A close-up photograph of a feral pig with coarse, greyish-brown fur and prominent, upright ears. The pig is positioned on the right side of the frame, looking towards the left. It is standing in a banana grove, with several banana plants and their thick, fibrous trunks visible in the background and foreground. The lighting is bright, suggesting a sunny day, and the overall scene is a natural, outdoor setting.

**TRAPPING
FERAL PIGS
ON THE
CASSOWARY
COAST:
A PRACTICAL GUIDE**

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DECLARED PEST LEGISLATION

Under the *Biosecurity Act 2014* launched on 1 July 2016, feral pigs are classed as restricted matter. They must not be moved, kept, fed, released into the environment, given away or sold. As with previous legislation, control of feral pigs remains the responsibility of the landholder. For more information regarding the new Biosecurity Act, visit the Biosecurity Queensland website www.biosecurity.qld.gov.au

IT IS ESTIMATED THAT FERAL PIGS CAUSE ANNUAL ECONOMIC DAMAGE OF APPROXIMATELY \$80 MILLION TO QUEENSLAND AGRICULTURAL INDUSTRIES AND APPROXIMATELY \$106 MILLION TO AUSTRALIAN AGRICULTURAL INDUSTRIES

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UNDERTAKING A FERAL PIG CONTROL PROGRAM THROUGHOUT THE CASSOWARY COAST IS ONE WAY TO REDUCE THE RISK OF SPREADING PANAMA DISEASE TROPICAL RACE 4

The Cassowary Coast is a mosaic of agricultural and horticultural production areas interwoven with World Heritage listed rainforests, national parks and land of high conservation value. These areas provide habitat and a food source for numerous native wildlife species, including the region's most recognised iconic bird, the southern cassowary.

With the detection of Panama disease tropical race 4 on a banana property in the Tully Valley in 2015, feral pigs were highlighted as a non-human vector of the disease as they habitually frequent banana farms to wallow and feed. Panama disease tropical race 4 is a soilborne fungus that is not eradicable and may lie dormant in the soil for up to forty years without a host plant. It can infect all the commercial banana varieties grown in Australia including the most common commercial variety, the Cavendish banana.

Undertaking a feral pig control program is one way to reduce the risk of spreading Panama disease tropical race 4. A trapping program may also mitigate the loss of income from feral pig damage to agricultural crops and help protect our environment from the negative impacts of feral pigs. Because of the region's high biodiversity value, feral pig control must take into consideration appropriate and effective methods that do not impact on the unique wildlife found here.

The Department of Agriculture and Fisheries has released this guide in conjunction with the Queensland Parks and Wildlife Service, Terrain Natural Resource Management and the Cassowary Coast Regional Council to give farmers, especially banana growers, the necessary resources to undertake a successful feral pig trapping program.



ABOUT FERAL PIGS

Feral pigs damage the environment and agricultural crops through wallowing, rooting for food and selective feeding.



Photo: Adrian Bell

They destroy crops and pasture and habitat for native plants and animals. In the Cassowary Coast region most damage to agriculture is on sugarcane and banana plantations.

Feral pigs can transport various weeds, diseases and pests. Their foraging sites provide ideal conditions for weeds to establish and a single pig may dig cubic metres of soil in one night while searching for food.

Feral pigs are also known to be vectors for numerous endemic (native to Australia) and exotic diseases that can be transferred to other animals and humans. These include Japanese encephalitis, bacterial diseases such as leptospirosis, brucellosis, melioidosis and foot and mouth disease.

Feral pigs also compete for resources with threatened native species such as the endangered southern cassowary which feeds predominately on rainforest fruits. The southern cassowary is considered vulnerable to competition from feral pigs.

Not only do feral pigs cause significant environmental and agricultural damage, they have been known to damage culturally significant sites and sources of bush tucker for Traditional Owners on the Cassowary Coast.

Pigs frequent moist, swamp environments near the coast. They prefer dense cover to avoid direct sunlight and high temperatures. Because pigs have a small number of sweat glands, they tend to drink more often so prefer to remain close to a water source and wallow in water and mud to cool off.



CREATURES OF HABIT

Feral pigs have a defined home range and habitually use trails, shelter areas, feeding and watering areas (when available). Their home ranges vary according to the seasons, availability of resources, population density and the animal's size and gender - males tend to have a larger home range than females. In Far North Queensland the average home range is estimated at around 8km². Pigs in the tropics generally tend to have a significantly larger home range size in the dry season compared to the wet season. The availability and quality of food and water are thought to be the main factors influencing home range size. There is no evidence to suggest that feral pigs actively defend territories from other pigs.

Feral pigs are intelligent, opportunistic omnivores with a rapid breeding cycle which makes them difficult to control. The number of feral pigs in Queensland is not accurately known but it is estimated they range from 3–6 million, with the majority in northern Queensland. Population and distribution are influenced by the availability of water, food and shelter.

THE ENDANGERED SOUTHERN CASSOWARY IS CONSIDERED VULNERABLE TO COMPETITION FROM FERAL PIGS



FERAL PIGS AND PANAMA DISEASE TROPICAL RACE 4

Landholders who are actively controlling pigs on their properties may reduce the risk of non-human assisted movement of Panama disease tropical race 4.

Panama disease tropical race 4 is a soilborne fungus that affects banana plants by attacking the plant's vascular system. The disease cuts off the supply of water and nutrients causing the plant to wilt and die. It is considered the greatest threat worldwide to commercial banana production.

The first commercial infestation of Panama disease was recorded in Panama, South America in the 1890s. The tropical race 4 strain of Panama disease is thought to have originated in southeast Asia around the 1990s and was first detected in the Northern Territory in 1997. It has since been detected in Far North Queensland on a Tully banana farm in March 2015.

The disease is not eradicable. It can survive for decades in the ground and is easily spread through soil, water and banana plant material. The tropical race 4 strain affects a wide variety of banana species including the most common commercial variety, the Cavendish.

The scientific name for the fungus that causes Panama disease is *Fusarium oxysporum* f.sp. *cubense*. The disease is classified into four races. Tropical race 4 is so named because the disease affects banana varieties grown in tropical environments.

Because the disease is a soilborne fungus, it can be spread by animals when soil sticks to their feet and/or fur as they roam farms in search of food and water. Feral pigs are of particular concern as they habitually wallow in wet soil and are attracted to banana farms as they provide a reliable food source.

As banana farms in Far North Queensland occupy relatively small land parcels, multiple properties can be exposed to one individual animal. Potentially contaminated soil could be spread throughout a pig's home range, an average of 8km². Maintaining farm entry and exit biosecurity procedures and implementing a well-planned feral pig management regime can further protect growers from Panama disease tropical race 4.

TRAPPING FERAL PIGS

Cooperation is the key!

WHAT YOU NEED TO KNOW ABOUT TRAPPING PIGS

The key elements of a successful trapping program are:

- ✓ appropriate trap design
- ✓ suitable placement
- ✓ free feeding or pre-feeding
- ✓ maintenance of the door and mechanism, and
- ✓ regular inspection of the trap when set.

CONTACT QPWS OR CCRC TO START YOUR TRAPPING PROGRAM

Growers can access FeralPigScan to record sightings of feral pigs, damaged sites and control activities in your local area. This community website comes in handy when planning where to undertake control and to help coordinate a trapping program with your neighbours. Visit www.feralscan.org.au/feralpigscan/

Trapping feral pigs is the responsibility of the landholder. Trapping is becoming more popular as trap designs improve and feral pig feeding behaviour is better understood.

The Cassowary Coast Regional Council (CCRC) has feral pig traps available for hire to all landholders. If your land is adjacent to a national park, the Queensland Parks and Wildlife Service (QPWS) can provide cassowary friendly pig traps for loan.

Both agencies provide advice and support to landholders who wish to undertake a feral pig trapping program. By working together, feral pig populations can be managed.

A trapping program should be undertaken or directly supervised by suitably skilled, proficient and competent persons. A suitable person will have had on-the-job trapping experience or have undergone formal training in the use of traps for pest animal management.

A collaborative trapping program where neighbours work together is the most successful technique to manage feral pig numbers over broad areas in the Cassowary Coast region. Feral pigs don't pay heed to boundaries, they will travel across multiple properties in search of food, water and cover.

As soon as feral pigs are sighted or activity is noticed on a property, a feral pig control program should be commenced. Sometimes neighbouring property owners pool resources, such as sharing the purchase of poison bait and hire of traps.



TIPS FOR AN EFFECTIVE TRAPPING PROGRAM

- Remember the environment dictates the trapping program. There is generally an abundance of pig food in the Cassowary Coast region. Cracked corn may not work as effectively to capture feral pigs when there is lots of other food for them to choose from.
- Reduce the attractiveness of your property to pigs. Pigs love banana dumps or piles of scrap fruit. Manage scrap piles to prevent pigs from free feeding on these dumps.
- For a trapping program to be worthwhile you have to commit to it. Keep the pre-feed up and monitor your trap every second or third day while pre-feeding and once the trap is set, check for pigs and non-target species every morning.

DON'T BE A FERAL NEIGHBOUR!



Trapping programs need to be initiated by the landholder. Government agencies, local councils and natural resource managers are available to assist landholders who wish to undertake a trapping program by providing traps, advice and poison bait. If you see feral pigs or feral pig activity on your land, be proactive and start your trapping program.

A COLLABORATIVE TRAPPING PROGRAM WHERE NEIGHBOURS WORK TOGETHER IS THE MOST SUCCESSFUL TECHNIQUE



PLACING TRAPS

Don't use inappropriate traps. If you live in or near cassowary habitat, contact QPWS and CCRC who have cassowary-friendly traps for loan. There are a number of things to consider when placing traps on your property:

- ✓ The trap should be in an area where it can be easily removed and relocated in case pigs do not continue to feed at the chosen site. For example, choose an area that is not too boggy for vehicles.
-
- ✓ Enough traps should be placed throughout an area so that there is a high chance pigs will encounter one when they roam the property. Research suggests that traps placed about 1km apart is sufficient.
-
- ✓ Traps should be located somewhere that can be easily accessed for daily morning checks, for example areas that are en route to other daily farming activities.
-
- ✓ Traps should be located in an area that allows access for release of non-target species and disposal of captured pig carcasses.
-
- ✓ Traps should be placed where there is evidence of high pig activity. Soil disturbance caused by feral pigs searching for food is the most visual evidence of activity. You can also look for footprints or scats.
-
- ✓ If possible the area should be shaded. Shade cloth or hessian can be placed over the trap if no shade is available. Make sure the cover is tied down as a flapping cover can spook pigs.



REMEMBER

You need consent of the landholder if you are placing a trap outside of your property boundary.

Planning, trap placement and pre-feeding can make or break a trapping program.



PRE-FEEDING & SETTING TRAPS

Pre-feeding or free feeding is crucial to attract and settle pigs before traps are set.



Once you see pig activity at a site, place the trap (disarmed) and start pre-feeding. Deposit small amounts of food throughout the surrounding area or along pig trails. Monitor and replenish food at these sites for several days. As pigs become accustomed to the pre-feeding food, this will maximise the number of pigs attracted to the pre-feeding and trapping area.

Almost any food you have in abundance at low or no cost can be used as trap pre-feeding material. Pigs have a wide, omnivorous diet and will eat almost anything. Although, it may take some time for pigs that are feeding on naturally occurring foods to eat a new, unfamiliar food item. Pigs have a tendency to stick to a locally abundant food source until it is exhausted and then switch to another food source.

Some ideas for pre-feeding material include waste fruit such as bananas or mangoes, or fermented grain or cracked corn and molasses. For best results, soak the grain in molasses for 24 hours. Be aware fruit is more likely to attract cassowaries and should only be used in traps specifically designed to exclude them.

During pre-feeding, erect the trap in stages to allow pigs to become accustomed to the unfamiliar odour of the steel mesh and humans. For example, erect only three sides of the four-sided trap, and leave a wide entrance. Place pre-feeding material inside the partially erected trap and when you think pigs are feeding confidently, put the gate on but leave it wired open. If, after a few days of feeding inside the trap, there is no evidence of non-target species feeding such as footprints,

scats or motion camera footage, the gate can be set.

If the trap is a permanent one or has already been erected, place a drum of fermenting grain in the middle of the trap.

It's against the law to use meat as bait in trapping programs as it can spread infectious diseases between pigs and humans.

A small amount of creosote (a wood preservative) over trap posts will sometimes attract pigs to a site. You can also use a molasses trail as a lure. The added smells will help attract any trap shy pigs.

Pre-feed until the pigs have been feeding inside the trap for at least two nights.

IF YOU TRAP A NON-TARGET ANIMAL AND IT IS INJURED YOU CAN TAKE IT TO A WILDLIFE CARER OR LOCAL VET

Keep human activity to a minimum and avoid taking dogs around trapping sites.

Once the traps are set check them every morning. Cassowaries have died from being left in traps. Release uninjured non-target species and destroy or remove trapped pigs as quickly and humanely as possible.

If you trap a non-target animal and it is injured you can take it to a wildlife carer or local vet. Phone 1300 264 625 (ANIMAL) if you need a wildlife carer to assist with the injured animal. Report any cassowary incidents including accidental capture immediately to the Department of Environment and Heritage Protection on 1300 130 372.

Trap mesh should be a minimum of 5mm in diameter and a maximum of 100mm x 100mm gauge to prevent pigs from wounding themselves once captured.

Walls of the trap should be at least 1.5m high or covered to prevent pigs jumping out.

Traps should also be wired at ground level – 200mm above ground and at 3 more points per post.

Motion cameras are sometimes used with traps to assist in identifying pig movements, non-target species or thieves and vandals. Some cameras relay live or recorded information to smartphones or ipads.

For more information on types of traps and how to make your own wildlife friendly traps, download the Feral Pig Manual from the Department of Agriculture and Fisheries (DAF) website www.daf.qld.gov.au.

Evidence suggests that at least 70% of the pig population needs to be removed or the mob will rapidly replenish to numbers before the trapping program commenced.



TRIED AND TESTED

- ✓ Bait should be placed in the centre of the trap area. If the bait is too close to the edge, pigs will try to lift the side of the trap to access it.
- ✓ Noisy swinging gates on the trap can deter pigs from entering. Gates should be quiet and the gate mechanism (tripping the trap) should allow for passage of all pigs in the group.
- ✓ Construct traps to prevent injury from loose wire, sharp edges or malfunctioning gates.
- ✓ As pigs are nocturnal, traps are best set from 6pm through to 5am in the morning.
- ✓ Traps are to be disarmed (left unset) during the day (from 5am) so there is less risk to non-target species that forage during the daytime.
- ✓ Attach a long rope to the trap door to open it in case non-target species are trapped and need to be released from a distance to reduce disturbance.
- ✓ Cover the trap with a shade cloth or leaves to camouflage it and provide shade for captured animals. Include drinking water in the trap. Branches and sticks across the top of the door will deter cattle.
- ✓ Avoid bright colours or shiny materials as pigs have excellent colour vision.
- ✓ Dig up the ground inside the trap with a hoe if pigs are still trap shy.
- ✓ Pre-feed at additional sites away from your trap. Once the initial trap site has been exhausted, you can quickly relocate it to your alternative pre-feeding site for quicker results.
- ✓ Traps are made of heavy materials to deter theft and ensure pigs cannot lift traps. If a trap is stolen report it to the Police.

SHOOTING OF TRAPPED FERAL PIGS



GUIDELINES FOR HUMANE SHOOTING OF TRAPPED PIGS

Smaller calibre rifles such as a .22 magnum rimfire with hollow/soft point ammunition are adequate for euthanasia of trapped pigs at short range (less than 5m). Twelve 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 40kg.

DO NOT SHOOT THROUGH THE TRAP. Destroy caught pigs by resting the barrel of the rifle on the trap mesh with the tip of the barrel pointing inside the trap. Wait for pigs to settle before shooting. To maximise the impact of the shot and to minimise the risk of misdirection, the range should be as short as possible.

Shooting must result in a humane, rapid and painless death with minimum distress to the animal. Head shots should only be used.

The shooter should approach the pigs in a calm and quiet manner. Keep other people away from the trap to avoid further agitation of the pigs.

Never fire when the pig is moving its head, be patient and wait until the pig has stopped moving before shooting. Accuracy is important to achieve a humane death.

One shot should ensure instant loss of consciousness and rapid death without the resumption of consciousness. Shots must be aimed to destroy the major centres at the back of the brain near the spinal cord.

SHOOTING MUST RESULT IN A HUMANE, RAPID AND PAINLESS DEATH WITH MINIMUM DISTRESS TO THE ANIMAL

RECOMMENDED SHOT PLACEMENTS



Confirm the shot animals are dead by observing the following:

- Absence of rhythmic, respiratory movements
- Absence of eye protection reflex or corneal reflex (blinking)
- Loss of colour in mucous membranes (become mottled and pale without refill after pressure is applied).

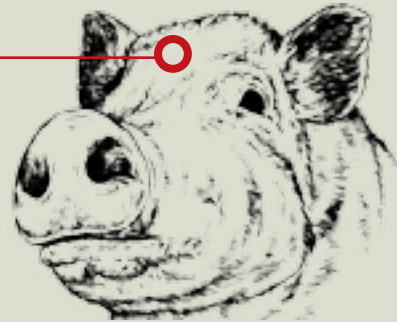
If death cannot be verified a second shot should be immediately delivered to the head via the points of aim described.

If small piglets (less than 5kg) are caught in the trap, the adult pigs should be shot first and then the piglets shot. Use of a shotgun is preferable as they are small targets and likely to be moving rapidly around the pen.

For smaller pigs

FRONTAL POSITION

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.

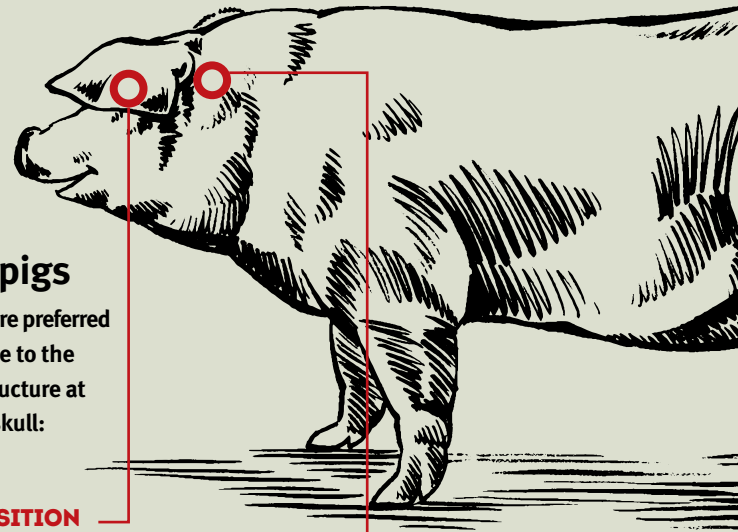


For larger pigs

These methods are preferred for adult pigs due to the heavier bone structure at the front of the skull:

TEMPORAL POSITION

The firearm is aimed at 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

The firearm is aimed at a point behind the ear directed towards the opposite eye.

Humane shooting of trapped pigs

Shooting of pigs should only be undertaken by licensed firearms operators with the necessary skills required. Storage and transportation of firearms and ammunition must comply with relevant legislation requirements.



A MESSAGE FROM YOUR LOCAL POLICE SERVICE

Always exercise common sense when using a firearm. Take into account the location where the weapon will be discharged. For example, if the trap is located on the edge of a farm that backs onto a residential area and you think the shots will concern or alarm anyone, advise your local police station. There are humane and effective methods for shooting pigs in cages. Speak to your local council pest officer or a QPWS ranger.

DISPOSAL OF FERAL PIG CARCASSES



CHOOSING A SITE

Make sure the site is accessible to trucks and earthmoving equipment. Don't bury on a slope greater than 6% to allow digging of deep pits with heavy equipment. The site should be of sufficient size to accommodate required burial activity without affecting neighbours.

When disposing of carcasses there are a number of methods and options to consider.

Trench burial is the most practical method for disposal of small numbers of feral pig carcasses on farms in the Cassowary Coast region. It involves the excavation of a trench, placing carcasses in the unlined pit and covering them with the excavated earth.

A long and deep trench (approximately 15m long and 2m deep) reduces the amount of times heavy machinery, such as an excavator, needs to return to the site. Carcasses are dumped in one end of the trench and progress along the trench as the trapping program continues. Carcasses must be immediately covered by soil once they are dumped in the trench. Most farm machinery can be used for this purpose such as a tractor with a back blade.

Commercial landfill uses highly regulated pre-existing waste disposal facilities. CCRC waste transfer station accepts feral pig carcasses for deep burial at a cost of \$70 per carcass.

Mass burial is used when large numbers of animal carcasses from multiple locations are disposed of. Unlined burial is normally used when the soil types or local geology can control risks of leakage of decomposition by products.

Mounding or above-ground burial is where carcasses are placed on a natural surface and covered with earth obtained from another source. There are environmental, work health and safety agency and future land-use matters that need to be considered. In some cases, the appropriate authorities such as an environmental agency, local council and work health and safety agency may need to be contacted.

ADDITIONAL FACTORS TO CONSIDER WHEN DISPOSING OF CARCASSES:

LOCATION

PROXIMITY TO DRINKING WATER SUPPLY:

make sure the burial site is not in a drinking water catchment area.

PROXIMITY TO HUMAN HABITATION:

burial site should be away from dwellings and major roads.

SOIL CHARACTERISTICS:

soil with a high clay content is less permeable which means less leaching. You could obtain clay from nearby sources to line the pit base if required.

GROUNDWATER LEVEL:

make sure the burial pit is above the seasonal maximum groundwater level to reduce contamination of the water table.

PROXIMITY TO WORLD HERITAGE AREAS, CONSERVATION AREAS AND INDIGENOUS CULTURAL SITES:

the burial site should be sufficient distance from World Heritage boundaries, conservation and Indigenous cultural sites to preserve the values associated with these areas. Contact the local council, QPWS office or environmental agency for advice.

CASSOWARY COAST REGIONAL COUNCIL WASTE TRANSFER STATION ACCEPTS FERAL PIG CARCASSES FOR DEEP BURIAL



Don't bury carcasses near watercourses, lakes, dams or ponds to reduce the likelihood of contamination of water systems. This also applies to coastal areas with permeable sandy soils.

DECONTAMINATION OF FERAL PIG TRAPS



Since the detection of Panama disease tropical race 4 on a banana property in the Tully Valley, banana farmers have implemented strict biosecurity plans to protect their farms from this potentially devastating disease.

All vehicles, machinery and equipment, including feral pig traps, must be appropriately decontaminated on banana farm exit. Decontamination of traps being moved between properties will not only minimise the risk of spreading of Panama disease tropical race 4 but other pests and weeds as well. Ideally, growers can purchase their own traps to minimise the risk of spread of pests, weeds and diseases.

Prior to the trap exiting a property, check that it's free from all soil and plant material and then apply appropriate decontamination. The Grower Kit that was sent to all banana farmers in the region by Biosecurity Queensland has guidelines for effective decontamination procedures for farm machinery and equipment. Alternatively, you can download the Grower Kit from the Biosecurity Queensland website www.biosecurity.qld.gov.au.

INFORMATION FOR THE HUMANE CAPTURE, HANDLING OR CONTROL AND DISPOSAL OF FERAL PIGS

The Australian Department of Sustainability, Environment, Water, Population and Communities Invasive Animals Cooperative Research Centre (CRC) has codes of practice (COP) and standard operating procedures (SOPs) for the humane capture, handling or destruction of feral animals in Australia. You can download the COP and SOPs on the Invasive CRC PestSmart website at: www.pestsmart.org.au.



Photo: Northern Gulf Resource Management Group Ltd

The Department of Agriculture and Fisheries (DAF) has a policy on trapping that describes DAF's position on the use of traps for pest animal management and the relevant legislative obligations. The department acknowledges the animal welfare issues associated with trapping. The policy outlines the numerous factors that trappers must consider for humane and efficient trapping outcomes.

Trapping programs should comply with the *Animal Care and Protection Act 2001*, specifically Sections 34, 41 and 42 and the relevant Codes of Practice listed in Schedule 1 of the *Animal Care and Protection Regulation 2002*. You can download the appropriate legislation at www.legislation.qld.gov.au.

ALL VEHICLES, MACHINERY AND EQUIPMENT, INCLUDING FERAL PIG TRAPS, MUST BE APPROPRIATELY DECONTAMINATED ON BANANA FARM EXIT



Prior to the trap exiting a property, check that it's free from all soil and plant material and then apply appropriate decontamination.

OTHER METHODS OF FERAL PIG CONTROL



Trapping programs are mainly used in the Cassowary Coast region as other feral pig control methods are considered less effective due to the risk to non-target species and constraints such as dense habitat.

POISON BAIT

1080 bait is the only poison bait used for feral pigs in the Cassowary Coast region. All landowners who would like to undertake a baiting program on their properties must contact CCRC to obtain a toxin 1080 guide which explains the safe and responsible use of sodium fluoroacetate in Queensland. Owners will also need to sign an indemnity form and abide by all legislation and guidelines regarding the use of 1080.

Laying poison bait on the open ground is not advised in the Cassowary Coast region due to the presence of non-target animals of high environmental significance such as the endangered southern cassowary and the critically endangered spotted tailed quoll. Working dogs and livestock can be exposed to poisons by eating baits that are intended for feral pigs. Other bird species, mammals and reptiles are also at risk of poisoning.

CCRC and QPWS have purchased weather-proof hog hoppers to be used in conjunction with 1080 pig baiting. Hog hoppers protect 1080 from being destroyed by rain and stops non-target species from picking up poison baits. Bait material such as fermented cracked corn or fruit is to be supplied by the property owner.

A notification of baiting form needs to be filled out by the property owner undertaking the baiting program and signed by all neighbouring property owners within 1km of the proposed baiting areas. An authorised council officer will need to sight the documents before the baiting program can commence.

Signs notifying of a 1080 baiting program must be installed at all entries and exits to the property and any boundaries adjacent to road sides. The signs are provided by council and detail what bait material is being used, the date and the chemical used to bait.

AERIAL SHOOTING

This method is not widely used in the Cassowary Coast region. Thick canopy cover from rainforest and bush make aerial shooting difficult and inefficient. However, a trial in the Moresby area showed it may be a worthwhile tool for lowland coastal zones.

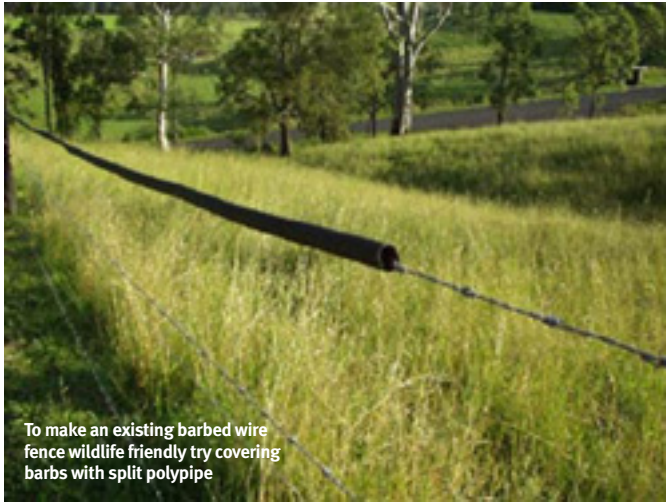
GROUND SHOOTING

Ground shooting can include rifles and bows. Small land parcels, different land tenures and dense vegetation all make ground shooting difficult and ineffective. This method is also not advocated in the region as it may scare pigs, making them harder to trap or bait with poison. Ground shooting can, however, be an effective method to target stragglers after a control program has ceased operating.

EXCLUSION FENCING

Although expensive, fencing is an effective method of pig control. The prevention of crop losses over time usually offsets the initial cost of the fence. Exclusion fencing can be confined to those areas of a property with the highest value. Mesh fencing is the most effective control method.

LAYING POISON BAIT ON THE OPEN GROUND IS NOT SUITABLE DUE TO THE PRESENCE OF NON-TARGET ANIMALS



To make an existing barbed wire fence wildlife friendly try covering barbs with split polypipe

WILDLIFE FRIENDLY FENCING

86% of recorded wildlife entanglements occur on the top strand of barbed wire fences.

When fencing think about using a combination of plain wire and electric fencing. Fences shouldn't block native wildlife accessing a natural water source or corridors between habitats. Avoid placing barbed wire fences on ridge lines, near feed trees, across wildlife corridors or over or near water. Barbed wire fences should incorporate a top strand of plain wire. This will limit the amount of wildlife, such as gliders and bats, getting tangled in top strand barbed wire fences.

Because wire fences are hard to see, they can be hazards for humans and wildlife. Improve visibility of wire fences by tying white plastic bags to the fence for a short term fix. Electric fence tapes, or similar, that flicker in the breeze are a more permanent remedy.

To make an existing barbed wire fence wildlife friendly if it is in a tangle hotspot (for example near a feed tree or water source) try covering barbs with split polypipe and make it more visible with plastic bags or tape. For more information visit www.wildlifefriendlyfencing.com.



Dogs lost during hunting trips is a common occurrence. Dog attack is a significant threat to native wildlife including the endangered southern cassowary.



DOGGING

Evidence suggests that hunting with dogs makes trapping feral pigs more difficult. Dogging is seen as ineffective in reducing feral pig populations and research has shown that even the most experienced dogs miss concealed pigs.

Feral pigs in fringe areas exposed to dogs and humans are reported to be skittish and cautious – making them less prone to enter a trap.

Under the *Nature Conservation Act 1992* hunting on national park, including for feral pigs, is not permitted unless it is part of an authorised pest management plan implemented by QPWS. Under this legislation it is also illegal to take domestic animals into a national park, so hunting with dogs is not permitted and penalties may apply.

The Australian 'Model code of practice for the destruction or capture, handling and marketing of feral livestock animals' outlines when it is acceptable to use trained dogs

to hunt feral pigs. Hunters must become familiar with the code's requirements for using dogs to hunt feral pigs.

These include ensuring that:

- hunters use only a properly trained dog that responds to the commands of the operator to locate and flush a feral pig in thick cover
- dogs do not harass, attack and bring down feral pigs
- pigs are killed humanely.

The code does not cover the use of dogs to bail up or hold pigs. In most circumstances, it should be acceptable for dogs to bail up pigs (without making contact with them) until the hunter arrives to kill the pig.

However, under the *Animal Care and Protection Act 2001*, landholders and hunters are obligated to not cause any animal unjustifiable, unnecessary or unreasonable pain. For more information visit www.business.qld.gov.au.

HELP IS AT HAND

CASSOWARY COAST REGIONAL COUNCIL (CCRC) can supply 1080 poison bait, transportable cage traps and hog hoppers. There are eight traps available. Go to council's pest management webpage at www.cassowarycoast.qld.gov.au and click to link to the application form and conditions of use. A deposit for traps is required and refunded when the traps are returned. Council also has pamphlets available on the usage of traps.

Contact: CCRC by telephone 4030 2222. Email: enquiries@ccrc.qld.gov.au Web: www.cassowarycoast.qld.gov.au

THE DEPARTMENT OF NATIONAL PARKS, SPORT AND RACING, QUEENSLAND PARKS AND WILDLIFE SERVICE (QPWS) can assist through their trap loan scheme if your property lies next to a national park. All traps fit on the back of a standard ute tray and have cassowary exclusion gates. Contact: QPWS by telephone 4048 3713. Email: qpws@npsr.qld.gov.au Web: www.npsr.qld.gov.au

If you suspect Panama disease in banana plants, report it immediately to Biosecurity Queensland on 13 25 23. For more information about Panama disease tropical race 4, visit the Biosecurity Queensland website www.biosecurity.qld.gov.au.

REMEMBER: TRAPPING PROGRAMS NEED TO BE INITIATED BY THE LANDHOLDER



Government agencies, local councils and natural resource managers are available to assist landholders who wish to undertake a trapping program by providing traps, advice and poison bait. If you see feral pigs or feral pig activity on your land, be proactive and start your trapping program. The Cassowary Coast Regional Council has feral pig traps available for hire to all landholders. If your land is adjacent to a national park, the Queensland Parks and Wildlife Service can provide wildlife friendly traps for loan.



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