

Feral pig

Sus scrofa



Pigs were introduced to Australia by early settlers. Subsequent accidental and deliberate releases resulted in wild (feral) populations establishing throughout Australia.

Feral pigs cause environmental and agricultural damage, spread invasive plants and can transmit and potentially spread exotic diseases such as leptospirosis and foot-and-mouth disease.

Legal requirements

The feral pig is a category 3, 4 and 6 restricted invasive animal under the *Biosecurity Act 2014*. It must not be moved, fed, given away, sold, or released into the environment. The Act requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated with invasive animals under their control. This is called a general biosecurity obligation (GBO).



**Queensland
Government**

At a local level, each local government must have a biosecurity plan that covers invasive animals in its area. This plan may include actions to be taken on feral pigs. Some of these actions may be required under local laws. Contact your local government for more information.

An animal ceases being considered an invasive restricted animal (feral) if a person is keeping it and has become a registerable biosecurity entity (RBE) to keep that designated animal. Feral pigs can be considered as designated animals if a person keeps them.

Description

Feral pigs are typically smaller, leaner and more muscular than domestic pigs with well developed shoulders and necks, and smaller, shorter hindquarters.

The body is usually covered in sparse, coarse hair and they have a longer, larger snout, longer tusks, a straighter tail and narrower back than domestic pigs. Feral pigs are mostly black, buff-coloured or spotted black and white.

Growth potential is similar but slower than domestic pigs, with harsh environmental conditions to stunt development. Adult female feral pigs usually weigh 60–75 kg, while males usually weigh 90–110 kg. Older boars (razorbacks) can have massive heads and shoulders and a raised and prominent back bone that slopes steeply down to small hams and short hind legs. Some boars develop a crest or mane of stiff bristles extending from their neck down the middle of their back.

Life cycle

Under good seasonal conditions, breeding occurs all year and sows can wean two litters per year. Adult females have a 21-day oestrus cycle, with a gestation period of about 113 days, producing a litter of 4–10 piglets. Sows can make nests of available vegetation just before farrowing. Nests sometimes have a domed roof and are usually less than 2 km from available water. Piglets normally spend the first 1–5 days of life inside the nest, with the sow nearby. Weaning occurs after 2–3 months. Sexual maturity is reached when sows weigh about 25 kg, usually around six months of age.

Mortality of juveniles is high if the mother's dietary protein intake is low (up to 100% mortality in dry seasons). Adult mortality does not vary as much with seasonal conditions, but few animals live more than five years.

Social behaviour

Feral pigs are generally nocturnal, spending daylight hours sheltering in dense cover. Pigs are omnivorous, eating plants and animals and are extremely opportunistic feeders, exploiting any temporarily abundant food.

They prefer green feed and will eat grains, sugarcane and other crops, fruit and vegetables. They root extensively for tubers, worms and soil invertebrates, particularly during wet periods when soil is easy to dig.

Feral pigs have relatively high energy and protein requirements, particularly during pregnancy and lactation and often move to other parts of their home range during pregnancy.

Habitat and distribution

Feral pigs are found in nearly all habitat types in Queensland. The greatest concentrations of feral pigs are on the larger drainage basins and swamp areas of the coast and inland. In hot weather, pigs need to remain near water and shade to keep cool.

Population estimates can be achieved by spotlighting, aerial survey or the use of motion cameras.

Evidence of feral pigs includes fresh digging or rooting of the ground, tracks and faeces on and off pads, mud or hair at holes in fences where pigs have pushed through, wallows, tusk marking and mud rubs on trees and fence posts and nests in vegetation made by sows before farrowing.

Female and juvenile pigs usually live in small family groups with a home range of 2–20 km². Adult males are typically solitary, with a home range of 8–50 km². Range size increases with body size, and varies with season, habitat, food availability and disturbance. Herds of 400 pigs have been recorded in Cape York.

Impacts

Pigs can damage almost all crops from sowing to harvest, starting with uprooting seed and seedlings to feeding on or trampling mature crop.

They feed on seed, sugar cane and grain crops (except safflower), fruit (especially banana, mango, papaw, macadamia and lychee) and vegetable crops. Research has shown feral pigs can take up to 40% of lambs.

Pastures are damaged by grazing and rooting and pigs can also transport weeds. Wallowing pigs damage and foul the water in tanks and bore drains and silt up troughs. They can also damage fences and dam walls.

Pig activity degrades water quality and the habitat for small terrestrial and aquatic animals. It also creates erosion and allows exotic weeds to establish. Predation of native fauna does occur and examination of faeces has shown remains of marsupials, reptiles, insects, and ground-nesting birds and their eggs.

Diseases and parasites

Feral pigs can carry many infectious diseases and internal and external parasites. Some are endemic (already present), while others are exotic to Australia.

Many of the diseases can spread to domestic pigs, other livestock and humans. Feral pigs can transmit sparganosis, melioidosis, leptospirosis, Q fever and brucellosis to humans.

To prevent contracting these diseases it is advisable to either avoid handling feral pigs or use suitable protective clothing (mask, goggles, strong rubber gloves and plastic apron and boots) to minimise contamination with blood, urine and faeces. Rare or undercooked meat should not be eaten; thoroughly cook meat to avoid contracting pathogens. Raw feral pig meat and offal should not be fed to dogs as dogs can be infected with swine brucellosis. Dogs infected with swine brucellosis can also transmit the disease to humans.



Feral pig wallow



Feral pig rooting



Feral pig damage to river banks



Feral pig damage to sugar cane

Control

Managing feral pigs

The GBO requires a person to take reasonable and practical measures to minimise the biosecurity risks posed by feral pigs.

Feral pigs are difficult to control because they are primarily nocturnal, breed rapidly, and are generalist omnivores. Feral pigs can have large home ranges and thus control programs need to be conducted over a wide area (often including several properties) to be effective.

Effective control requires an integrated, collaborative approach where all stakeholders participate in planning, implementation and evaluation of the actions taken.

Fencing

Though an expensive option, fencing can provide effective pig control especially for high value crops grown on small areas. Research has indicated that the most successful pig-proof fences are also the most expensive.

The most effective pig-proof fences use fabricated sheep mesh held close to the ground by plain or barbed wire and supported on steel posts.

Electrifying a conventional fence greatly improves its effectiveness, particularly if used before pigs have established a path through the fence.

Pigs may charge at an electric fence and unless the fence incorporates fabricated netting they often successfully breach the fence.

For crop protection or to avoid lamb predation, pig-proof fences are best constructed before the pigs become a problem. Once pigs have adjusted to feeding on grain or lambs in a particular paddock, fencing may be challenging ineffective.

Trapping

Trapping is an important technique that is most useful in populated areas, on smaller properties (<5000 ha), and where there are low pig numbers. Trapping can be particularly useful in 'mopping up' survivors from baiting programs. It is most successful when food resources are limited.

Trigger mechanisms for pig traps can be made pig-specific and therefore pose little danger to wildlife or domestic animals. There are also remote activated trap technologies available, and cameras to aid in monitoring for any captures.

Advantages

- Can be safely undertaken in closely populated areas with adequate precautions.
- It's flexible and can be incorporated into routine property activities, making economical use of labour and materials.
- Carcasses can be safely disposed of.
- Traps can be moved and re-used; good trapping makes use of opportunities as they arise.
- Normal pig behaviour is not altered, which allows a greater number of the total population in an area to be targeted.
- More humane to pigs and non-target species.
- The number of animals removed can be easily monitored.

Disadvantages

- Can be time consuming and expensive to construct and maintain.
- Must be checked regularly.
- Not practical for large-scale control.
- Some pigs are trap shy.

Tips

- Stop all activities that will disturb normal feeding (i.e. do not undertake any shooting or dogging).
- Pre-feeding (i.e. ensure that pigs are visiting trap and consuming bait) prior to activating traps is an essential part of successful trapping.
- Feeding sites should be placed where feral pigs are active (i.e. water points, holes in fences, areas containing old carcasses on which pigs have been feeding).
- Bait for traps must be food that pigs usually eat in that area. Pigs feeding on one crop (e.g. sugarcane) will often not take to alternative foods. However, new, novel baits are sometimes attractive (e.g. fermented grains).
- The trap can be built around the feeding site, with feeding within the trap undertaken for several nights before it is set.
- Set the trap every night and check each day. Remote cameras can help with monitoring. If the trap cannot be checked daily then shade and water must be provided.
- Continue to trap until no more pigs are caught. A change of bait can be tried. Again, feed for at least one or two nights before re-setting the trap.
- Traps may be left permanently in locations used by pigs and can be utilised when fresh signs of pigs appear.
- If the trap is to be moved, start feeding at the new site before re-locating the trap.
- Avoid bringing in new objects into trap sites.

Design

There are several trap designs but all are principally an enclosed area with one-way gates (see figure 1).

The main area of the trap can be any shape and be made from materials on the property. The best material is steel mesh with a grid 100 × 100 mm, with a minimum height of at least 1.5 m. Star pickets need to be placed no more than 1.5 m apart and imbedded far enough to ensure that adult pigs cannot push them over or lift them up out of the ground.

Alternative trap entrances

Funnel entrance

Formed by the two ends of the mesh forming a funnel, the ends are tied together at the top with wire or rope. The pig moves through the funnel forcing the bottom of the mesh ends apart and once it is in the trap, the ends spring back together (see figures 1 and 2).

Tripped gate entrance

A side-hinged gate is pulled shut by springs and is held open by many systems that can be triggered to allow the gate to swing shut. Often trip wires or other systems are used; most of these systems are not selective for feral pigs and can be triggered by any animal attracted to the bait. Once triggered the trap is no longer effective in trapping pigs.

Pig-specific trigger

By far the simplest and most effective trigger system. The gate is held open by a bar (often a branch or piece of wood) which is hooked over the wire on the gate and on the side panel (see figure 3). For a close up of the pig specific trigger (see figure 4).

Pigs rooting for feed in the trap lift the bar allowing the gate to swing shut. The specific feeding habit of pigs insures they are the only animals that lift the trigger bar. The gate may be latched to prevent pigs from opening it once triggered. However, this will prevent more pigs pushing their way in to join those inside.

Shooting

Shooting pigs by helicopter is an effective and quick method to reduce feral pig populations. Aerial shooting is most efficient in areas where pigs exist in reasonable numbers and are readily observable from the air. An observer using a thermal camera may be helpful to locate feral pigs in areas with dense-canopy habitats, or when pig populations decline to low levels. When pig numbers are very low, aerial shooting may be supplemented or replaced with other control methods to improve efficiency. Applying regular control efforts will also ensure that pig populations do not recover to pre-control levels.

Studies have found that aerial culling operations do not impact the home range size or location of surviving feral pigs, supporting its use in future disease management programs.

Ground shooting is not effective in reducing the pig population unless intense shooting is undertaken on a small, isolated and accessible population of pigs. The use of a thermal camera or scope can greatly aid detection.

Poisoning

Poisoning is the most effective control method available that can quickly reduce a pig population.

Pre-feeding is the most important step in ground-based poisoning operations. Free feeding with non-poisoned bait should be performed for several days prior to laying poisoned baits. By selecting bait wisely, landholders can be species-selective in their poisoning program and avoid the unintentional effects of secondary poisoning.

Bait material such as fermented grains are very attractive to pigs. It is a good idea to establish a free feeding routine so that pigs are the only animals feeding, which helps to keep other non-targets away from the feeding site.

Other options (like pig-specific feeders) are now commercially available, and can assist in reducing non-target species access to bait. Other options include burying baits; feral pigs are one of the few animals that will dig up bait.

Aerial poisoning is also available and typically used for broadscale control in western and northern regional areas. Bait is distributed from an aircraft under strict conditions. This is particularly useful for covering large, remote areas with restricted ground access. Aerial poisoning is a proven and cost-effective method for reducing pig populations.

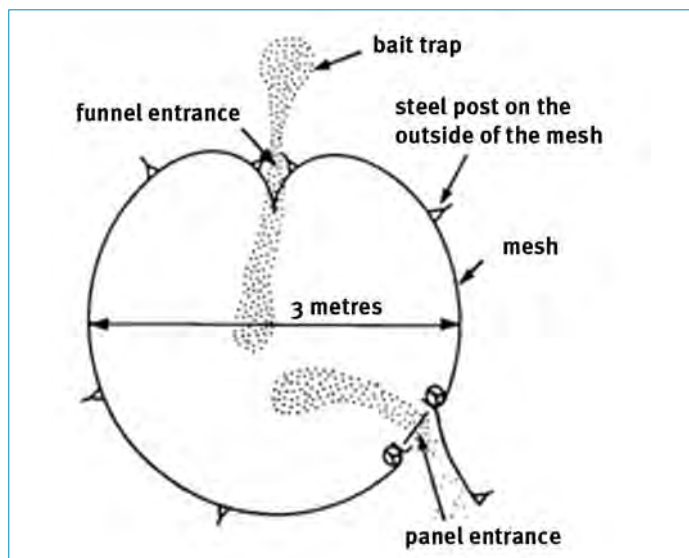


Figure 1. Alternative trap entrances – funnel entrance

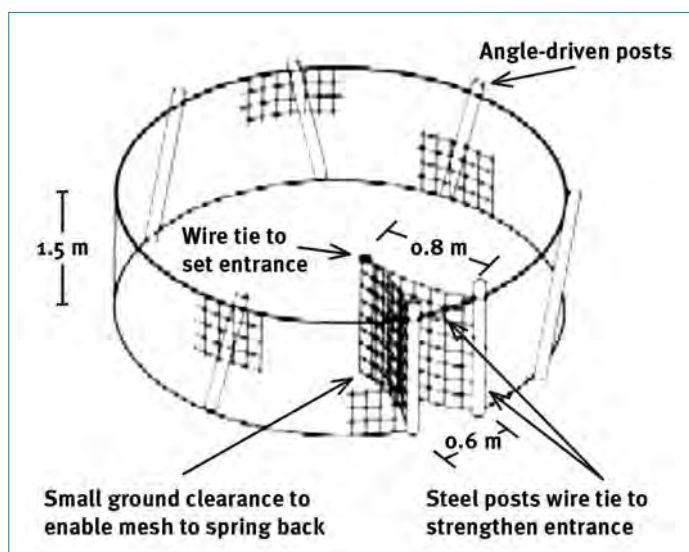


Figure 2. Silo trap with funnel entrance (14 m of silo mesh, diameter about 4.5 m)

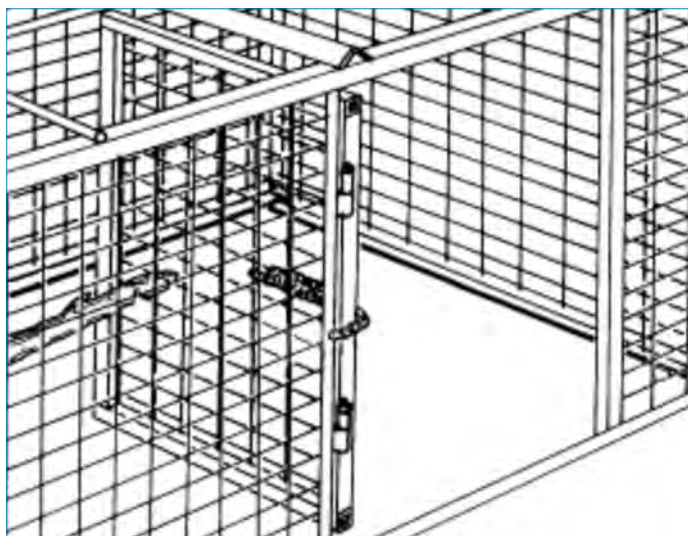


Figure 3. Pig-specific trigger

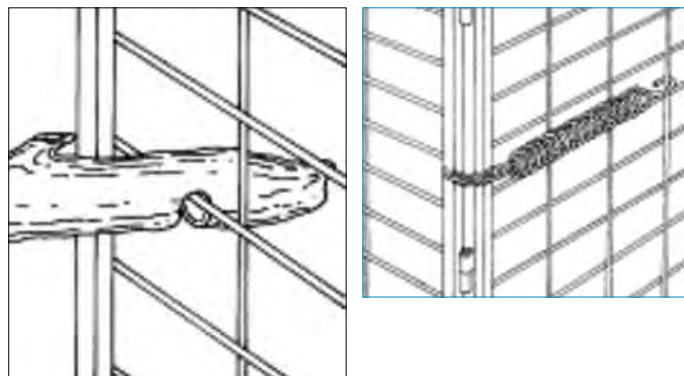


Figure 4. Close-up of pig-specific trigger



Feral pig trap



Three trapped feral pigs in large wire cage



A pig-specific bait station called hog hopper

More information

For more information contact your local government or visit biosecurity.qld.gov.au.

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Feral pig exclusion fencing

Fact sheets are available from biosecurity.qld.gov.au. The control methods recommended should be used in accordance with the restrictions (federal and state legislation, and local government laws) directly or indirectly related to each control method. These restrictions may prevent the use of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, the department does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

