

5.2. REVIEW EFFECTIVE FERAL PIG CONTROL METHODS

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RECOMMENDATION

That Council resolves to:

Note the report and consider funding a trial of alternative technology for feral pig control in future Operational Budgets.

EXECUTIVE SUMMARY

This report summarises the finding of an extensive review of feral pig control methods currently available to land managers, investigates new tools, technologies and advancements in effective feral pig control. The report aims to identify areas for improvement that can be embraced and supported by all stakeholders ensure the best possible outcomes for the community and the environment.

BACKGROUND

Pigs were introduced to Australia by early settlers and subsequent releases resulted in the wild (feral) population establishing throughout Australia. The total number of pigs in Queensland is not accurately known, but estimates range from 3 - 6 million; with the majority in North Queensland. Population densities in the wet tropics were estimated at 3.1 animals per km².

The feral pig is a restricted invasive animal under the Biosecurity Act 2014 (Act) and must not be moved, fed, given away, sold, or released into the environment without a permit. The Act requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control.

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, fruit (especially banana, mango, papaw, macadamia and lychee) and vegetable crops. Feral pig damage in Queensland is estimated to be tens of millions of dollars annually. Pastures are damaged by grazing and pigs can also transport weeds. 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.

Feral pigs 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. Feral pigs can carry many infectious diseases and internal and external parasites. These include Japanese encephalitis, bacterial diseases such as leptospirosis, brucellosis, melioidosis and foot and mouth disease.

COMMENT

Recent changes in legislation now allow feral pigs to be kept. 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.

CURRENT CONTROL

A range of control techniques are available to control feral pigs. Generally, control techniques should not be considered as a stand-alone measure. Some techniques will require follow up methods. Currently there are various techniques available to control feral pigs, including:

- Poisoning;
- Trapping;
- Exclusion fencing;
- Ground shooting; and
- Dogging.

Poisoning

Poison bait is generally considered to be the most appropriate for large scale control but may not be suitable for all situations. When toxins can be used safely this is the most effective method of removing the bulk of the population with the least effort and cost. Poisoning is also one of the few methods of reducing pig populations quickly. Poisoning with 1080 (sodium fluoroacetate) is the most widely used technique for the control of feral pigs, and used by all vertebrate pest control organisations within Australia. 1080 bait is the only poison bait used for feral pigs in the Douglas Shire area.

All landowners who would like to undertake a baiting program on their properties must contact Council 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.

Council has trialed the use of 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.

A range of other toxins have been used to control feral pigs. These chemicals are not recommended by the Queensland Government for feral pig control due to adverse environmental, animal welfare and effectiveness concerns.

Attractants – Creosote, a wood preservative has been found to make baits more detectable to pigs while deterring most non-target animals from consuming the bait.

Currently only the Department of Primary Industries and Fisheries (DPI&F) and local government officers that have been approved by Queensland Health can prepare 1080 bait material for landholders. New changes to legislation will soon allow landholders to purchase manufactured 1080 baits over the counter once accredited.

Trapping

Council provides a coordinated trapping service to the community. Our program employs two skilled, proficient and competent persons that together have had many years of on-the-

job trapping experience and 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. Feral pigs don't pay heed to boundaries, they will travel across multiple properties in search of food, water and cover. 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.

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

Humane shooting of trapped pigs is only be undertaken by licensed firearms operators. Storage and transportation of firearms and ammunition must comply with relevant legislation requirements. Council staff take into account the location where the weapon will be discharged, and only exercise humane and effective methods for shooting pigs in cages. Disposal of pig carcasses is by deep burial at approved Queensland Parks and Wildlife Services (QPWS) disposal sites or waste transfer stations.

The Australian Department of Sustainability, Environment, Water, Population and Communities Invasive Animals Cooperative Research Centre has codes of practice and standard operating procedures for the humane capture, handling or destruction of feral animals in Australia.

The Department of Agriculture and Fisheries (DAF) has a policy on trapping that describes their position on the use of traps for pest animal management and the relevant legislative obligations.

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.

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.

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.

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

AREAS FOR IMPROVEMENT

In November 2016, key operational staff attended a week long Pest Animal Symposium that showcased and highlighted new technologies, including the latest tools used in effective feral pig control methods. The following examples were identified as areas that Council could improve our feral pig control operations:

- JAGER PRO MINE Trapping system – Uses remote control technology to capture an entire mob of feral pigs in one go.
- JAGER PRO MINE Camera – The gate on the trapping system can be triggered via SMS from anywhere you have mobile coverage.

Key features of the system include:

- Pigs are conditioned to enter the trap by feeding them at the same time every day;
- Cameras are used to capture movement at the trap site, i.e. when pigs enter the trap, which are capable of sending via MMS or Email photos to up to four trappers;
- Modular design that allows the size of the trap to be increased if required. Additional gates can be added with the possibility to synchronise drops.

Key benefits include:

- Less labour intensive and more cost effective than current methods;
- High volume control solution compared to traditional methods;
- Can be adapted for other pest animals such as wild dogs; and
- Adaptions available for wireless devices to expand the trapping system's reach into areas without mobile coverage.



Figure 1.

The above photo shows a double gate set up utilising a standard sized trap enclosure. A single camera, with a single command sent by the user, was used to simultaneously trigger both gates at once for a synchronous drop.

PROPOSAL

Council note the report and consider funding a trial of alternative technology for feral pig control in future Operational Budgets.

The initial trial will take place in the Daintree River Catchment in areas that receive cellular coverage such as Forest Creek. An external booster antenna will be used in areas where coverage is weak to expand the usable range of the devices.

FINANCIAL/RESOURCE IMPLICATIONS

A trial will cost approximately \$20,000 and funding is to be considered in future operational budgets to purchase equipment for the project. The efficiencies gained will offset the initial purchase costs by freeing up staff resources required to manual check and maintain traps. The additional staff time gained will greatly assist the Open Spaces team by allowing more staff resources to be used in other priority areas.

RISK MANAGEMENT IMPLICATIONS

The use of expensive camera technologies poses a substantial risk of theft equipment from members of the public. However the cameras are equipped to send pictures when motion activated to our trappers, thus providing identification of the offenders that can be used as evidence to prosecute. To help mitigate this risk the system will be set up in secure / safe locations to avoid any interference. Locking systems to secure the cameras in place will be used to deter thieves.

SUSTAINABILITY IMPLICATIONS

Economic: The use of this new technology will provide long term economic gains by reducing the resources required. The increased available staff time will greatly benefit other operational areas within the Open Spaces Unit. An effective trapping program also assists our farmers by mitigating the loss of income from feral pig damage to agricultural crops.

Environmental: The Douglas Shire contains 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. An effective trapping program helps 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 use of camera technologies greatly reduces the risk of off target captures.

Social: 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. 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 Daintree Coast

CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

Corporate Plan 2014-2019 Initiatives:

2.1.1 Develop management plans for all Council assets and adequately resource their implementation.

Operational Plan 2015-2016 Actions:

3.1.12 - Engage with relevant agencies and stakeholders to review current practices and determine if there are opportunities for more effective control of feral pigs.

COUNCIL'S ROLE

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

Facilitator	Bringing people together to develop solutions to problems
Fully-Responsible	Funding the full cost of a program or activity
Information Provider	Bringing people together to develop solutions to problems.
Regulator	Meeting the responsibilities associated with regulating activities through legislation or local law.

CONSULTATION

The following individual, groups and agencies were engaged during the review of Effective Pig Control Methods:

Internal:	<ul style="list-style-type: none"> • Council's Pest Animal Controllers • Council's Biosecurity Management Staff
External:	<p>Biosecurity Queensland Department Agriculture and Fisheries</p> <ul style="list-style-type: none"> • Biosecurity Officer Invasive Plants and Animals • Community engagement, Panama TR4 Program <p>Queensland Parks and Wildlife Service</p> <ul style="list-style-type: none"> • Senior Ranger Pest Management <p>Weed Society of Queensland</p> <ul style="list-style-type: none"> • Pest Animal Branch • Pest Animal Symposium speakers, exhibitors and delegates <p>Private landholders</p> <ul style="list-style-type: none"> • Canegrowers

COMMUNITY ENGAGEMENT

Members of community who participate in our community trapping program were engaged during the review of effective feral pig control methods process. Participants receive a practical guide on best practice trapping of feral pigs. Further community engagement is expected to occur during the implementation phase of this ongoing project.

ATTACHMENTS

Nil