

TM

HOGHOPPER



Proudly
Australian
Made



Responsible Feral Pig Management using the HOGHOPPER™



Australian Designed
Australian Made
Rugged Construction
Flat Packed Delivery
Easy to Assemble



Feral pigs in Australia are a considerable burden to cropping, agriculture, horticulture, grazing and the environment

The costs of control efforts, losses in production and damage to infrastructure quickly mounting. Feral pigs are therefore one of the most damaging and expensive introduced pests of the Australian landscape.

Baiting is the most common control technique to suppress feral pig densities and to prevent damage in rural areas. Primarily, the toxin sodium fluoroacetate (1080) is either mixed with preferred pig feeds such as meat or grains or used as a central bolus in the shelf stable PIGOUT® Feral Pig Bait.



The PIGOUT® Bait is designed with a poisoned core, specifically flavoured and coloured green to deter non-target wildlife as much as possible. The risk of non-target uptake can be further reduced by the HOGHOPPER™ delivery system which targets baits exclusively to feral pigs. Baiting for feral pigs is also time-consuming and labour intensive when baits must be replenished frequently. This is a constraint to feral pig management programs on large and remote properties and consequently, some pig populations are baited poorly.

The HOGHOPPER™ does not require frequent checking and so overcomes this constraint to a successful control program, while reducing non-target risks.

Pigs have unique attributes that are not possessed by native species. Pigs have reach, snout strength and a natural lifting behaviour, which when coupled with their height and strength, were exploited to design the HOGHOPPER™ bait delivery station. The sliding access door is weighted so that pigs remain the only species in the Australian landscape to access baits from the HOGHOPPER™.

The communal feeding behaviour of pigs is also advantageous when designing a baiting program, especially where a novel feed substrate and delivery mechanism is to be introduced. Pigs are highly neophobic, which means that they avoid new objects and experiences. Using the HOGHOPPER™ requires only one pig from a mob to become familiar and comfortable with it, then the remainder of the group will learn very quickly.



As the door of the HOGHOPPER™ can be locked in an 'open' (free-feed) position, pigs easily access non-toxic baits and become familiar with feeding from the HOGHOPPER™. After the door is closed, pigs learn to lift the door to access the baits. The natural curiosity of a pig results in a thorough investigation of the closed door HOGHOPPER™ until the mob has mastered how to lift and access the feed.

The HOGHOPPER™ holds enough bait for several days of baiting, making it suitable for baiting more remote, environmentally sensitive areas with minimal maintenance.

The HOGHOPPER™ was subjected to extensive pen and field testing during its development to ensure an optimum final design. HOGHOPPERS™ were shown to reduce the population of feeding feral pigs by 90-100% when delivering either 1080 laced grain or PIGOUT® Feral Pig Bait, respectively. Moreover, the HOGHOPPER™ successfully prevented all non-target species, including even small rodents, from accessing toxic bait.

Using the HOGHOPPER™ .

Stage 1: Know your target

It is important to have an understanding of the ecology and biology of the target species before developing a baiting program. This helps to determine why, when, where and how often baiting is required to achieve the greatest results.

Diet

- Pigs **must** drink at least once a day in hot weather.
- They are opportunistic omnivores, consuming a highly variable diet.
- Pigs readily switch foods and feeding places.
- They have high protein requirements, particularly for successful rearing of young.



Reproduction

- Sows can wean 2 litters every 12-15 months.
- The average litter size is 6 piglets.
- Oestrus occurs at 6-12 months of age, with litter size increasing with age and body weight.
- Pigs can breed throughout the year, particularly in good conditions.

Habitat and home range

- Home range is determined by abundance of resources, body size, mob density and climate.
- Feral pigs typically live in areas which provide reliable food, water and shelter.
- Annual home range can be as large as 43km² (mature boars) or 20km² (mature sows).
- Daily home range is between 0.7-1.4km².

Behaviour

- Most active from late afternoon to early morning.
- Movement affected by distribution of shelter, food & water as well as disturbances and topography.
- Generally travel on well marked trails for feeding, water and bedding.
- Wallow in mud and dust to reduce parasite infection and or for thermoregulation.
- pigs become nocturnal if persecuted by hunting or dogging



Common signs of pig presence

- Rooting of soils.
- Holes under fences.
- Wallows and tree rubs.
- Tracks.
- Scats.
- Carrion consumption.



Image © IAGRC



Stage 2: Timing

Baiting is usually most effective when resources such as food and water are limited. In these conditions, feral pigs often congregate near permanent water and are more likely to consume bait. However, this does not apply for all areas and sometimes some testing is needed to optimise the approach. Coordinated baiting with neighbours increases the target area and slows re-invasion.

Stage 3: Site selection

Identify feral pig hotspots in the target area based on historical records, preferred habitat and pig resource requirements. Assess each hotspot for fresh feral pig activity (tracks, scats and rooting). If pigs are active in the area, assemble your HOGHOPPER™ where feral pigs are most likely to encounter it. If using multiple HOGHOPPER™'s be sure to distance them far enough apart so the same mob of animals is not feeding from multiple stations. Feral pig home ranges vary according to resource availability, climatic conditions, body size, gender and topography. It is not possible to prescribe set distances between stations, although a general rule is to place a HOGHOPPER™ at each hotspot, but no closer than 1 kilometre apart. Motion-sensing cameras are useful in determining whether the same mob are feeding from multiple bait sites.

Always place your HOGHOPPER™ in a shady and discrete location (under trees or bushes near water). Cooler temperatures will prolong the life of bait material and feral pigs will feel less exposed whilst feeding. On public land, HOGHOPPER™s should remain out of sight to avoid tampering by the public.

HOGHOPPER™ set up for free feeding



Ensure HOGHOPPERS™ are securely pinned to the ground and cannot be tipped, pushed or moved.



Stage 4: Free-feeding – doors partially open

Set the HOGHOPPER™ to the free-feeding position with the doors latched open (see image below). The free feed period is vital for a successful baiting program as this is when feral pigs become familiar with the HOGHOPPER™ as a source of feed. Skipping this stage and closing the doors from the outset of the baiting program may result in pigs failing to access baits.

Load the HOGHOPPER™ with PIGOUT® Feral Pig Bait Free Feed or other free-feed. Various free feeds can be used although it is recommended to use the same substrate for free-feeding that will be used during the toxic baiting phase of the campaign. Pigs will become familiar with the feed available to them from a HOGHOPPER™, thus changing feed types when moving from non-toxic to toxic baits may discourage them from eating.

Feral pigs may take several days to recruit onto free-feed.



Do not be discouraged if pigs do not begin to feed immediately. Often grain and baits are quite foreign feedstuffs for feral pigs, so they will be cautious to commence feeding. Continue to deploy free-feed or PIGOUT® Feral Pig Bait Free Feed every 3-4 days once they have begun feeding. When most of the population are consistently feeding from the HOGHOPPER™ and feed uptake is consistent, move on to Stage 5.





A feral pig that was present during free-feeding consequently knows how to use the lift door when the doors are fully closed.

Stage 5: Toxic-baiting

Remove any remaining free-feed bait material from the HOGHOPPER™. DO NOT remove the bolted metal strap as the pigs will lift the doors entirely off the HOGHOPPER™, exposing non-target species to toxic bait. Load the HOGHOPPER™ with sufficient toxic PIGOUT® Feral Pig Baits or other toxic bait based on the volume of free-feed bait consumed in the free feeding period. Place a small amount of free-feed bait (non-toxic) on the ground in front of each door to encourage feeding. Continue to toxic bait with PIGOUT® Feral Pig Bait or other toxic bait until bait uptake ceases (typically 3-4 days).

Stage 6: Follow-up.

A follow-up phase should always be undertaken once toxic bait uptake ceases as new feral pigs may have arrived during toxic baiting which have not learnt how to lift the HOGHOPPER™ doors. As such, return to stage 4 (free-feeding), but ensure all toxic bait material has been removed from the HOGHOPPER™. Alternatively, if there is no bait uptake it is likely you have successfully removed all feral pigs in that area.

Stage 7: Pack-up.

Remove all unused PIGOUT® Feral Pig Bait or grain from the site and either incinerate or bury to a depth of 1 metre in a disposal pit and cover with a minimum 500mm of soil. All reasonable steps must be taken to recover carcasses for up to 14 days post baiting. Carcasses should also be buried if possible. HOGHOPPER™s should be triple rinsed to ensure toxic residues do not remain in the device upon the completion of the baiting program.



Carcasses are not always found during or after a baiting program. Do not assume you have not fatally poisoned feral pigs based on no carcasses in the vicinity. Studies have shown carcasses can be found anywhere between 20m to 1200m from bait stations. The Invasive Animals Cooperative Research Centre implemented a paddock trial using wild caught feral pigs to determine whether the HOGHOPPER™ could be used to eradicate a small mob whilst delivering PIGOUT® Feral Pig Bait. All animals fed from the HOGHOPPER™ on the initial night (54 toxic PIGOUT® baits consumed) resulting in 100% mortality. Yet the time until death was highly variable ranging from 8 to 48 hours but animals only display symptoms for the last hour. Thus, poisoned pigs may travel some distance after toxic bait consumption.

What if the carcasses are not found?

Extensive research has been undertaken to evaluate the actual risk to non-target species should they scavenge the carcass of a 1080 baited feral pig. Interestingly, all studies concluded there is little to no risk to non-target native scavengers as those of highest concern (birds of prey and monitors) are relatively to 1080 and because pig carcass residues are low. Conversely, dogs and foxes may be at risk due to their low 1080 tolerance, particularly if they consume the contents of the gastro intestinal tract or vomit. Therefore, farm dogs should never be allowed to scavenge poisoned feral pig carcasses. Rapid decomposition of carcasses reduces the amount of edible material and 1080 concentration within days.



Toxic core, colour and composition of PIGOUT® reduces risk to non-targets



Regulations for the use of the HOGHOPPER™.

As the HOGHOPPER™ is used to deliver toxic bait, toxic baiting rules and regulations apply. Users must adhere to:

- Relevant State, Territory and other Commonwealth legislation.
- Up-to-date information on conditions of use including distance restrictions, public notification and bait preparation, distribution, storage, transportation and disposal of 1080 baits (as per product label).
- Standard Operating Procedure PIG005: Poisoning of feral pigs with 1080, prepared by Trudy Sharp & Glen Saunders, NSW Department of Primary Industries.

What is the HOGHOPPER™ made from?

The HOGHOPPER™ is constructed from lightweight aluminium and powder coated. The bolt holes are pre-drilled and door rails reinforced to withstand constant and rough use in the tough Australian environment.

The HOGHOPPER™ consists of two vertically lifted doors on either end, from which the pigs access the bait. These doors have perforations throughout to allow airflow into the bait chamber, so the baits don't sweat or ferment. On the top, there is a third door opening into a central hopper, where the bait/feed is poured. The central hopper fills both sides of the HOGHOPPER™.

The HOGHOPPER™ is rodent proof as long as all the doors are securely closed.

How heavy is the HOGHOPPER™?

The HOGHOPPER™ weighs about 27kg when empty. It is still vital to ensure the HOGHOPPER™ is appropriately secured to the ground, as pigs (and other livestock) can knock hoppers around or tip them while searching for baits. There are four securing points at ground level through which a star picket or any other type of securing peg can be inserted.



Rapid breeding of feral pigs is a concern



What are the HOGHOPPER™ dimensions?

The HOGHOPPER™ is delivered in a cardboard 'flat pack' (72 x 75 x 15 cm). Up to 10 HOGHOPPERS™ fit on a pallet. When constructed, the HOGHOPPER™ is 70cm long x 70cm high x 60cm wide.

How many baits fit in each HOGHOPPER™?

Four pails of PIGOUT® Feral Pig Bait (256 x 250g baits – 64kg of bait material) or 60kg of grain will fit into the hopper of the HOGHOPPER™. The feed chamber slopes to gravity feed baits into each side of the HOGHOPPER™. There should be no sticking of baits to the chamber walls – baits should freely flow.

Can other animals access the HOGHOPPER™?

The HOGHOPPER™ is designed specifically to prevent non-target animal access. All access points require an animal to lift several kilograms from a prone position. Then whilst holding that position, have a reach of 15cm. Pigs are the only animals in Australia which have that capacity. The HOGHOPPER™ is otherwise sealed, so not even a mouse can enter it.

The pig uses its snout as a shovel, wedge and ram and can lift heavy weights. It is these specific traits that have enabled the HOGHOPPER™ to be used for deployment of toxic material in sensitive eco-systems.

WHERE CAN HOGHOPPERS™ BE PURCHASED?

The HOGHOPPER™ is available direct from
Animal Control Technologies (Australia) Pty Ltd (ACTA).
Fax orders and delivery address to
03 9308 9622 or Call 03 9308 9688.

See www.animalcontrol.com.au

Acknowledgments.

This booklet has been prepared by the teams at the Invasive Animals Cooperative Research Centre and Animal Control Technologies (Australia) Pty Ltd and two skilled engineering firms appointed to manufacture. Contributions from the Federal Government through the Bureau of Rural Sciences Australian Pest Animal Management Program and Animal Control Technologies (Australia) Pty Ltd to develop the product were greatly appreciated. Cooperation from several



government and semi-government agencies throughout Australia and several private landholders made the development of this product possible.

HOGHOPPER™ is a product developed through a successful partnership between the Australian Government, Invasive Animals CRC and Industry. Invasive Animals Cooperative Research Centre – www.invasiveanimals.com
TM HOGHOPPER trademark is licensed to Animal Control Technologies (Australia) Pty Ltd.

® PIGOUT is a registered trademark Licensed to Animal Control Technologies (Australia) Pty Ltd.

This booklet is © Copyright 2012



Other ACTA products for large-scale pest animal management available through agencies and/or leading rural merchant stores:



FOXOFF®

Fox Bait

For the control of foxes



SLUGGOFF®
Slug & Snail Bait

For the control of snails & slugs in the home garden/



FOXSHIELD®

Fox Bait

For the control of foxes



DEN-CO-FUME®

Fumigation Cartridges

For the control of foxes in natal dens



DOGGONE®

Wild Dog Bait

For the control of wild dogs



RABBAIT®

1080 Oat Bait

For the control of rabbits



RABBAIT®

Pindone Oat Bait

For the control of rabbits



MOUSEOFF®

Zinc Phosphide Bait

For the control of mice in crops



MOUSEOFF®
Bromadiolone Rodent Bait

For the control of rats and mice



RATTOFF®

Zinc Phosphide Bait Sachets

Reducing rat populations in sugarcane crops



RODEMISE®

Bromadiolone Rodent Block

For the control of mice and rats in domestic, commercial & industrial buildings



PIGOUT®

Feral Pig Bait

For reductions in feral pig populations



**Animal Control Technologies
Australia Pty Ltd**

Phone: 03 9308 9688 Fax: 03 9308 9622

Email: enquiries@animalcontrol.com.au

More info at www.animalcontrol.com.au

acta
Excellence in Pest
Animal Management

Excellence in Pest Animal Management