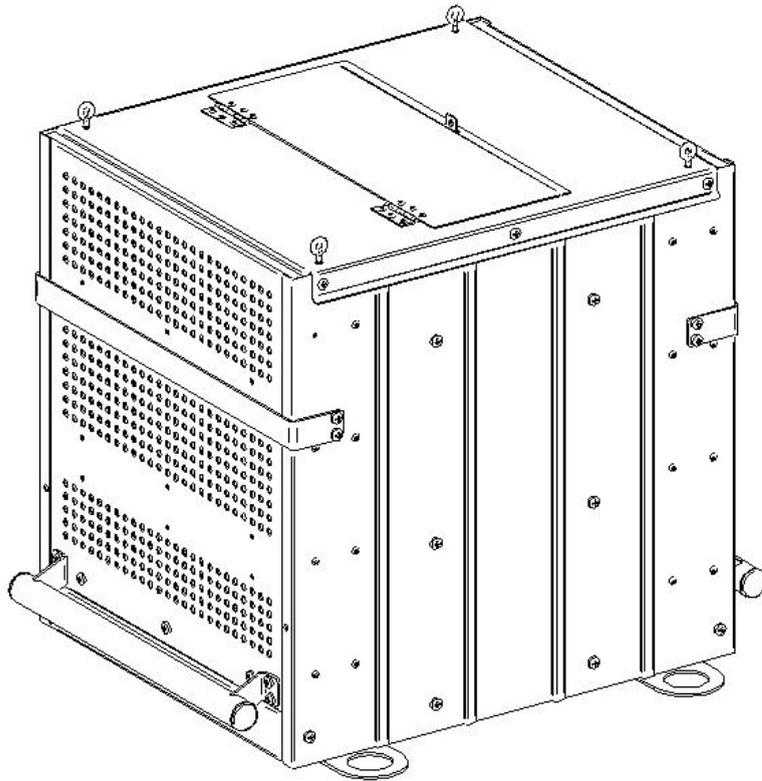


HogHopper™

Feral Pig Bait Delivery Device

Users Manual

REV: 5 August 2012



Another quality product from ACTA

The HogHopper™ was developed through a successful partnership between the Invasive Animals Cooperative Research Centre, the Australian Government and ACTA.

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Invasive Animals Cooperative Research Centre



Australian Government

Australian Bureau of Agricultural and
Resource Economics – Bureau of Rural Sciences



HogHopper™

Feral Pig Bait Delivery Device

IMPORTANT! Please read and understand this manual before using your HogHopper™

In Australia, one of the most common control techniques used to suppress feral pig densities and damages in rural areas is toxic baiting. Sodium fluoroacetate (1080) is the primary toxin used and it is commonly added to substrates found palatable to feral pigs such as grain or meat; it is provided as the pre-dosed shelf-stable PIGOUT® Feral Pig Bait. The PIGOUT® bait is highly target specific, compared to other bait substrates, but there is always a risk that non-target animals could consume poisoned bait material. The HogHopper™ has been designed to reduce this risk by delivering bait specifically to feral pigs. Traditional feral pig baiting can be labour intensive, as bait stations must be checked daily to replace consumed bait or to refresh uneaten bait. As a consequence, many remote feral pig affected areas are baited improperly or they are omitted from baiting campaigns altogether. The HogHopper™ makes feral pig baiting programs far less labour intensive and keeps the bait fresher longer; prolonging its attractiveness.

The HogHopper™ is strategically designed to exploit unique feral pig attributes such as reach, size, feeding behaviour and strength to prevent non-target species access to toxic bait material. The HogHopper™ also holds enough PIGOUT® Feral Pig Bait to eliminate daily operator maintenance, making it suitable for baiting more remote areas.

The HogHopper™ has been developed by the Invasive Animals Cooperative Research Centre (IA CRC). During its development, the HogHopper™ was subjected to rigorous pen and field testing to ensure an optimal final product was created. The HogHopper™ was able to reduce feeding feral pig populations by 90-100% during the final field efficacy trial, whilst delivering either 1080 laced grain or PIGOUT® Feral Pig Bait respectively. What's more, the HogHopper™ successfully excluded all non-target species, including small rodents.

This manual has been devised to help ensure you get the most out of your HogHopper™. We include the following information on feral pigs and baiting that you may find useful. If you require any further information please contact:

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Stage 1 – Know your target

It is important to have an understanding of the ecology and biology of your target species before you begin to develop a baiting campaign. This helps to determine why, when, where and how often you should bait to achieve the greatest results.

Diet

- Pigs must drink at least once a day in hot weather
- Pigs are opportunistic omnivores
- Pigs will readily switch foods and feeding places
- Pigs have high protein requirements, particularly for successful rearing of piglets

Reproduction

- Sows can produce 2 weaned litters in 12-15 months
- The average litter size is 6 piglets
- They can reproduce at 6-12 months of age
- Fecundity increases with age and body weight
- Breeding usually peaks in May and October, although pigs will breed throughout the year in good conditions

Habitat and home ranges

- Home ranges are generally determined by resource abundance
- A daily home range can range from 0.7-1.4 Sq km
- An annual home range can be as large as 43 Sq km (boars) or 20 Sq km (mature sows)
- Feral pigs typically live in areas that provide them with reliable food, water and shelter

Behaviour

- Usually most active from late afternoon to early morning
- Movements can be affected by shelter, food, water, disturbance 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

Common signs of pig presence

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

Stage 2 – Timing

Baiting is usually most effective when temperatures are high and resources such as food and water are limited. In these conditions, feral pigs often congregate near permanent water and they are more inclined to consume bait. This does not apply for all areas and sometimes trial and error may be your best approach. Additionally, you should always coordinate baiting with your neighbours to increase the target area and slow re-invasion.

Stage 3 – Site selection

Identify all feral pig hotspots in the target area based on historical records and/or habitat and resource requirements. Assess each hotspot for feral pig presence (tracks, scats and rooting). If pigs are active in the area, place your HogHopper™ where feral pigs are most likely to come into contact with the device. If you are using multiple HogHopper™s be sure to distance them far enough apart so that the same animals do not feed from multiple devices. Remember, feral pig home ranges vary greatly according to the environment (temperature, alpine, rangeland, tropical rainforest etc), resource availability, climatic conditions, the age and sex of the animals and topography. Therefore, it is not possible to provide set distance, although as a general rule of thumb place one HogHopper™ at each hotspot unless they are closer than 1-2 kilometres to each other. Thereafter, you may need to adjust HogHopper™ locations accordingly. Motion sensing cameras can be valuable for determining whether the same pigs are feeding from multiple HogHopper™s.

Always place the HogHopper™ in a shady and discrete location under trees or bushes near water holes or wallows. 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 site to avoid tampering by the public.

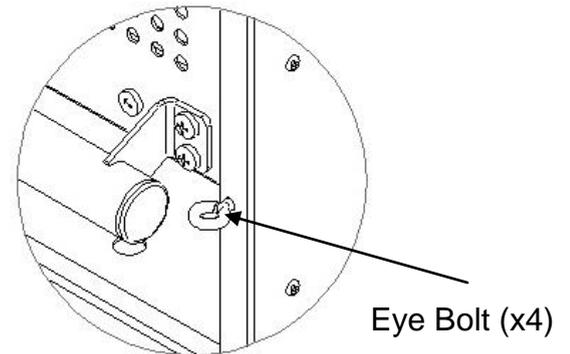
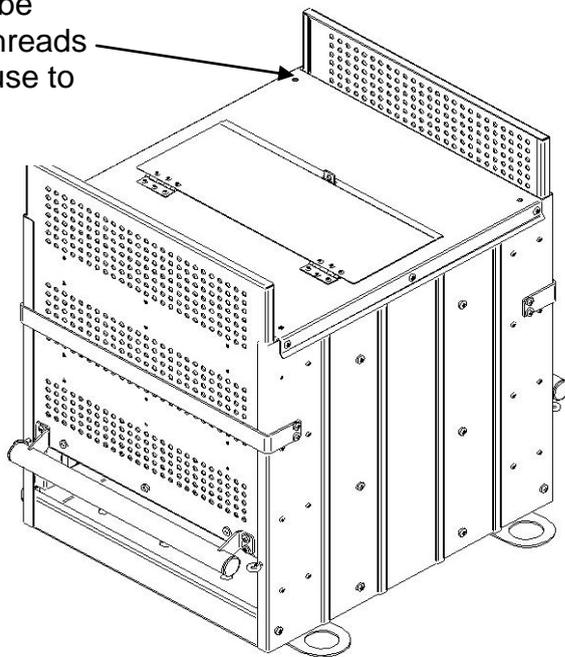
HogHopper™s are best anchored using 4 star-droppers (T-posts). In areas inhabited by cattle or other large animals, a strand of barbed wire should be strung around the angled posts to prevent cattle from rubbing against and warping the HogHopper™.

Stage 4 – Free-feeding

Insert the four (4) locking pins supplied (see diagram HogHopper™ training position) to set up your HogHopper™ for free-feeding. This stage is vital to the success of your program as this is when you teach the feral pigs to use the lift doors. If you skip this stage and close the doors completely, your efforts will be in vain. Load the HogHopper™ with the non-toxic free-feed bait or PIGOUT® Feral Pig Bait Free Feed. Various free feeds can be used, such as grain or pellets. It is a good idea to use PIGOUT® Feral Pig Bait Free Feed as you will then not have to recruit them over again before toxic baiting.

Do not be concerned if pigs do not feed immediately, as it can take several days to recruit them onto bait from natural foods. Continue to deploy PIGOUT® Feral Pig Bait Free Feed or grain every 3-4 days once the animals have begun feeding. When the bait take plateau's and you are confident that all feral pigs have learnt how to use the lift doors (motion sensing cameras can be highly valuable at this point), you can move on to Stage 5.

Eye Bolts can be screwed into M6 threads (x4) when not in use to prevent loss



HogHopper™ doors in training (open) position

Stage 5 – Toxic-baiting

Remove any leftover free-feed bait material from the HogHopper™, and ***remove the bottom door locking eye bolt pins to allow the doors to close completely***. Load the device with sufficient toxic PIGOUT® Feral Pig Bait material based on free-feed bait uptake and 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 until bait uptake ceases (typically 3-4 days).

Please Note! never use toxic bait with the doors in the training (open) position.

Stage 6 – Follow-up

You should always run a follow-up phase once toxic bait uptake ceases, as new animals may have arrived during toxic baiting that have learnt how to use the lift doors. As such, return to stage 4 (free-feeding), but make sure you have removed all toxic bait from the HogHopper™. When you believe that the new animals have learnt how to use the lift doors, proceed to stage 5 (Toxic-baiting). Alternatively, if there is no bait uptake it is likely that 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 covered with a minimum 500mm of soil in accordance with product label directions. Reasonable steps must also be taken to recover carcasses for up to 14 days post baiting and carcasses should be incinerated or buried to a depth of 1 metre in a disposal pit and covered with a minimum 500mm of soil.

If you do not find any carcasses during your carcass recovery phase, do not assume that you have not fatally poisoned feral pigs. Studies where intensive carcass searches were undertaken have confirmed that carcasses can be found anywhere between 20m to 1200m from bait stations. Remember, that's only including carcasses that were actually found. The IA CRC 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 (10/10) fed from HogHopper™ on the initial night (54 toxic PIGOUT® baits in total), which resulted in 100% mortality. The time until death ranged from 8 hours to 48 hours (animals only displayed visual symptoms for last hour). This highlights that baited pigs may travel large distances from the HogHopper™ 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. Analytical studies showed that residues in carcass material other than gut and stomach contents is low. The studies concluded that there is little to no risk to non-target native scavengers. Those of highest concern (birds of prey, Corvids and Monitors) have a high tolerance to 1080. However, dogs and foxes that scavenge pig carcasses may be at risk due to their low 1080 tolerance, particularly if they consume contents from the stomach or vomit. **Therefore, farm dogs should never be allowed to scavenge poisoned feral pig carcasses.** Rapid decomposition of carcasses will reduce the amount of edible material and 1080 concentration within days depending on weather conditions.

Regulations for the use of HogHopper™

Because the HogHopper™ is being used to deliver toxic bait, toxic baiting rules and regulations do 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**
- **Standard Operating Procedure PIG005: Poisoning of Feral pigs with 1080, prepared by Trudy Sharp & Glen Saunders, NSW Department of Primary industries**

Assembly Instructions

The HogHopper™ easily assembles in 10 to 15 minutes; working on a table will ease assembly. Please use the M8 Screws supplied for all fitment as they can be fitted hand tight and then tightened with a Phillips Head screwdriver.

1. Screw fit (x4) Locating Brackets(#2) and (x1) Bait Divider(#4) to Base (#1)
2. Screw fit (x2) Side Panels(#11) to the Base(#1).
3. Screw fit (x2) Dividers(#5) between the Side Panels
4. Screw fit Top Panel(#10) to Side Panels
5. Screw fit a Nudge Bar to each Door Assembly
6. Slide the (x2) Doors(#7) into position
7. Screw fit (x2) Upper Door Stops(#6) to the Side Panels
8. Fix Bottom Door Braces(#12) to bottom of Doors
9. Check that Doors slide without obstruction
10. For Bait Training, raise the Door and insert M6 eyebolts(#13). The door can then be lowered to rest on pin(s) and remain partially open
11. Refer to ACTA product label instructions Re: Baiting Procedures

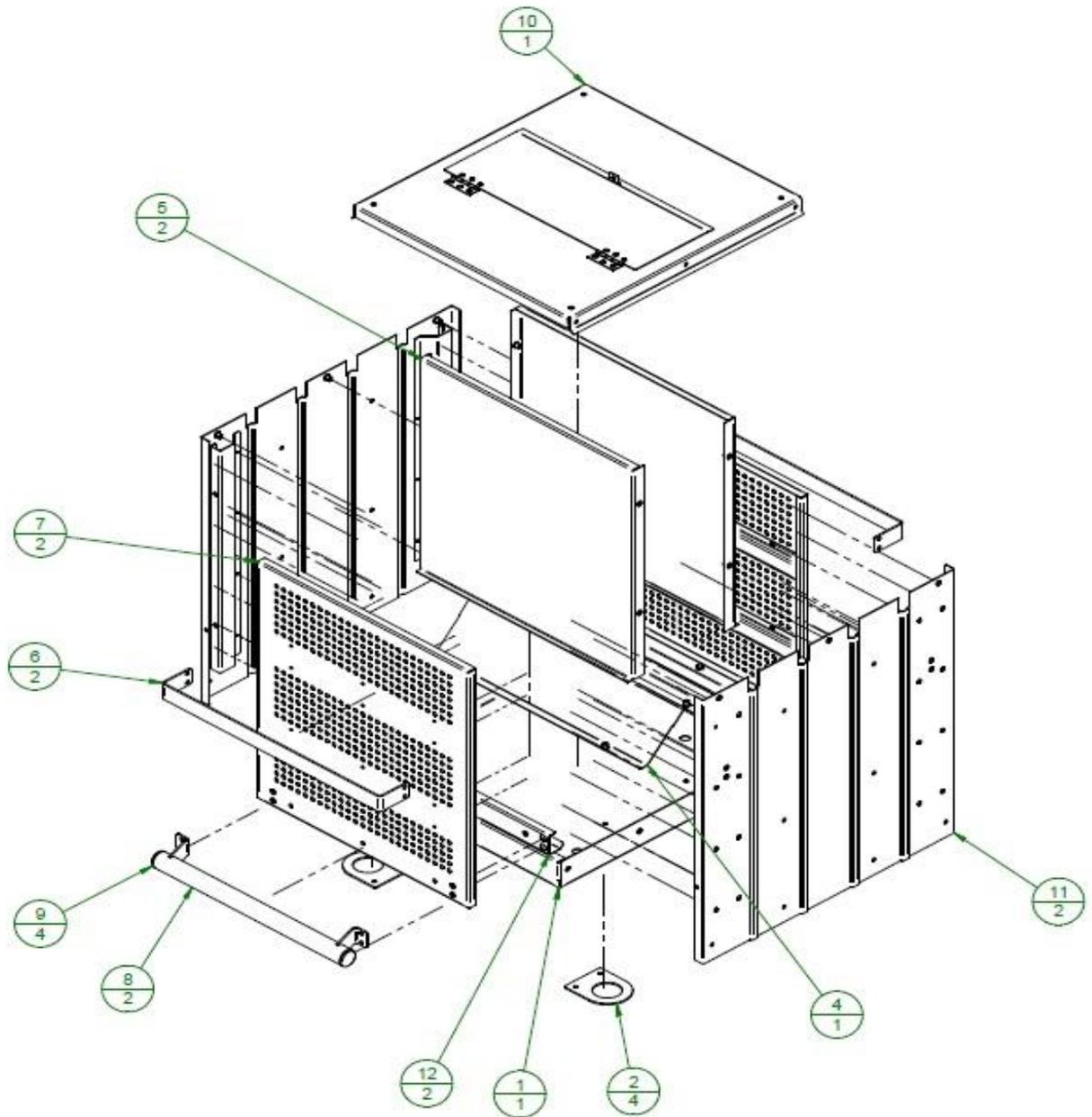
Maintenance

Your HogHopper™ is virtually maintenance free; although care should be taken to ensure dirt or debris does not build up in the door channels, as it may impede the smooth and consistent door sliding. Application of a dry film silicone lubricant to door slides from time to time will ensure correct operation. Do not use wet film lubricants that dirt can stick to as this will hinder sliding.

HogHopper™ Parts List

<i>Item #</i>	<i>Description</i>	<i>Qty</i>
1	Base	1
2	Locking Bracket	4
3	Pan Head M8x20	56
4	Bait Divider	2
5	Divider	2
6	Upper Door Stop	2
7	Door	2
8	Nudge Bar	2
9	PVC Plug (black)	4
10	Top Panel	1
11	Side Panel	2
12	Bottom Door Brace	2
13	Eyebolt M6x50 (S/S)	4

HogHopper™ Parts Exploded



Item Number	Title	Quantity
1	Hog Hopper Base Assy	1
2	Hog Hopper Locating Brkts	4
3	M8 x 16 pan head philips s.steel	56
4	Hog Hopper Bait Divider Assy	1
5	Hog Hopper Divider Assy	2
6	Hog Hopper Upper Door Stop	2
7	Hog Hopper Door Assy	2
8	Hog Hopper Nudge Bar Assy	2
9	40mm PVC round tube plug Flexliner type RTRI-5575 or equiv.	4
10	Hog Hopper Top Panel Assy	1
11	Hog Hopper Side Panel Assy	2
12	BOTTOM DOOR BRACE ASSY	2
13	EYEBOLT M6 X 50mm S/STEEL	4

Assembly Instructions

1. Screw Fix four Locating brkts (#2) and one Bait Divider(#4) to base (#1) using M8 screws
2. Screw Fix two Side panels (#12) to the Base (#1) using M8 screws.
3. Screw Fix two Dividers (#5) between the side panels using M8 screws
4. Screw Fix Top panel (#10) to Side panels using M8 screws
5. Screw fix a Nudge bar (#8) to each door assembly (#7) using M8 screws
6. Slide the Doors into position.
7. Screw fix the two Upper Door Stops (#6) to the Side panels using M8 screws.
8. Fix Bottom Door Braces (#12) with M8 screws
9. Check that Door(s) slide without obstruction
10. For bait training, raise the door and insert the M6 eyebolts. Lower the door so that it rests on the pin and remains open.
11. Refer to ACTA instructions re baiting procedure.