



CENTRE FOR
INVASIVE SPECIES SOLUTIONS

A FIELD GUIDE TO POISON BAITING: **WILD DOGS AND FOXES**



Part of the

pestSMART 

publication series

Website: www.pestsmart.org.au

This publication is licensed under a Creative Commons Attribution 4.0 International license, except for photographic and graphical images contained within it. Photographs and other graphical material must not be acquired, stored, copied, displayed and printed or otherwise reproduced — including by electronic means — for any purpose unless prior written permission has been obtained from the copyright owner. Copyright of photographs and other graphical material is variously owned by Invasive Animals Ltd, individuals and corporate entities. For further details, please contact the Communications Manager, Invasive Animals Ltd.

The Creative Commons Attribution 4.0 International license allows you to copy, distribute, transmit and adapt material in this publication, subject to the exception for photographic and other graphic material set out above, and provided you attribute the work as shown below. The license does not transfer ownership of the copyright.

A summary of the license terms is at: <https://creativecommons.org/licenses/by/4.0/>

© Invasive Animals Ltd

Citation: Mifsud G (2016). A field guide to poison baiting: wild dogs and foxes. 3rd edition 2018. PestSmart Toolkit publication. The Centre for Invasive Species Solutions, Canberra, ACT.

Print ISBN: 978-0-9924083-2-9

Web ISBN: 978-0-9924083-1-2

Published by: The Centre for Invasive Species Solutions

The original creation and update of this publication was funded with thanks to the following:

Disclaimer: The information contained in this publication has been prepared with care and is based on knowledge and understanding at the time of writing (xxxx). Some of the information in this document is provided by third parties, and all information is provided “as is”, without warranty of any kind, to the extent permitted by law. After publication, circumstances may change and before relying on this information the user needs to take care to update as necessary.

NO PRODUCT PREFERENCES: The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product name does not imply endorsement over any equivalent product from another manufacturer.

ALWAYS READ THE LABEL: Users of agricultural or veterinary chemical products must always read the label and any permit, before using a product, and must strictly comply with the directions on the label and the conditions of any permit. Users are not absolved from compliance with the directions on the label or the conditions of the permit by reason of any statement made or not made in this publication.



Contents

1. Introduction.....	4
2. Why bait?.....	5
3. When to bait.....	9
4. Baiting strategies.....	11
5. Working dog safety.....	28
6. Tips and tricks to improve baiting success.....	29

1. Introduction

This guide provides information on the strategies and approaches to deliver baiting programs for wild dogs and foxes. It brings together a range of practical methods for the placement and use of wild dog and fox baits in various landscapes around the country. The guide has been developed to provide land managers with additional information and strategies to improve the effectiveness of baiting programs for the protection of livestock and biodiversity.

The information contained in this document is intended as a guide only and the methods and advice provided here can be modified to suit different environments and production settings, provided they meet current state regulations and policies.

Sodium Fluoroacetate (1080) and Para-amino propriophenome (PAPP) are S7 restricted chemicals and the regulations and requirements for their use is state specific. Individuals intending to undertake baiting using these toxins need to contact their local authorities to ensure they meet the current licensing and regulatory requirements to access and use these toxins prior to undertaking any control activities.

For the purpose of this document, the term predators will often be used interchangeably in reference to wild dogs and foxes.

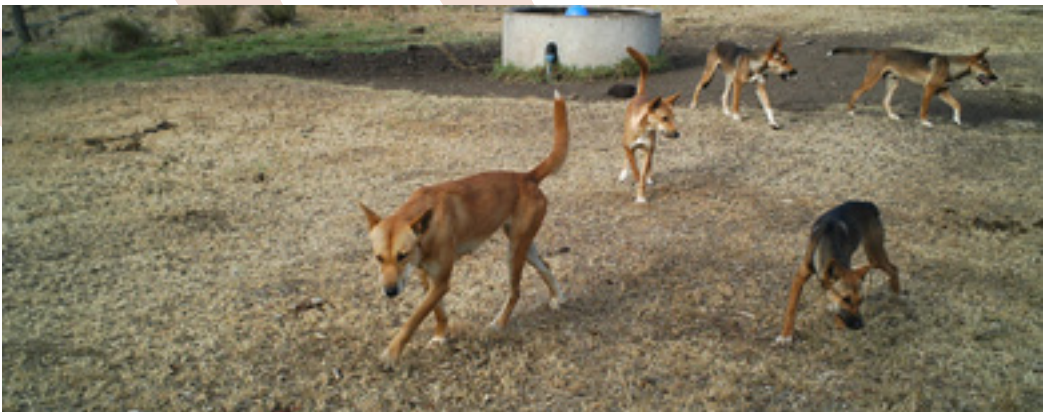
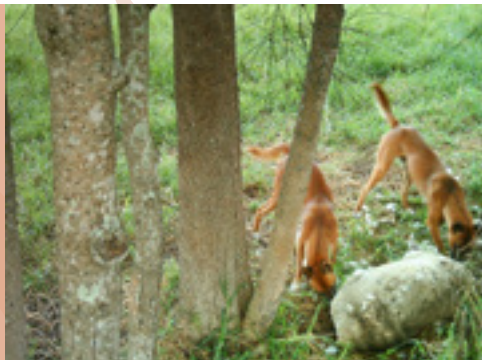


Image by John Smith

2. Why bait?

- Extremely cost effective compared to other control tools
- Deliver broad scale population reduction of predators
- Baiting is easily incorporated into general farm management activities

Image by Troy Wilton



Define the purpose and plan your control program

When used effectively, baiting can benefit livestock production, biodiversity protection and disease management by significantly reducing the impacts of pest animal populations. The use of baits is only one tool in a range of options available as part of an integrated management program to control wild dogs and foxes. When used correctly, baiting programs can effectively reduce populations to manageable levels and then other methods, such as trapping and shooting, can be used to further reduce predator numbers.

Wild dog and fox management programs should be delivered to mitigate or manage the impacts of these pests on livestock and biodiversity assets. The use of 1080 and PAPP baits as well as other control tools should be undertaken as part of a well-planned program to limit these impacts.

Prior to commencing any control, land managers need to determine the extent of the program required based on current predator activity and livestock being protected.

Protection of livestock

Land managers have a legislative responsibility to control pest animals and predators on their land in order to prevent impacts of those pests on neighbouring properties. Cattle producers that reside in areas where sheep and goat producers co-exist should be undertaking adequate control of predators on their own land so as to avoid impacts on sheep and goat growers in the area.

The control strategies undertaken by livestock producers to manage the impacts of predators may vary between livestock types, production settings and environments.

Small stock such as sheep and goats are at high risk of predation from wild dogs and foxes. This impact can at times be extremely high so producers of small stock should be undertaking more frequent control in order to mitigate the impacts on production.

Cattle producers may not see the value in undertaking frequent control programs as it is only calves and small weaners that are at high risk of predation. However frequent baiting or control in cattle production areas may be very relevant in order to maintain wild dog numbers at low levels to avoid attacks when cows begin calving.

The removal of foxes with baits in these areas will have long term benefits for ongoing wild dog control. If fox densities are high they can completely undermine the effectiveness of a wild dog baiting program by removing/eating and hiding baits laid for wild dogs.



Wild dogs will regularly kill more than they need to eat. These sheep were attacked on a property in QLD.

Frequent baiting in cattle areas will reduce fox and wild dog densities which will be beneficial for wildlife and limit impacts on neighbouring sheep properties.

Biodiversity protection

Wild dogs and foxes can have devastating impacts on native fauna. The European red fox has been implicated in the extinction of several species of native Australian mammals. Predation by foxes and wild dogs is currently listed as a key threatening process for numerous native species of mammals, reptiles and birds.



Fox caught on camera removing a wild dog bait and eating it from the highlands of NSW.

Predation by wild dogs and dingoes can also heavily impact populations of native species particularly if at high densities. Predation by wild dogs also heavily impacts on species suffering from other key threatening processes such as drought, seasonal variances or habitat degradation.

Strategic fox and wild dog management programs are being delivered across Australia in order to protect various endangered species. 1080 baiting is one of the most widely used tools in these programs because of its effectiveness at reducing predator populations. It is also a naturally occurring toxin and many of the native species we are trying to protect are relatively resistant to it, particularly at the concentrations used for predator management.

Broad scale management for population reduction

Broad scale coordinated predator control programs are effective in managing wild dog and fox populations over large areas. These predators are highly mobile and often occupy large home ranges or territories often over many properties. Coordinated programs delivered using a strategic, nil tenure approach are more effective at managing populations and limiting migration.

These large-scale programs are aimed to take advantage of periods during the predator's life cycle to keep their numbers low. Baiting in late autumn early winter leading up to mating season can limit breeding and the number of offspring produced. Baiting in spring targets young dogs as they disperse and move away from their maternal home range and the protection of their parents. Baiting at this time



Wild dogs caught on camera digging up Mallee Fowl nests in WA. Photo by Roger Pitman



Foxes often kill echidna and other small native mammals.

The objective of broad scale coordinated baiting programs is to reduce populations to lower levels which can then be more easily managed using other predator control tools, such as trapping or shooting.

when the dogs are young can be very effective, as juveniles are generally more likely to scavenge and take baits if they are available.

The key to getting reductions in predator populations is to expose as many individuals to bait as possible and this requires participation by as many landholders as possible within a given area. Individual landholder or property baiting programs in isolation will not control an entire predator population.

Broad scale predator control programs are generally organized and delivered by local stakeholder groups such as wild dog associations and supported by the relevant state or local government authority. These large scale baiting programs are generally referred to as “coordinated community baiting programs”. Information on these large coordinated community baiting programs can be obtained from local or state government authority, natural resource group websites or may be advertised within local newspapers.

Proactive baiting—ongoing maintenance to limit predator abundance

Wild dogs and foxes are highly mobile and can travel considerable distances to find new territories. The aim of proactive baiting is to ensure that toxic baits are in place should one of these animals turn up on the property. Proactive baiting generally involves using small numbers of baits or mechanical ejectors, placed at known locations on the property and replaced on a regular basis so that any predator that migrates or moves onto the property will be exposed to bait. This type of baiting strategy is known as a replacement baiting program and is explained further in Chapter 3.

These regular baiting programs can be combined with other property management activities such as water or bore runs, checking fence lines and grading roads or fire trails.

The key to successfully running a proactive baiting program is to be able to monitor the uptake of baits. It is important that baits are placed in marked locations so that they can be checked and replaced where necessary. Knowing the locations of the baits is also important so they can be picked up or covered prior to mustering or other activities where farm or working dogs are used.

Being proactive and baiting on a regular basis will gradually reduce the number of predators within

the property and the local area. Applying small amounts of control on a regular basis in conjunction with broad scale community baiting programs is seen as the most effective way of managing predator numbers and mitigating livestock and biodiversity impacts.

Measuring the benefits of control on livestock production

Regardless of the type of control program being delivered, it is important to measure the outcomes of the control and the impacts on livestock. By undertaking regular checks of livestock and observing predator activity at known locations such as creeks. Given the number of predators at some locations, the land manager will need to regularly assess whether the amount of control being delivered is achieving the desired outcome of reducing the

Monitoring of control programs may involve a range of methods including but not limited to:

- Setting up remote cameras in locations where predators are known to occur on farm.
- Regularly looking for tracks at known sites like sandy creek crossings, fire trails or property tracks.
- Recording and observing impacts on livestock such as bites and stock loss at weaning, shearing, lamb or calf marking.
- Taking notice of the general behaviour of livestock in paddocks. Livestock under stress from the presence of predators will be extremely alert and flighty.



Fox taking a bait from a marked bait site.



Wild dog taking a bait from a sand pad.

- Livestock difficult to muster with working dogs.
- Damage to fences as a result of livestock being pushed through fences by wild dogs
- Observe the behaviour of wildlife on farm. Kangaroos and wallabies will make themselves scarce if there are dogs hanging around.



Good places to look for predator activity include sandy vehicle tracks (A), muddy gullies and soaks in out of the way places (B), stock pads where loose sand gathers (C).

3. When to bait

Coordinated community baiting programs are delivered at different times of the year in each state depending on seasonal conditions and wild dog breeding biology.

Wild dogs begin the mating period between March and June; pups are generally whelped over the period from June to August with juvenile dispersal occurring over the months from September through till March.

Participation is the key to reducing predator populations during coordinated community baiting programs. In order to achieve good participation, the timing often needs fit in around property and livestock management activities such as mustering. Stakeholders should avoid undertaking broad scale baiting programs leading into extremely wet seasonal conditions as rain may affect the viability of the baits.

Predator control should be undertaken to mitigate impacts on livestock and biodiversity. Control should therefore be delivered during periods when livestock are most susceptible to attacks and predation.

For sheep and goat producers this may mean undertaking some form of control all year round as both adults and offspring are susceptible from predation by wild dogs and to a lesser extent foxes.

Many people do not control for foxes or even wild dogs until just prior to lambing or kidding, by which time predator numbers across the landscape are quite high. A single baiting event will not be sufficient to manage the impacts of dogs and foxes on lambs and there are likely to be other predators ready to move in and cause similar pacts.

Regular baiting in a proactive and strategic manner will gradually reduce predator numbers and limit impacts, particularly by foxes at lambing. The inclusion of strategic proactive bait replacement programs as part of regular property management activities will assist in consistently removing predators from your property, resulting in improved long- term outcomes for livestock production.



Lamb Kill. Image by Neil Mitchels

4. Baiting strategies

Coordinated community programs

- Undertaken at a regional scale involving small groups of landholders in order to reduce predator populations over a large area.
- These programs are run by stakeholders with support from local and state government, Landcare and/or natural resource management groups.
- Objective is to deliver some form of control across all properties in a nil/ cross tenure fashion as predators don't obey boundaries or
- Programs should be part of a wild dog and fox management plan that is agreed to by all stakeholders.
- Baits should be placed strategically in areas where predators are likely to come across them. These areas described in site selection below.
- Coordinated community baiting programs may involve a number of techniques including ground and aerial baiting with fresh meat and manufactured bait

Aerial baiting

- Aircraft are used to deploy either meat or manufactured baits strategically in isolated and rugged terrain than can't easily be accessed by ground.

Equipment

- Aerial deployment of wild dog and fox baits occurs in all mainland states using fixed wing or rotary aircraft depending on the region and state regulations.
- Fixed wing aircraft are used in rangeland environments where it is the most cost effective means of delivering baits over large distances.
- Helicopters are used in mountainous areas to deliver baits because of their ability to follow tightly winding geographic features in high altitudes.

Bait placement and delivery

- Aerial bait lines are specified in management plans and determined by land managers and landholders based on local knowledge
- Aerial baiting is strictly regulated and all aerial bait lines are GPS logged to ensure that baits are delivered on the correct property and location.

- Wild dogs are creatures of habit and will travel the same path whether they were born there or not.



Baits cut up and ready for injection with 1080 by an authorised officer in WA.



Landholders in WA bagging dry baits ready for distribution.

- Targeting ridges, drainage lines and soft sandy country is most effective.
- Aircraft GPS technology is such that baits can be dropped with extreme accuracy. Studies have shown accuracy up to 5m either side of the designated flight path.

- The number of baits delivered per linear kilometer is regulated nationally by the Australian Pesticides and Veterinary Medicines Authority.
- Each state government is responsible for regulating aerial baiting within its own state in accordance with the national requirements.
- For most parts of the country aerial baits for wild dog and fox management are delivered at 10 baits per kilometre. This is more than adequate for rangeland environments.
- Research has indicated that in mountainous country in eastern Australia a rate of up to 40 baits per kilometre delivered by helicopter is more effective than the prescribed rate of 10 per kilometre for the control of wild dog, foxes and feral cats in these environments.
- Land managers should be undertaking targeted ground baiting at the same time to complement the use of aerial baiting.



Helicopters are used to bait ridgelines where access is limited by ground.



Waiting for the Chopper. Landholders prepare baits for aerial baiting in the NBWE England Area of NSW. Photo by Dave Worsley.

Ground baiting

- Ground baiting involves placing either a meat bait or manufactured bait intended for wild dogs or foxes on or in the ground at locations where predators are likely to find them. Canid Pest Ejectors, or mechanical ejectors may be used in the same manner as baits for control programs described here. Information on these devices can be found at pestsmart.org.au. Check state regulations to see if you are permitted to use these devices before hand.

Predator behaviour

- Foxes are natural scavengers and will readily take baits when available.
- While wild dogs will hunt and kill prey they will also readily scavenge and eat baits when available.
- Research has shown that predators will not necessarily take baits immediately after being laid.
- Radio collared wild dogs have eaten a bait and been killed up to eight weeks after the baits were laid despite being in the areas for the entire time.



Track Junctions are ideal places to bait.

Site selection

- Predators will travel on the easiest and softest country they can so look for vehicle tracks, graded trails or sandy country to place baits.
 - They will avoid rough rocky areas or places where they have to travel through thick undergrowth or are likely to get burrs.
 - Targeting travel corridors such as ridge lines, water courses, dry creek beds, fire trails or fire breaks, animal pads and vehicle tracks are all great locations to lay baits.
 - Physical barriers such as netting or electric fences are also good places to bait as predators will travel along their length looking for somewhere to get through.
- If you can, place the bait at a location where you can see the footprints of the animal that took the bait. This could be a sandy creek crossing, a dusty place where the silt has built up in the edge of a vehicle track, or on the road reel left by the grader or blade plough.
 - Avoid wet soggy areas as 1080 in baits laid in these locations will break down quickly due to the moisture and the microorganisms in the soil.
 - Baits can be buried just under the surface, covered with soil or leaf litter or the can be simply placed on the ground, preferably in spots like tussocks or in logs so that other non- target animals can't find them.

Bait placement

- Place baits well apart — at least 500m or more. This will avoid a single dog or fox eating more than one bait.
- 1080 has to be metabolized before an animal shows any symptoms, therefore a predator can eat more than one bait before it feels the effects of the first one.
- If there isn't any soft soil in the spot where you want to put a bait then bring some in and make a pad. Just make sure you use soil from the local area so it looks and smells similar to the area where you want to place the bait. This is often referred to as a "sand pad".



Wild dogs and foxes can sometimes eat multiple baits before they die from the toxin. This wild dog was found with several partially digested baits in her stomach. Image courtesy Vertebrate Pest Research Unit, NSW DPI.

Monitoring bait take

- Burying baits or covering them with soil also enables observation of the tracks of animals that take the baits on the soil that is dug up.
- Identifying whether a fox or wild dog has taken a buried bait is also possible from investigating the diggings.
- Foxes dig holes with one paw over the other very carefully until they reach the bait and pull it out, leaving a very neat and clean "trench" in the soil.
- Dogs use their front paws and back legs and dig up the ground like a rotary hoe. Just like your dog at home burying a bone in the front garden!



This neat little hole is typical of how foxes remove baits. Note the footprints that give it away.

- By monitoring the baits taken land managers can identify which predators are most abundant and get a better understanding of how the program is going and whether or not baiting needs to continue.
- Less baits being taken should mean less predator activity, which should equate to less impact on livestock and native fauna.



Figure 1 - Private property bait placement and site selection.

The symbols on this map indicate areas where wild dogs and foxes are likely to travel or live when on private property.

★ Fire trails or tracks in or coming out of bushland. Junctions where two or more tracks meet are excellent places for bait or ejectors stations. Tracks on ridgelines and in gullies are also prime positions.

▲ These are areas of isolated bushland within cleared paddocks. These bushlands act as islands and will be used by dogs and foxes to move across open country. Foxes will often dig dens in these areas especially if they are located away from houses or roads.

⋯ Trees along water course or gullies. Once again foxes and wild dogs will travel along these pathways to cross open country particularly if they link up patches of bushland. Place baits on the outside of the bush or near livestock pads.

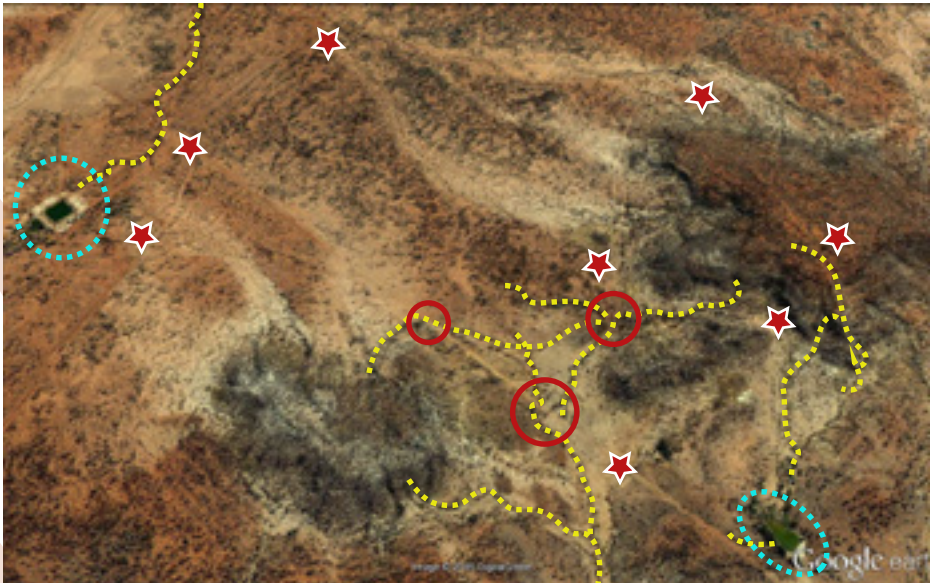





Figure 2 - Rangeland bait placement and site selection.

The symbols on this map indicate areas where wild dogs and foxes are likely to travel or live in rangeland areas.

 Water points will be the main focus of wild dog and fox activity in arid landscapes. Baiting on tracks leading into or out from water points is a great way to target predators. Overflow pipes in dams and turkey nests are used by dogs, foxes and cats as dens site or to avoid the heat.

 Tracks and Trails through the ranges, in paddocks and on fence lines will be used by dog and foxes to travel as they provide the easiest path. Junctions of tracks are great places for a bait or ejector sites. Tracks on ridgelines and in gullies are also prime positions.

 Creeks and Gullies leading from scrub country to water points are great places to bait. Dogs and foxes will use the cover provided by creeks and gullies to move across paddocks. Ridges coming off hills provide easy access to open grazing country and are good baiting spots.


 Junction where gullies and creek cross over with farm tracks are good baiting sites as dogs and foxes will travel along both features moving between water and cover.



Figure 3 - Mixed farmland bait placement and site selection.

The symbols on this map indicate areas where wild dogs and foxes are likely to travel or live when in mixed farming landscapes.



Water points - These are still key areas in cropping country and will be a focus point for wild dog and fox activity. Baiting on tracks leading into or out from water points is a great way to target predators.



Vehicle tracks and livestock through paddocks and crops as well as on fence lines will be used by predators in this landscape. The junction points where two or more tracks meet or where they cross gullies, are excellent places for baits or ejector sites.



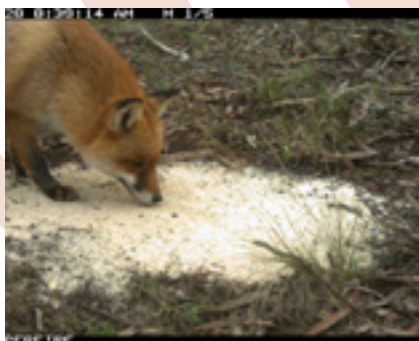
Creeks, gullies and native grass corridors between crops will be used by predators to move across paddocks. Baits and ejector sites on these locations will be encountered by predators as they move between paddocks.



Bushland within cleared paddocks will act as islands and will be used by dogs and foxes to move across open country. These bushland patches are often found on small hill tops in cropping country and are good spots to bait as they are often out of the way places.

Bait replacement program

- A bait replacement program is simply one where you place a bait at a known location and check it at regular intervals, replacing the bait if it has been taken.
- Baiting programs should be considered part of on-farm management and done in conjunction with other activities.
- Replacement baiting strategies might go for a couple of weeks or a couple of months depending on the level of predator activity on the property.
- The number of bait takes will also give you a good indication as to whether you need to keep going or should stop for a while.



A fox investigating a bait site. This image was picked up on a trail camera which are effective tools for detecting bait takes when set up properly. (See www.pestsmart.org.au for more info on camera)

- If you have sheep or goats which are at constant risk of predation, particularly by dogs, then you may want to do short runs of a week or two every couple of months once the initial program has been completed.

Site selection and marking

- Choose bait sites that can be checked regularly as part of weekly property or farm management activities, such as fence and water runs.
- Wild dogs and foxes rely on water so choosing bait sites on a track leading to a water point is a good place to start.
- By setting the bait site back 50–100m away from the water on any track or trail leading to the water point you



A wild dog taking a bait from a site on the edge of a vehicle track near un-cleared bushland.

avoid having it disturbed by livestock and you can let your working dog off for a drink with less risk.

- Other locations include the junctions of roads or tracks, near gateways where dogs are moving through fences, on fire breaks, on fences where dogs or foxes are travelling, either side of roo holes in fences or along gutters.
- Sites should be marked or identified. Markers used can vary but should be something that is relatively permanent and visible so they can be found easily by anyone who works on the property.
- Cattle ear tags, flagging tape or coffee tin lids are ideal as they can be tied, nailed or screwed at eye height onto posts or trees so they are easily visible.
- Markers can also be numbered using a permanent marker or spray paint to ensure all baits are checked and to assist in recording bait takes on a form
- If a good bait site is found but there isn't a post or tree to put the marker on, drive a steely or star picket in place

and put the marker on it so the bait site can be found next time. See picture on page 8.

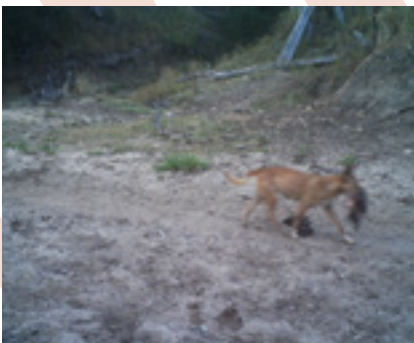
Bait types, storage and handling

- If you have the baits on hand they can be changed on a weekly basis as part of other on farm duties such as water runs and boundary fence checks.
- Baits **MUST** be stored as per state regulations on the back of the vehicle. This generally requires a lockable tool box or similar lockable container that is secured to the vehicle, but check with your relevant state authority or NRM agency.
- Manufactured baits or dry meat baits are ideal for replacement baiting programs however fresh meat baits should also be used when available.

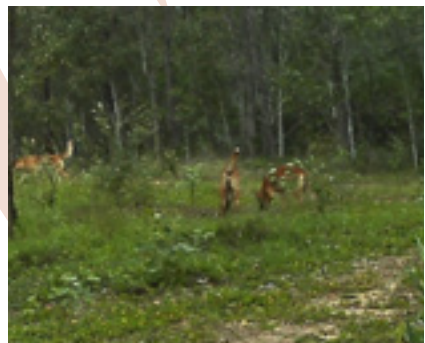
Changing up the bait type used will help with uptake, use different types of meats, manufactured baits and occasionally lures as discussed later will all help.



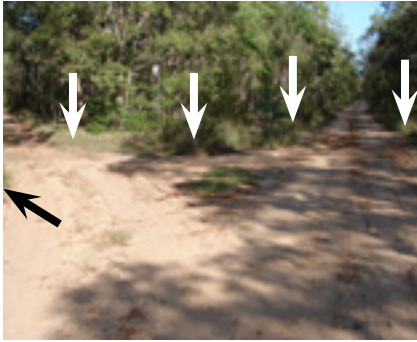
Mix it up! Use a variety of baits when targeting predators. Here we have mix of some manufactured (factory made) and dried meat baits. Image by NSW DPI.



Young dog with a bait in its mouth taken from a permanent bait site where the creek in the back ground meets the vehicle track.



Property tracks on edges of timbered country are ideal spots for permanent bait sites. Bends or junctions provide good spots to target wild dogs and foxes. The old fella walks past but the young dogs can't resist! Regular replacement of baits at sites like this can take out the entire pack.



The junctions of vehicle tracks are great bait sites. The arrows show likely bait sites in each landscape. Baits can be placed on either side of the road to take advantage of varying wind direction.

Man-made barriers like netting fences make good bait sites as predators are forced to run along them looking for an opening. Placing baits on those structures will increase the chances of a dog or a fox finding and eating one.



Stock and animal pads leading in and out of isolated water points make good bait sites. The arrows show likely bait sites at each location. Set the bait sites off the water point in a location where the predator will have to pass them to get to the water.

Stock and animal pads leading through gates and old fence lines make good bait sites as they funnel animals through restricted access points. Bait in these areas will get good exposure to predators. The arrows show likely bait sites at each location.

Decoy or carcass baiting strategies

- The carcasses of dead animals can be used as a lure to bait predators however landholders should consider that every other scavenger out there is also likely to be feeding on the carcass so the baits may be taken by non-target animals.
- Placing baits on tracks and trails leading to the carcass is the safest way of getting baits to predators without having them taken by other animals.
- An even better strategy would be to drag the carcass to a location where racks and trails can be baited along the path to the carcass.
- In some instances predators will become familiar with carcass dumps or kill pits and will regularly visit these areas for a free feed, particularly in dry times. These are good locations to set up a bait site.

Dragging a carcass

- Landholders regularly ask about dragging a carcass of an animal along trails or tracks and then baiting on that track using the scent of the dead animal as a lure to get the predators to take baits.

Leave the working dogs at home if checking baits!

- This method is quite effective provided the baiting is done on numerous occasions.
- If you have foxes in the area they will travel along the path of the carcass and eat baits before wild dogs get a chance, so use a strategy of placing a number of baits at known sites and then replace them as they are taken for up to a week or two after dragging the carcass.
- Dogs and foxes have an exceptional sense of smell and will still be able to detect the scent of the carcass and the baits so they will continue to take baits along the drag path for some time.
- Over time, the number of baits taken by foxes should decline leaving more for the dogs to find.



Photo by Adam Sykes

- This is a very effective way of drawing predators to baits but also be aware that it could attract other non- targets (like goannas). It may be best to undertake this type of baiting when the seasons turn and its starts to get cold.

Opportunistic, ad hoc baiting programs

- Be prepared and take advantage of any opportunity to bait when predators are at their most susceptible.
- These baiting programs may not be scheduled or part of a bigger program but can deliver results on farm in reducing numbers, particularly if more than one property is involved.
- Periods of extremely dry or cold weather may be good times to undertake additional baiting as predators are likely to be nutritionally stressed and looking for food or water.



Gullies and dry creek beds make are used as movement corridors by foxes and wild dogs.

- Foxes and wild dogs love travelling on freshly graded fire break or trails. In many instances landholders and machine operators see the wild dogs and foxes, following machinery as they travel along the track.
- These individuals are looking for insects and reptiles that are dug up by the machines and this is an excellent time to throw baits out.
- Predator numbers will always build up in response to prey availability.
- The periods following a decline in prey populations, either due to seasonal conditions or disease, are prime times to bait for foxes, wild dogs and feral cats. This will increase their scavenging behaviour and make them more vulnerable to baits.
- For example rabbit numbers regularly build up and decline due to RHDV and to a lesser extent myxoma virus around the country. These diseases hit rabbit populations at different times of the year depending on where you are. In the case of RHDV, an entire population of adult rabbits can be eliminated in a couple of days.

- Baiting after the rabbit numbers decline will have definite impacts on foxes and dogs as they have just lost their primary food source.
- The use of fresh meat baits in these circumstances has proven extremely effective at controlling foxes, cats and wild dogs, particularly young and naïve individuals.
- Similar events occur throughout the country with other prey species — e.g. native rodents such as long haired rats in rangeland environments and house mice in grain growing districts. Populations explode after favorable seasonal conditions only to crash when food availability declines or disease wipes them out.
- Take advantage of these kinds of natural events and weaknesses in predator biology to improve bait uptake and reduce predator populations whenever you can.

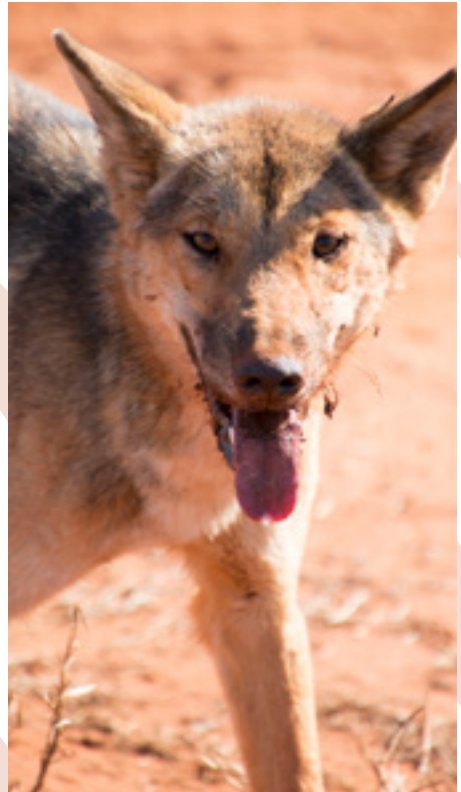


Image by S Jordan.

5. Working dog safety

The only way to fully protect working dogs from baits is to ensure they are muzzled when they are being used in paddocks that have been baited

Image by Alf Manciangli.



- Knowing where your baits are and avoiding these areas when working your dogs will also help keep them safe from accidental poisoning.
- Using permanently marked bait sites and burying or covering baits with soil will help ensure that all the baits have been found and picked up prior to mustering.
- Baits can be shifted to areas where you aren't expecting them to be by animals such as foxes and occasionally birds. To help stop this, baits can be tied to objects or natural structures such as trees or large branches using light gauge wire.
- Tied baits are harder to pick up and carry, forcing the predator to actually chew and swallow the bait off the wire.
- Tied baits are easier to monitor and pick up before mustering.
- Covering baits is another way of preventing working dogs eating them. One producer uses plough discs to cover baits, to stop working dogs from eating them when mustering.
- Following good hygiene practices when baiting is also essential.
- Wear overalls or old clothes that can be removed and immediately washed before making contact with any farm dogs.
- Make sure there is no blood, poison or liquid on your boots. It is a good idea to have a set of clothes and pair of rubber boots specifically for baiting. Lock them up in the shed so the dogs don't find them.

- Make sure you thoroughly wash down every vehicle that has carried 1080 or 1080 baits. Wash vehicles away from the homestead and ensure there is no blood or meat stuck to the vehicle before returning to the home.

6. Tips and tricks to improve baiting success

Bait location

Place baits in location where predators are most likely to find them. Look for signs of wild dogs and foxes and place baits in those areas. These areas include but are not limited to:

- around water in rangeland areas
- tracks on ridges
- dry creek beds and watercourses
- intersections of creek crossings and creek beds with tracks and trails
- fence lines, especially electric fences where predators will walk alongside them looking for a break
- fire trails or property tracks
- around flood ways or holes in fences
- junctions of property or fire trails

- freshly graded fire breaks or property tracks
- tracks leading to carcasses, kill pits or rubbish dumps

Bait type

- Use different baits as often as possible. Mix it up — use fresh meat, dry meat and the different manufactured baits at different times or even in the same bait line.
- Choose baits depending on seasonal conditions, remember 1080 will get broken down by bacteria in the soil, get eaten by maggots and insects and will be affected by water so choose the type of bait best suited for your seasonal conditions at the time.
- For example, in the south eastern states, manufactured or dry meat baits might be a better option in summer due to the high blow fly activity.



- Manufactured baits can resist water better than fresh meat baits due to high fat content and some have sausage skin on the outside which help with shedding water. They still breakdown over time but can last a little longer in wet conditions.
- When using fresh meat baits, also change the meat type regularly. Use beef, then kangaroo, then horse, then deer, or whatever different meat is available in your area, just make sure it is cut up according to state requirements.
- Other common products may also be used to attract predators to baits, such as tuna/fish oil and blood and bone. These lures can be placed on the ground or on objects near where the bait is placed and should be sufficient to get them into the vicinity of the bait and hopefully enough to encourage them to take it.
- Lures can also be added to a bait. Most states permit the addition of a substance to a bait to increase its attractiveness to the target species.

Using lures to improve bait uptake

- A range of different lures can be used to improve bait uptake. Dragging a carcass is a form of lure used to draw predators in the area where baits are laid.
- There are a range of lures available from feral animal trapping suppliers designed to attract animals into areas where traps are in place.
- These same lures can be used to draw animals to baits or a bait line. Just remember to use food based lures if you want to draw them into an area to take baits!
- A range of lures can be used for this purpose including liquid or powdered blood and bone, the blood from a killed beast, sardine or tuna oil
- Be cautious about the amount of lures used on baits. Due to a predators heightened sense of smell, you don't need a great deal for them to smell the lure. Using a sauce bottle to drizzle liquid blood and bone is a great way to regulate the amount placed on baits. Using too much lure may have a detrimental affect by making it easier for some non- target species to find and remove baits intended for foxes and wild dogs, so

keep the amount of lure used to a minimum depending on your environment.

Avoiding non-target uptake

In order to improve the success of your baiting program you have to make sure there are enough baits out there in the right spots for the foxes and wild dogs to find. Removal of baits by non-target animals reduces the effectiveness of control programs. While the dose rate of 1080 used in wild dog and fox baits is too low to kill most native animals, non-target animals impact the program by removing baits before the predators get to them.

PAPP on the other hand may affect some native animals and its use may be restricted during periods when goannas or quolls are present or active.

Limit the removal of baits by non-targets by securing baits using tie wire or string to known locations or by burying them so they can't be seen by birds.

If feral pig numbers are high, they can take many of the baits put out for wild dogs and foxes. Pigs require a much higher dose rate of 1080 to be killed and can remove large numbers of baits laid for predator control.

The control of feral pigs by trapping, shooting or baiting prior to a wild dog or fox baiting program is advisable if pig numbers are high. The added benefit of baiting for pigs, particularly with meat (where it is permitted), is that you may also take out wild dogs and foxes as non-target species.

7. More information

Learn more about best practice baiting for wild dogs via PestSmart

– www.pestsmart.org.au



