

## PIG003 GROUND SHOOTING OF FERAL PIGS

Prepared by Trudy Sharp & Glen Saunders, NSW Department of Primary Industries

### Background

Feral pigs (*Sus scrofa*) have a significant impact on the environment and agricultural production and are a potential reservoir and vector of exotic diseases. Control methods include poisoning, trapping, exclusion fencing, ground shooting and shooting from helicopters.

Ground shooting of feral pigs is undertaken by government vertebrate pest control officers, landholders and professional or experienced amateur shooters. Although intensive ground shooting operations may reduce the local populations of feral pigs, it is rarely effective for damage control and is not suitable as a long-term control method. Shooting from a helicopter is a more effective method of quickly reducing feral pig populations. Refer to **PIG002 Aerial shooting of feral pigs**.

Shooting can be a humane method of destroying feral pigs when it is carried out by experienced, skilled and responsible shooters; the animal can be clearly seen and is within range; and, the correct firearm, ammunition and shot placement are used.

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

### Application

- Shooting should only be used in a strategic manner as part of a co-ordinated program designed to achieve sustained effective control.
- Ground shooting is often used as a secondary control method after initial reduction of high density pig populations by aerial shooting and/or 1080 poisoning. It is time-consuming and labour intensive and therefore an inefficient method for large-scale feral pig control in Australia.
- Ground shooting should not be conducted prior to, or during any other control program eg. trapping or poisoning, as it can disrupt normal feral pig activity and may cause temporary dispersal of pigs to other areas.
- Ground shooting is not suitable in inaccessible or rough terrain where sighting of target animals and accurate shooting is difficult or when wounded animals cannot easily be followed up and killed.
- Trained dogs are sometimes used to detect or flush out pigs prior to shooting. It is unacceptable to set a dog onto a feral pig with the intention of bringing it down, holding or attacking it.
- Shooting of feral 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 legislative requirements.

## **Animal Welfare Considerations**

### **Impact on target animals**

- Humaneness of shooting as a control technique depends almost entirely on the skill and judgement of the shooter. If properly carried out, it is one of the most humane methods of destroying feral pigs. On the other hand, if inexpertly carried out, shooting can result in wounding which may cause considerable pain and suffering.
- Shooting must be conducted in a manner which aims to cause immediate insensibility and painless death. The appropriate firearms and ammunition must always be used.
- Shooters should not shoot at an animal unless it is clearly visible and they are confident of killing it with a single shot.
- Only head (brain) or chest (heart-lung) shots must be used. Shots to the head are preferred over chest shots as they are more likely to cause instantaneous loss of consciousness. Chest shots do not render the animals instantaneously insensible and are likely to result in a higher incidence of wounding. Shooting at other parts of the body is unacceptable.
- The shooter must be certain that each animal is dead before another is targeted.
- Wounded pigs must be located and dispatched as quickly and humanely as possible with a second shot preferably directed to the head. If left, wounded animals can suffer from the disabling effects of the injury, from sickness due to infection of the wound, and from pain created by the wound.
- If lactating sows are shot, efforts should be made to find dependent piglets and kill them quickly and humanely. Piglets that escape after a sow has been shot will usually return to the area within the next few hours.
- If dogs are used to flush feral pigs out from vegetation, they must be adequately controlled to prevent them from attacking pigs. In the event that a dog latches onto a pig, the dog must be called off and be made to stay behind the shooter until the pig has been killed.

### **Impact on non-target animals**

- Shooting is relatively target specific and does not usually impact on other species. However, there is always a risk of injuring or killing non-target animals, including livestock, if shots are taken at movement, colour, shape or sound. Only shoot at the target animal once it has been positively identified and never shoot over the top of hills or ridges.
- Shooting should be used with caution around lambing paddocks as it may disturb the lambing flock and cause mismothering.
- If using dogs to locate and flush feral pigs out from vegetation, the following should be observed:
  - Dog handlers must be experienced and the dogs well trained i.e. they must be easily controlled by a whistle or call, obey the handlers' commands and will not chase or attack non-target animals including

livestock. Dogs that are deliberately bred or trained to attack without provocation must not be used.

- Handlers must not encourage dogs to bring down or attack feral pigs. They should only be used to locate pigs, not to capture and hold them.
- Chest, neck and body plates should be used to prevent serious injuries which can be inflicted by feral pigs. If a dog is injured it must receive veterinary attention as soon as possible.
- Never shoot at a pig until the dog is behind the shooter.
- Do not let the dog become fatigued as it is more likely to sustain injury.
- Where affordable, it is recommended that dogs wear a working radio collar so that they can be located quickly if lost. Lost dogs can suffer from dehydration, starvation and exposure and can have a negative impact on livestock and native fauna if they are left to run wild.
- For more details refer to **GEN002** *The care and management of dogs used for pest animal control*.

## Health and Safety Considerations

- Firearms are potentially hazardous. All people should stand well behind the shooter when an animal is being shot. The line of fire must be chosen to prevent accidents or injury from stray bullets or ricochets.
- Firearm users must strictly observe all relevant safety guidelines relating to firearm ownership, possession and use.
- Firearms must be securely stored in a compartment that meets State legal requirements. Ammunition must be stored in a locked container separate from firearms.
- Adequate hearing protection should be worn by the shooter and others in the immediate vicinity of the shooter. Repeated exposure to firearm noise can cause irreversible hearing damage.
- Safety glasses are recommended to protect the eyes from gases, metal fragments and other particles.
- 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.

## Equipment Required

### Firearms and ammunition

- Large calibre, high powered rifles (.243 minimum), fitted with a telescopic sight should be used eg. .243 Winchester, .270 Winchester, .308 Winchester. Hollow-point or soft-nosed ammunition is preferred
- 12-gauge shotguns with heavy shot sizes of SG or SSG, may be effective, but only up to a distance of 20 metres from the target animal.
- The accuracy and precision of rifles should be tested against inanimate targets prior to the commencement of any shooting operation.

### Other equipment:

- If shooting at night, a handheld spotlight (at least 100 watt), or a helmet or headband mounted 12 volt (35 watt) spotlight
- First Aid kit
- Lockable firearm box
- Lockable ammunition box
- Personal protective equipment (hearing and eye protection)
- Communication devices (2 way/mobile etc.) are recommended for safety reasons

## Procedures

- The best time to ground shoot feral pigs is when they are most active i.e. in the early morning, late evening and throughout the night if spotlights are used.
- Feral pigs must NOT be shot from a moving vehicle or other moving platform as this can significantly detract from the shooters' accuracy. Ensure you are in a firm, safe and stable position before taking a shot.
- The objective is to fire at the closest range practicable in order to reduce the risk of non-lethal wounding. Accuracy with a single shot is important to achieve an immediate and, therefore, humane death.
- A feral pig should only be shot at when:
  - It can be clearly seen and recognised;
  - It is within the effective range of the firearm and ammunition being used;
  - It is safe to shoot (i.e. there is a safe backstop, no hard surfaces or water near target); and
  - A humane kill is highly probable. If in doubt, do NOT shoot.
- The shooter must aim either at the head, to destroy the major centres at the back of the brain near the spinal cord or, at the chest, to destroy the heart, lungs and great blood vessels. This can be achieved by one of the following methods (*see diagrams in Appendix*):

Head Shot (this is the preferred point of aim)

For smaller pigs:

*Frontal position (front view)*

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 horizontally into the skull.

For larger pigs:

*Temporal position (side view)*

This method is preferred for adult pigs due to the heavier bone structure of the front of the skull.

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.

Chest Shot

*Side view*

The firearm is aimed horizontally at the centre of a line encircling the minimum girth of the animal's chest, immediately behind the forelegs. The shot should be taken slightly to the rear of the shoulder blade (scapula). This angle is taken because the scapula provides partial protection of the heart from a direct side-on shot.

*Front view*

The firearm is aimed horizontally at the point midway between the forelegs and immediately below the base of the throat. Frontal shots should only be used for animals in the 'head high' position. Adult males have a thickened cartilaginous shield under the skin which protects the shoulders and ribs during fighting. This shield may interfere with frontal chest shots; therefore side chest shots are preferred.

- When using a rifle, the target animal must be stationary and within a range that permits accurate placement of the shot. Shots to the head are preferred over chest shots.
- When using a shotgun, the target animal may be stationary or mobile, but must be no more than 20 metres from the shooter. The pattern of shot should be centred on the head or chest. It is essential that the distance to the target animal is accurately judged. To achieve adequate penetration of shot, the animal must be in range. It is recommended that shooters practice estimating distances before a shooting operation.
- The target animal should be checked to ensure it is dead before moving on to the next animal. Death of shot animals should always be confirmed by observing the following:
  - Absence of rhythmic, respiratory movements;
  - Absence of eye protection reflex (corneal reflex) or 'blink';
  - A fixed, glazed expression in the eyes; and
  - Loss of colour in mucous membranes (become mottled and pale without refill after pressure is applied).

If death cannot be verified, a second shot to the head should be taken immediately.

## Further Information

Contact the relevant Commonwealth, State or Territory government agency from the following list of websites:

Commonwealth	Department of Environment and Heritage <a href="http://www.deh.gov.au/">http://www.deh.gov.au/</a>
ACT	Environment ACT <a href="http://www.environment.act.gov.au/">http://www.environment.act.gov.au/</a>
NSW	NSW Agriculture <a href="http://www.agric.nsw.gov.au">www.agric.nsw.gov.au</a>
NT	Parks & Wildlife Commission <a href="http://www.nt.gov.au/ipe/pwcnt/">www.nt.gov.au/ipe/pwcnt/</a>
QLD	Department of Natural Resources and Mines <a href="http://www.nrm.qld.gov.au">www.nrm.qld.gov.au</a>
SA	Animal & Plant Control Commission <a href="http://sustainableresources.pir.sa.gov.au">http://sustainableresources.pir.sa.gov.au</a>
TAS	Department of Primary Industries, Water & Environment <a href="http://www.dpiwe.tas.gov.au">www.dpiwe.tas.gov.au</a>
VIC	Department of Primary Industries, Agriculture & Food <a href="http://www.dpi.vic.gov.au">www.dpi.vic.gov.au</a>
WA	Agriculture WA <a href="http://www.agric.wa.gov.au">www.agric.wa.gov.au</a>

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Recommended shot placements - Feral pig

Diagram 1

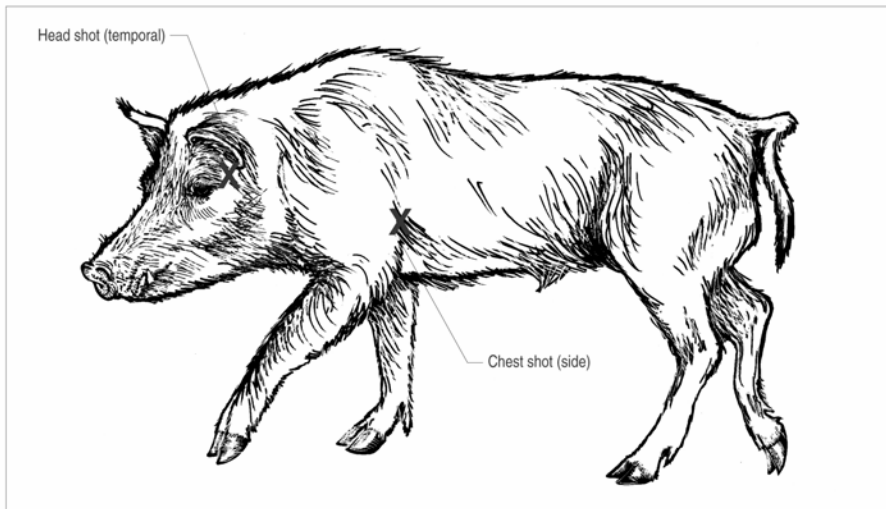


Diagram 2 - Side view (skeleton)

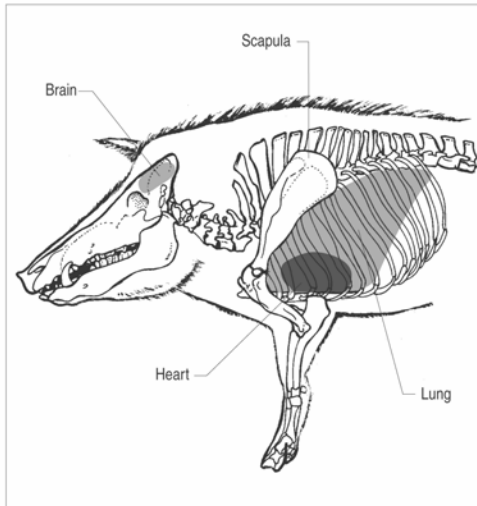


Diagram 3 - Head shot (frontal)

