

Background

The use of fixed large panel or mesh traps for the live capture and destruction of feral pigs (*Sus scrofa*) is common throughout NSW.

Prior to trapping, free feeding of bait is offered at sites where pigs are active. After selecting a suitable site, a trap is then erected and free feeding is continued for a number of days before the trap is set. After pigs have been caught they are shot whilst still inside the trap. Good trapping techniques may enable whole groups of pigs to be caught at one time with minimal impact on non-target animals.

This standard operating procedure (SOP) is a guide only; it does not replace or override the relevant legislation that applies in NSW. The SOP should only be used subject to the applicable legal requirements (including WHS) operating in the relevant jurisdiction.

Individual SOPs should be read in conjunction with the overarching Code of Practice for that species to help ensure that the most appropriate control techniques are selected and that they are deployed in a strategic way, usually in combination with other control techniques, to achieve rapid and sustained reduction of pest animal populations and impacts.

Application

- Trapping should only be used in a strategic manner as part of a co-ordinated program designed to achieve sustained effective control.
- Trapping is effective for reducing numbers of feral pigs in areas where 1080 poisoning cannot safely be used or when pig populations are relatively low. It is often used as a follow-up control method after initial reduction of high density pig populations.
- It is successful as a control technique when food resources are limited.
- Maintenance of traps is time consuming. Therefore, it is only suitable to use traps in situations where the operator has time to check them on a daily basis.
- Shooting of pigs should only be performed by skilled operators who have the necessary experience with firearms and who hold the appropriate licences and accreditation.
 Storage and transportation of firearms and ammunition must comply with relevant legislation requirements.

Animal welfare implications

Target animals

- Traps should be set up at sites where vegetation can provide shade and shelter. Pigs
 have poor thermoregulation and can suffer greatly when exposed to extremes of heat
 and cold.
- Free feeding is essential for effective trapping as it increases the proportion of feral pigs in the area encountering and learning to enter the trap. Free feeding also trains additional pigs to enter the trap after the first few pigs have been caught and the trap door is activated.
- Free feeding also helps identify suitable trap sites and allows early identification of non-target interference.
- To minimise the possibility of dehydration and heat or cold stress, all traps must be inspected daily.
- Trapping must not be conducted during extremes of weather; however, shade cloth or hessian can be used to provide some protection if the weather changes unexpectedly.
- The trap should be constructed in a way so as not to cause injury from loose wire, sharp edges or malfunctioning gates.
- Captured animals must be approached carefully and quietly to reduce panic, further stress and risk of injury.
- Trapped pigs must be destroyed by shooting as quickly and humanely as possible.
- If lactating sows are caught in a trap without their young, efforts should be made to find dependent piglets and kill them quickly and humanely.

Non-target animals

- Traps are designed for the capture of feral pigs and so pose only a small risk of capturing other species. Use of a pig-specific gate trip mechanism minimises the risk of catching some species e.g., wallabies. Placement of a steel post across a funnel trap entrance at a height of 1 metre above the ground will prevent cattle from entering.
- Live non-target animals caught in traps must be examined for injuries and signs of illness or distress and dealt with as follows:
 - o Animals which are unharmed or have only received minimal injuries such as minor cuts or abrasions should be immediately released at the site of capture.
 - o Animals which have more severe injuries or which are suffering from thermal stress should receive appropriate attention. An animal suffering from thermal stress can initially be placed in a suitable quiet holding area which provides warmth or shade to allow recovery before release. Animals with treatable injuries that cannot be immediately released or those failing to recover from thermal stress should be presented to a veterinarian or a registered wildlife carer for treatment.
 - o Animals that have injuries which are untreatable or which would compromise their survival in the wild should be euthanased using a technique that is suitable for the

species. For more information on euthanasia techniques refer to *GEN001 Methods of Euthanasia*.

• If a trap continually catches non-target animals, an alternative bait attractant could be considered or the trap could be moved to another site where it will have minimal effect on other species.

Workplace health and safety considerations

- During construction of traps, operators should be wary of the risks of injury from lifting heavy items. Leather gloves and eye protection will help prevent injuries from wire, steel panels and hammers.
- Firearms are potentially hazardous. Everyone should stand well behind the shooter when pigs are being shot. The line of fire must be chosen to prevent accidents or injury from stray bullets or ricochets.
- Care must be taken when handling pig carcasses as they may carry diseases such as leptospirosis, Q fever, brucellosis, sparganosis, melioidosis and tuberculosis that can affect humans and other animals. Routinely wash hands after handling all carcasses. Carcasses can be heavy (>100kg), so care must be taken when lifting/dragging.
- Never enter a trap with a live captured adult pig. Feral pigs can be aggressive and will attack, especially in situations when they, or their dependent piglets, are distressed or threatened.

Equipment required

Traps

- Several trap designs exist, differing mainly in their gate construction. These include the silo trap, the drop-gate trap, the panel trap and the box trap. All are basically an enclosed area with a one-way gate.
- It is best to use steel mesh with a small grid size e.g., 50mm x 75mm or 50mm x 100mm. A grid larger than this will damage the pigs' snouts if they charge the mesh.
- The minimum height needs to be 1.5 metres.
- Entrance to the trap can be a funnel entrance, a tripped gate or a pig specific trigger.
- Choice of trap design will depend upon habitat, material available and accessibility to site.
- Details of trap specifications and construction can be obtained from relevant pest control manuals and guidelines, for example:
 - o PestSmart: https://pestsmart.org.au/resources/

Bait

• Bait preferences can vary from area to area. Current diet will sometimes determine how readily the pigs will accept an alternative food.

- Pigs will be more attracted to bait with a strong odour.
- Bait can include grain (e.g., wheat, oats, barley or sorghum) or commercial pellets. Grain can be soaked in water (fermented) with molasses added as an attractant). Vegetables and fruit can also be used.
- It is illegal in NSW to use mammal product e.g., meat portions or carcases, as free feed or as bait in traps due to the risk of transmitting disease. However, a permit can be obtained from the NSW Chief Veterinary Officer (CVO) for the purposes of baiting. Under these circumstances the CVO would need to be satisfied that the mammal product being used does not constitute a disease risk. Please refer to the Biosecurity Regulation 2017 under the NSW Biosecurity Act 2015.
- Large amounts of bait will be required; around 10-20 kg each time the trap is set.

Firearms and ammunition

- Smaller calibre rifles such as .22 magnum rimfire with hollow/soft point ammunition are adequate for euthanasia of pigs at short range (within 5 metres).
- 12 gauge shotguns may also be used with shot sizes of SG or SSG for large pigs over 40kg, and BB or AAA cartridges for small pigs less than 40 kg.

Procedures

Selection of trap sites

- Free feeding should be undertaken at sites where pigs are active, for example, near watering points, holes in fences, wallow areas or sites of recent damage to crops. This helps to retain pigs in the area and will give an indication of the most suitable trap site. Leave 5 to 10 kgs of grain or pellets at each selected site. If necessary a short (5-10m) trail of bait can be used to lure pigs to a chosen trap site.
- Cease any activity in the area that will disturb normal feeding behaviour e.g., shooting or use of dogs.
- If possible, choose a site that is in a shady area with as much natural vegetation as possible.

Placing the trap

- Build the trap at a site where bait is being regularly taken.
- Place fresh bait both inside and outside the trap to keep pigs feeding for 1 to 2 days.
- Once the pigs have become accustomed to the trap and are still regularly feeding, only place bait inside the trap. Keep feeding until all pigs within a group are going into the trap to feed before it is actually set. This may take 1 to 2 weeks.

Setting the trap

 Once bait is being taken inside the trap, set each evening and check the following day, preferably in the morning.

- Continue to set the trap each evening until no more pigs are caught. A change of bait may be tried to entice more pigs, with free-feeding again for 1 to 2 nights before activating the trap.
- Traps can be left at permanent sites and reactivated when fresh pig activity is detected or they can be moved to new sites depending on requirements.
- Some baits, e.g., grain, may attract birds. Where this happens, lightly cover the bait with vegetation. Night baiting may also reduce bird take. Additionally, grain that has been dyed green may help to deter consumption by birds.

Shooting of pigs

- Caught pigs should be destroyed by shooting inside the trap.
- Shooting must be conducted to cause sudden and painless death with minimum distress to the animal. Only head shots are acceptable.
- The shooter should approach the animals in a calm and quiet manner. To prevent unnecessary agitation of the trapped pigs, other people should keep away from the area until shooting is completed. Park vehicles away from the trap site and keep voices low.
- Direct shot through open top of the trap or with the muzzle of the rifle through the mesh of the trap panel. Do not shoot pigs at a distance through the trap panel. To maximise the impact of the shot and to minimise the risk of misdirection the range should be as short as possible.
- Accuracy is important to achieve a humane death. Shots are more likely to be accurate when the animal is not moving and is looking at the shooter.
- A single, accurate shot to the head should ensure instantaneous loss of consciousness and rapid death without resumption of consciousness. However, if an animal does not appear to be killed by the initial shot, then a further shot (or shots) must be taken to ensure death before targeting further animals.
- Shots must be aimed to destroy the major centres at the back of the brain near the spinal cord. This can be achieved by one of the following methods (see also Figure 1).

Frontal position

• This is the ideal site for shooting pigs. The firearm should be aimed at a point midway across the forehead and about 2cm above the level of the eyes. The bullet should be directed in the direction of the tail.

Temporal position

• This shot is useful for older pigs and large boars that can have foreheads consisting of thick bones and a ridge that runs down the centre. The firearm is aimed from the side of the head so that the bullet enters the skull at a point midway between the eye and the base of the ear on the same side of the head. The bullet should be directed horizontally into the skull.

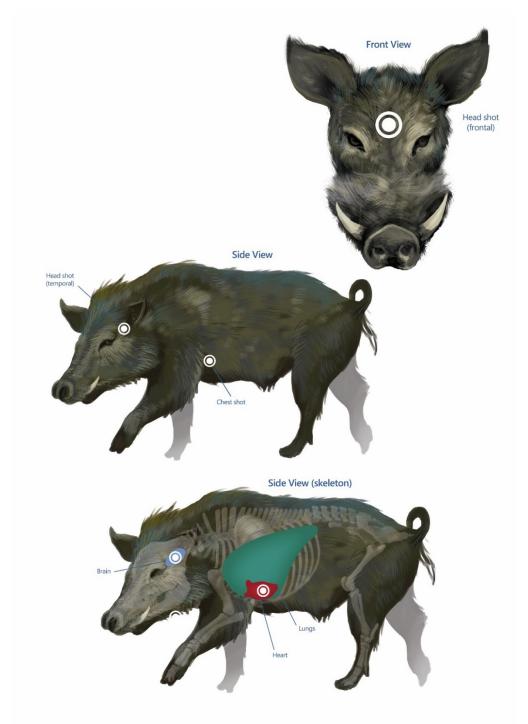
Behind the ear

- This shot is also used for older pigs and large boars that can have foreheads consisting of thick bones and a ridge that runs down the centre. The firearm is aimed at a point behind the ear directed towards the opposite eye.
- Once all animals in the trap have been shot, death should be confirmed in each animal by observing a combination of the following:
 - o no heartbeat
 - o no breathing
 - o no corneal reflex (no blinking when the eyeball is touched)
 - o no response to a painful stimulus e.g., a pinch of the ear tip.
- If death cannot be verified, a second shot to the head should be taken immediately.
- If small piglets (<5kg) are caught in the trap, it is preferable to shoot the adult pigs first to avoid the piglets being trampled However, ideally, shooters should shoot those animals that are calm and present themselves for an accurate shot first, regardless of size or age. Very small piglets (<5kg) can also be captured by hand and euthanased with a concussive blow to the head once the larger pigs have been shot.

Disposal of carcasses

Carcasses should be removed from the trap to minimise disease risks associated with using meat to attract other pigs as discussed above. Carcases should be buried some distance away from the trap. For further information about disposal of carcases refer to https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0003/1299603/animal-carcass-disposal.pdf





Head shots (temporal or frontal - as above, or behind the ear -not shown) should be used for shooting feral pigs caught in traps. See text for details.

Note that shooting an animal from above or below the horizontal level as depicted here will influence the direction of the bullet through the body. Adjustment to the point of aim on the external surface of the body may need to be made to ensure that the angled bullet path causes extensive (and therefore fatal) damage to the main organs in the target areas.

References

- Animal Health Australia (2015). *Operational manual: Destruction of animals (Version 3.2)*. Australian Veterinary Emergency Plan (AUSVETPLAN), Edition 3. Agriculture Ministers' Forum, Canberra, ACT.
- Bengsen, A., Gentle, M., Mitchell, J., Pearson, H., & Saunders, G.R. (2014). Management and impacts of feral pigs in Australia. *Mammal Review*, 44: 135-47.
- Blackmore, D. K., et al. (1995). The use of a shotgun for the emergency slaughter or euthanasia of large mature pigs. *The New Zealand Veterinary Journal*, 43: 134-137.
- Choquenot, D., McIlroy, J. & Korn, T. (1996). *Managing vertebrate pests: pigs*. Bureau of Resource Sciences. Australian Government Publishing Service, Canberra. Available at: https://pestsmart.org.au/resources/
- Invasive Animals CRC. (2014). *Trapping for feral pig control in Australia. PestSmart Feral Pig Factsheet*. Invasive Animals CRC. Available at: https://www.cwba.org.au/wp-content/uploads/2018/11/Trapping-for-feral-pig-control-in-Australia.pdf