



SHOOTING / HUNTING OF FERAL PIGS



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This practical guide provides advice that will help you manage feral pig problems in the Dry Tropics region.

Several techniques are available to control feral pigs. Generally no stand alone technique is sufficient for each situation so a suite of integrated techniques or combination of methods is necessary. When developing a pig control strategy, managers need to consider what problems the pigs are causing and then decide which control option or combination of options is most suitable to **reduce the problem**.

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INTRODUCTION

Hunting has long been established as a control technique for feral pigs (*sus scrofa*), with ground shooting or hunting with dogs as the primary method of pig control for many landholders. Hunting of feral pigs is a major recreational pursuit throughout Australia, as pigs are considered the main feral animal to be hunted in Australia. Aerial shooting is increasingly becoming more popular since the 1980s.

Limited information is available on the use of hunting as a control technique. Aerial shooting has been shown to be an efficient and cost effective method of controlling pigs over extensive areas in remote locations and in sparsely vegetated landscapes. However ground hunting is a very labour intensive and ineffective method of controlling pigs over large areas, particularly when pigs are at low densities. The main benefit of hunting is as a mopping up exercise to eliminate residual populations after more effective control programs have been used. The use of recreational hunters to control pig numbers is seldom effective and may disperse pigs through regular disturbance.

ADVANTAGES of hunting:

- Aerial shooting is effective in extensive and/or inaccessible areas and ideal as a quick and effective initial population knockdown technique.
- Ground shooting is useful as a mopping up technique after other more effective control techniques have been implemented.
- Useful where small numbers of pigs or individuals are causing extensive economic problems.
- Can be used to eradicate small isolated populations.
- Economic returns can be made from the sale of pig carcasses to commercial harvesting companies.
- Some economic returns to local communities from hunter expenditure.
- Can be used in conjunction with other control techniques.
- Little threat to non-target species.

DISADVANTAGES of hunting:

- Recreational hunting is ineffective as a population control technique.
- Aerial shooting can be expensive and ineffective in dense vegetation.
- Hunters have transported pigs into 'clean' areas.
- Usually only adult pigs are targeted.
- As the population diminishes, hunting success becomes more uncertain and hunters will cease hunting.
- Hunting is applicable only in relatively small, easily accessible areas.
- Hunters have also been accused of theft of equipment, damaging fences and leaving gates open. In more remote areas, hunters illegally trespassing on land is commonplace.

GROUND HUNTING / SHOOTING

Ground hunting is possibly the most widely used feral pig control technique. Shooting using rifles, long bows and cross bows are used by different hunters. Using dogs to find and hold pigs and using knives to dispatch the captured pigs is also a very common hunting technique. Hunting can include individual hunters stalking pigs, groups of hunters chasing pigs into more accessible shooting terrain, spotlight shooting or opportunistic shooting from vehicles.

Hunting is usually not effective in reducing pig populations unless concentrated on small isolated populations of pigs. Usually only 15% to 20% of the population will be controlled by hunting alone. Lack of accessibility into pig populated areas and being unable to see pigs due to dense vegetative cover will limit the effectiveness of hunting. Feral pigs are cryptic animals and difficult to locate and are intelligent and will quickly adapt to harassment from hunters and move to other locations.

However, hunting has been shown to be useful as a follow up technique to remove remnant populations left over from other control operations. Extensive poisoning or trapping programs will never eradicate pigs from an area; there will always be difficult to control individuals left behind. Hunting in this situation, especially in small accessible areas, is a recommended technique to control the last few individuals.

Hunting is also a low cost alternative (usually at no cost to the landholder) to other control techniques and, as such, some landholders rely solely on shooting by volunteers or people who will sometimes pay to hunt as their primary control option. These landholders regard shooting as an effective technique as they can see the captured pigs or know how many have been controlled. Also, the pig damage usually diminishes after hunting; generally this is entirely due to the pigs being chased into other areas or onto neighbouring farms where the damage will continue.

The most effective use of hunting is in intensive agricultural areas where individual or a small groups of pigs can cause extensive damage. Even an expensive method to control these small numbers of pigs is cost effective. Intensive hunting using spot lights, lying in wait and night vision sights are effective in these situations. Some individual boars for example will quickly lock onto a quality food resource such as a grain silo, bags of grain in sheds etc and cause extensive damage. Intensive hunting is an effective technique in these situations.





A major problem with hunting is, as the population becomes more and more scarce, the number of pigs successfully hunted is reduced to the point where hunters will simply give up, as it is not worth their effort for so few pigs. This point is usually reached when there is still a viable pig population present so the population will quickly recover.

A technique using night vision scopes attached to rifles has been shown to be effective in open terrain. Pigs do not have good vision especially at night so they become confused in the dark and are not aware of where gunfire originates. A number of pigs in a group may be shot before they disperse. Thermal imaging goggles and rifle sight are being used in some situations; as the price drops on this equipment more use can be made of this technology.

Humaneness of hunting is debatable. Aerial and ground shooting if done by competent marksmen and following the Standard Operating Procedures is considered humane. However, shooting over extreme distances, incompetent marksmen or being unable to locate wounded pigs can lead to humane issues.





AERIAL SHOOTING

Aerial shooting is regarded as the most effective method to achieve fast population knockdown in a short time period and can be used in inaccessible areas and over all seasons of the year.

Aerial shooting **ADVANTAGES** include:

- Labour efficient.
- Unaffected by seasonal conditions.
- Humane and target specific.
- Effective in open terrain, in remote locations or in inaccessible areas where ground control techniques are impossible.
- Cost efficient where pigs are in high numbers and observable from the air.
- Numbers controlled are known and can be used for population monitoring purposes.
- Helicopter shooting can be used to form coordinated group control programs.

DISADVANTAGES include:

- Dispersal of animals; during an intense aerial shooting program a feral pig was shown by radio tracking to have dispersed over 100km away.
- Increasing costs as numbers decrease and in dense vegetation, woodland and forest.
- Ineffectiveness of annual shoots in keeping numbers low. Helicopter shooting should not be considered as a stand-alone control measure, as it will only reduce the population by a limited amount and will require follow up with other control techniques.



The high cost of aircraft hire is the major impediment to this technique, although the high number of pigs controlled over a short time period can make this technique very cost effective in most situations. However the high costs usually force aerial shooting to be conducted only spasmodically so it can be ineffective in keeping pig populations at low levels over a long time frame. Aerial shooting is best used in combination with other techniques (as part of an integrated control program) to maintain populations at a low level over a long time period.

The cost effectiveness of aerial shooting is dependent on pig density, vegetation cover and the efficiency of the operators. In areas where pigs have little cover or are concentrated into small areas (around waterholes for example) cost effectiveness can be very high. A single shooter with an experienced pilot in a small helicopter has killed up to 3000 pigs daily in open grassland plains in north Queensland.

The weapons most suitable are either automatic shotguns or semi-automatic large calibre (.308) rifles. Usually red dot scopes are used to increase accuracy. In suitable terrain, helicopter shooting can achieve over 80% population knockdown. This technique is also the principle technique advocated in contingency plans for eradicating feral pigs during exotic disease emergencies.



The increasing availability of small mustering helicopters has made aerial shooting a more economic option, particularly in inaccessible areas. Helicopter shooting still has some shortcomings as some habitat types can conceal pigs from the air making them difficult to shoot. The use of 'Judas' pigs, similar to the 'Judas' goat technique used in feral goat control, involves the use of a radio collared individual to locate other animals after it is released and re-joins a group.

DOGGING

The use of trained dogs to locate and capture feral pigs is very popular throughout Australia particularly in north Queensland. As with ground shooting, dogging is not effective in reducing feral pig populations. Pigs are either flushed out of cover or bailed up and then subsequently shot by hunters or “dogged” where larger dogs are used to hold the pig so it can be either shot or stabbed by hunters. Dogs are trained to be finders, bailers or holders and this can be dependent on their breed and/or their size. Dogs up to 80 kg have been used to capture and hold even very large pigs over 100 kg. Usually dogs work in packs of 3 to 5. Protective vests are used to minimise injury to holding dogs and GPS tracker technology can be used to find lost or injured dogs. However, dogging is considered by some community groups to be inhumane both to the pig and to the dogs.

The **ADVANTAGES** of dogging are:

- Effective in situations where other control techniques do not work i.e. crops where lone boars or small groups are living and are unwilling to enter traps or eat bait material.
- Low cost to the landholder.
- May cause a rapid reduction in damage.
- Can be coupled with general farming practices.

The **DISADVANTAGES** of dogging are:

- Not effective in reducing the pig population.
- Only a short term reduction in damage.
- The use of dogs to pursue and hold pigs is considered inhumane by welfare groups.
- Lost dogs can establish wild dog populations and cause damage to livestock.
- High cost of general care and veterinarian care for injured dogs and costs of protection equipment.
- Dogs may target other species including cattle, horses and native animals.
- Dogging tends to disperse the pigs to neighbouring properties or into new areas.
- When a mob of pigs are encountered dogs tend to catch few pigs, especially the adult males who stand to defend while the rest of the mob escapes.





Dogging is best suited to remove the few remaining pigs left after other more effective control techniques have been used. However research has shown that even experienced dogs can miss concealed pigs. Radio transmitters placed on feral pigs, hunting dogs and in the backpacks of hunters have been used to map their movements. The results showed only 27% of the pigs seen were captured by the dogs. Hunters passed within 100m of pigs without the dogs scenting the pigs. This control technique only removed 13% of the pig population present. There have been reports of a 90% success rate when dogs encountered solitary pigs but that the success rate rapidly declined as the group size of pigs increased. Another dogging trial showed that at least one-third of all feral pigs encountered escaped from the dog; when groups of pigs were encountered, usually only 1 was caught. The effectiveness of dogging depends largely on the skills of the hunter and dogs.

However dogging has been used successfully in eradication programs in Hawaii, Galápagos Islands and on Lord Howe Island where other control techniques were unable to be used. Dogging also remains the primary method of pig control in New Zealand (although they only have a small pig population) where dogging is regarded as a cultural recreation within the Maori communities and the pigs are often used in traditional ceremonies.

Hunting with dogs in extensive cropping situations such as grain, sugar cane and banana crops is also effective when individual boars or small groups cause extensive damage. The dense vegetation in the crops and the unwillingness of these pigs to enter traps or eat bait material leave no option but to use dogs and hunting to quickly control the damage before it escalates.

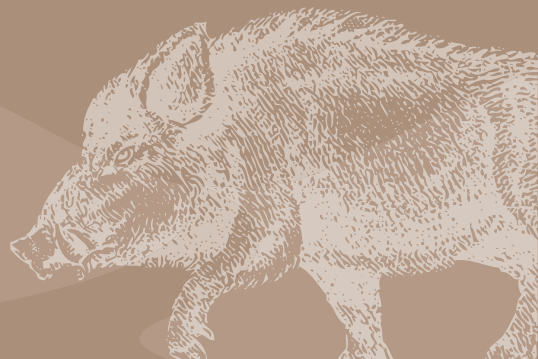
COMMERCIAL HARVESTING



Wildlife harvesting occurs when feral pig carcasses are bought to refrigerated containers or “chiller boxes” and sold to game meat processing companies who then on sell the frozen meat to overseas countries for human consumption. Hunters must be accredited with Safe Foods Queensland to sell to the chiller boxes and follow specific health guidelines and operate to an approved quality assurance program regarding the harvesting of pig carcasses for human consumption.

Commercial and recreational harvesting of pigs is often encouraged because it is essentially a ‘free’ reduction in pest density. However, the perceived reduction in feral pig numbers may not be matched by actual reductions in damage. The main benefits of harvesting are the economic gains to the harvester, with potential benefits from reducing damage.

The major disadvantage of commercial harvesting is the population must be maintained at a level where the economic returns from hunting are more than the cost of hunting. This population level may be unacceptable to landholders suffering damage from pigs. Other disadvantages include the targeting of adult pigs over 21 kg (pigs under 21kg are not saleable). These young adults left behind may quickly reach breeding weight due to more resources being available from the reduced competition. This may lead to rapid population recovery. Hunters have also been known to transport live pigs to new areas to establish a “hunting” population closer to where they live. This relocation occurs throughout Australia and has established many new populations; DNA analysis has been used to confirm the movement of pigs into new previously unoccupied and isolated areas.





The economic return to Australia from commercial hunting of feral pig meat exports varies between \$10 million and \$20 million annually and is mostly attributed to the European market. In Queensland up to 500,000 pig carcasses annually obtained from 2100 accredited field operators has been recorded. The variable overseas markets dictate prices paid to hunters and the number of carcasses required. Oversupply of the markets has led to the closure of the industry in some years.

There are always conflicting views on the positive resource value of feral pigs to some groups and the negative economic damage caused by pigs to other groups. Hunter organisations regard the pig as a valuable economic resource while Aboriginal communities regard the pig as a hunting resource and also as a significant food resource; although most agree that too many pigs is unacceptable. Many graziers hold no opinion on the positive or negative value of pigs but accept there is a disease risk to their cattle. Most cropping industries have a negative view of pigs and regard them as causing serious economic damage to most crops.

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