



## Poison baiting for feral pig control in Australia

### Introduction

Poison baiting is one of the most economical and effective ways to control feral pigs on a broad scale. Aerial baiting can be more practical in hard to access and large, remote areas, especially when there is an urgent need to control diseases that feral pigs might carry. However, aerial baiting is illegal in most states other than Queensland, except under permit. Ground-based baiting is more target-specific than aerial baiting, but needs to be conducted in areas that are readily accessible for daily checks (or every 2-3 days when using HogHoppers™).

### Which poisons are used?

Sodium fluoroacetate (1080) is the main toxin used for poisoning feral pigs. It is produced naturally in around 35 native plants in Australia, so native animals are generally more tolerant to the toxin than introduced animals like pigs. 1080 is water soluble and biodegradable, enabling it to be broken down naturally in the soil to a harmless substance. It also does not accumulate in the food chain. Other toxins, such as CSSP or SAP (yellow phosphorus) and warfarin, are being phased out nationally due to animal welfare and non-target concerns. Sodium nitrite, a common human food preservative (250), is currently being developed as a new toxin and is fast-acting and humane. It takes less than two hours for sodium nitrite to result in pigs' death, compared to 6-8 hours for 1080, 2-4 days for CSSP, and 1-2 weeks for warfarin. This next-generation toxicant is currently being developed and will be submitted for registration in Australia once testing is complete<sup>1</sup>.

### How to apply

Strict protocols apply and accreditations may be required to access, make and deploy poisoned baits. Pest controllers should consult with relevant and

Image: Andrew Bengsen



current state or territory legislation and regulations before baiting<sup>2</sup>. 1080 is a Schedule 7 Dangerous Poison, a 'restricted chemical product', according to Regulation 45 of the *Commonwealth Agricultural and Veterinary Chemicals Code Regulations 1995*. This means bait must only be prepared by authorised officers or persons under their direct supervision, and prepared bait must be stored and transported in a secure and safe manner. Access is restricted to approved personnel only. Notification must be given to neighbours and the community, and warning signs need to be displayed before and during a poisoning campaign, however requirements vary across jurisdictions.

In NSW and QLD, grain (wheat, oats, barley, sorghum, soybeans and lupins) and pellets are the most common type of bait material. Fruit (eg bananas) can also be used as bait, and manufactured baits are also available for purchase (PIGOUT®). In NSW, manufactured pellets and grain can only be used in bait stations, not on trails. In QLD, meat baits are only allowed in western and northern grazing areas. All bait must be dyed blue or green when laced with poison to distinguish it from human and animal food and make it less attractive to birds.

The best time to bait is when pigs are suffering from peak nutritional stress caused by natural lows in food resources. This is normally when surface water is scarce and pastures have dried off. It is also better to bait prior to breeding seasons because farrowing sows restrict their normal home range and their litters



Image: Invasive Animals CRC

do not often get exposed to baits. Breeding generally occurs after the food-abundant season. Baits should be laid in shady areas late in the afternoon or evening because feral pigs are mostly active between dusk and dawn. Pigs will usually consume the bait overnight before other animals have access to it.

Baits should be laid where feral pigs are likely to find them. Pigs tend to congregate near permanent water points and move from cover to water before foraging, so ideal bait locations are around pig pads, areas of thick cover, creeks and swamp edges, or waterholes. Sheltered areas are preferred to minimise the effects of the weather and disturbance by non-target animals. Sites should be accessible for the person conducting the baiting, as large amounts of bait will need to be transported. In aerial baiting, baits are normally dispensed along defined grid lines throughout areas where feral pigs are known to be active, or in areas of known local pig density, such as around waterholes. This is preferred as it will enable multiple baits to be found by a mob of feral pigs.

#### **Distance restrictions**

Each state and territory has restrictions on where 1080 bait can be laid in relation to habitation, watercourses, boundary fences and roads, and according to the method used (ie ground- or aerial-baiting)<sup>2</sup>. See the [Standard Operating Procedures](#) for more information.

#### **Free feeding**

In some areas (NSW, Wet Tropics of QLD), free feeding is compulsory for ground baiting. Free-feeding is extremely important as it helps to ensure that all animals in the area have had a chance to find a bait station before toxic bait is deployed. It is not normally conducted in aerial baiting campaigns, although there is no restriction on this being done. Free feeding involves offering un-poisoned bait for 3-10 days. Bait is progressively offered until bait uptake stabilises. Any activity that might disturb pigs or make them spread out should be avoided, such as shooting and using dogs. Visits by pest controllers to

the free-feeding sites need to be kept as brief and quiet as possible. For aerial baiting, free-feed baits should be deployed once or twice during the week prior to poison bait deployment. It is important to use accurate GPS equipment to ensure the free-feed is dropped in exactly the same area as the poison bait.

Once free-feed bait uptake plateaus, toxic baits can be introduced until toxic bait uptake ceases (1-3 nights). The same feed material should be used for both the un-poisoned free-feed and the poisoned bait. In some jurisdictions (eg NSW), 1080 baits must NOT be used for more than 3 consecutive days. Bait should be replaced when exposed to adverse weather conditions, such as rain, because they may reduce the toxin concentration. After the baiting campaign, unused baits should be collected to the extent possible.

#### **Risk to non-target animals**

Non-target animals including native species, domestic cats and dogs and livestock, can also be exposed to poison either directly, by eating baits (primary poisoning), or by scavenging a poisoned animal (secondary poisoning). Dogs are highly susceptible to 1080. A bait delivery device such as the HogHopper™ can help increase the selectivity, efficiency and safety of pig baiting. Alternatively, working dogs should be muzzled and tied up when not working. 1080 is also toxic to humans and there is no known antidote for 1080 poisoning. Operators need to take precautions to safeguard against exposure by wearing protective equipment.

#### **Further reading**

1. [Frequently asked questions about HOGGONE](#). PestSmart Factsheet. Invasive Animals Cooperative Research Centre, Canberra.
2. Sharp T (2012). [Standard Operating Procedure \(PIG005\): Poisoning of feral pigs with sodium fluoroacetate \(1080\)](#). Invasive Animals Cooperative Research Centre, Canberra.

See also: [Practical feral pig control](#). PestSmart Factsheet. Invasive Animals CRC, Canberra.

[New tools for feral pig control](#). PestSmart YouTube video clip. Invasive Animals CRC, Canberra.

[Use of the HogHopper® for baiting of feral pigs](#). PestSmart YouTube video clip. Invasive Animals CRC, Canberra.

Invasive Animals Ltd has taken care to validate the accuracy of the information at the date of publication [January 2014]. This information has been prepared with care but it is provided "as is", without warranty of any kind, to the extent permitted by law.

