

THE CURRENT IMPACTS & POSSIBLE MANAGEMENT STRATEGIES FOR FERAL PIGS IN THE IBCPS CANE GROWING REGION OF NORTH QUEENSLAND

2016-17 GROWER SURVEY



INNISFAIL BABINDA CANE
PRODUCTIVITY SERVICES



1. INTRODUCTION

Feral pigs (*Sus scrofa*) are one of the most abundant and potentially devastating pests on Queensland. The damage found to be caused by feral pigs in the Wet Tropics and IBCPS cane growing regions can be and currently is significant with losses in cane sitting around the \$1M mark. In Queensland feral pigs are a declared Class 2 pest, therefore implying that they can potentially cause significant adverse economic, social and environmental damage (Mitchell, 2011).

Across the IBCPS area management of the pest has proven to be quite difficult due to one of the main factors being the landscapes in which feral pigs are found. Across the district there has been varying success through hunting, baiting, trapping and aerial shooting activities, all of which cost money. Currently in the IBCPS area there is no co-ordinated effort or approach to managing feral pigs within our landscapes and this has been the main contributing factor to the losing battle with the pest.

2. BACKGROUND TO THIS REPORT

IBCPS was approached by other industry bodies to conduct a survey across the district from Fishery Falls through to Bells Creek/Silkwood regarding pest damage to cane blocks, in particular Feral Pigs. Detailed pest surveying had not been completed in a while, therefore IBCPS was keen to get involved and collect some data and information regarding these matters. Data in pig damage and incidence was collected from all farms that responded to the IBCPS call out in November for damage to be assessed and recorded. Local knowledge from our extension staff also assisted us in gathering information in a short period time through knowing what previous years and trends in pig damaged where like.

The following report is a simplified interpretation of the amounts of damage and losses across the districts, along with what options are out there for the future of cane farming.

3. CURRENT CONTROL METHODS AND BAITING MATERIALS

In view of the previous management strategy that was in place with Terrain several years ago, growers have done their best to keep up with pig numbers across the districts. There has been no standalaone management technique that has been 100% effective for the control of feral pigs. Several techniques such as hunting, baiting, trapping and aerial shooting are found to be quite effective in the control of pigs, however it can be implied that without a stable, co-operative approach across the whole of the district, we will never completely get on top of the problem at hand.

3.1 Hunting method

One of the most common control methods used in our district currently is hunting (especially dogging). While hunters are catching pigs, they tend to come at the wrong times to hunt; late at night rather than early hours of the morning, and besides the problem of dogging further dispersing the pigs making them scatter, a lot of hunters are found to be illegally trespassing on private property. To add a note to the time frame, there are several growers across the region who invested in a camera system on parts of the farm where they suffer the most damage, all of them suggested the appropriate time to go hunting or catching is during the early hours of 1am – 3am. In addition to the loss of income from pig damage, trespassers are cost even more money out of farers pockets, ripping up headlands and drains. To those growers who are using trusted hunters, they are paying for costs such as dog food, petrol and the most expensive would be vet bills.



Figure. 2

A large boar hunted at the back of Number 6 Branch. Note marks on the pig are from fighting not sticking, 2017

3.2 Trapping and baiting method

Trapping and baiting would have to be the second preferred method for control of feral pigs. Growers across the region have kept detailed record of what is caught in their traps, with an average of 60-70 pigs from piglets to boars caught per 12 month period. This is a huge effort on growers to have continued monitoring and uptake of baiting material, and while that sounds like a large figure, it is still not enough to control the pests and get on top of the problem.

Common baiting materials used across the area are bananas and paw paws. Common baits/poisons used are sodium fluoroacetate (1080) and C.S.S.P. –Phosphorus Pig Poison. PIGOUT® is a commercially available packaged bait for the control of feral pigs sold in Australia, but feedback from other CPS suggest that this is not an effective bait and where trials was not as effective as using a baited tropical fruit.



Figure. 3
One of small mob of 4 piglets caught using the trapping system, again at Number 6 Branch., 2017

3.4 Pig fencing

Pig Fencing is also become a more common practice among growers across the IBCPS region, with growers investing money and time into fencing off their problem blocks from the neighbouring grazing land or National Parks. Growers that have been surveyed with this method in place have mentioned that it sure has eased the amount of pressure from the pigs but over time they do manage to push their noses under and push through (this is after some period though). Some growers have also gone to the extent of having their fences lead to a large version of a pig trap to locate larger numbers at once.

3.5 Aerial shooting

Aerial shooting is a practice that has come into our region in more recent years. Particularly in the flatter cleared country such as the Mourilyan area, aerial shooting has been the only effective method for getting on top of the issue. For growers in this type of country, aerial shooting really has been the only method that has saved their farms, but like all things this method come at a cost and is an expensive task for individual growers to continue funding. It is known though, that for more elevated terrains, this is not an effective method. The contractor for the region has suggested that for him to take this method to the next level of effectiveness, an investment into infrared technology would be the next step.

In conclusion all of the above methods and techniques contribute to the control of feral pigs and it can be completely agreed upon that every pig taken out is better than no control at all. Again this all takes time, money and effort which can only result in extensive outcomes if a co-operative approach is taken.

4. CANE VARIETIES IMPACTED

In completion of this survey, an observation was made that feral pigs do have a preference for particular cane varieties, however there is no previous research even attempted that can quantify the variety preference by feral pigs.

Early on after harvest, particularly during the months of December through to March, pigs are getting into the variety Q208 has been recorded as the most popular variety for incidence of feral pig damage (unfortunately no percentages have been recorded for this observation). Without any detailed data on varieties affected other varieties that have been damaged significantly throughout the year are Q250, Q200, Q228, Q231, Q251, Q253 and although Q241 is known as a harder fibre cane, IBCPS staff have assed block of ratooning Q241 chewed off by feral pigs.

One of the biggest down falls with pig damage is that in comparison to other pest such as rats or

wallabies, once a pig uproots a stool or damages it significantly from an early stage, whether its plant cane or ratoon that will remain as a loss throughout the crop cycle.

In relation to varieties, a suggestion was made by another CPS, where they had a project involving a trap crop of Q208, with the idea that the trap crop would lure pigs into a specific area where feral pig baiting activities could occur; this technique proved to be very successful where there was limited area of susceptible varieties or where non-cane habitats that were refuges for feral pigs were adjacent to the cane farm blocks.

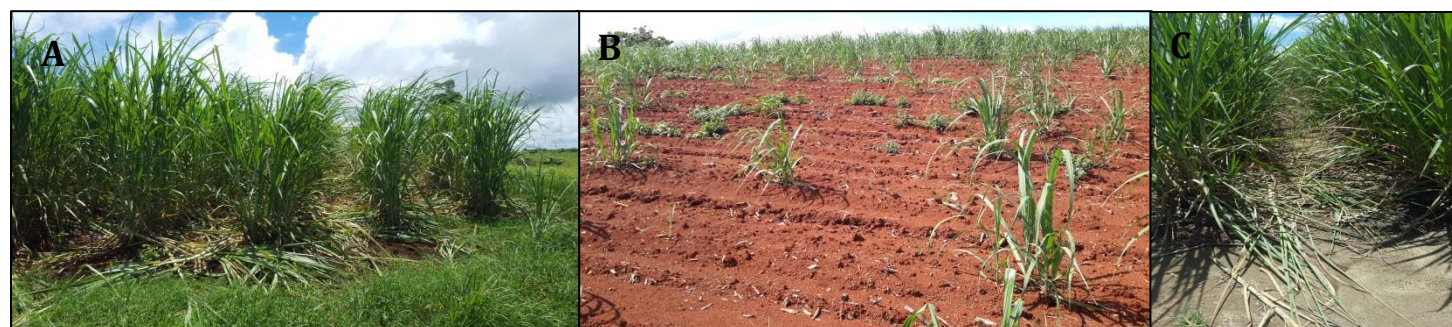


Figure. 4

Image A: 2016 planted cane with a 50% loss in that block of Q208. Image B: 2016 Planted cane, that has been planted twice since September due to pig damage – growers is leaving it as is in picture. Image C: 2R Q208 again walking though the block the misses are getting worse each year due to pig damage.

5. CROP LOSS ASSESSMENT

Across the IBCPS area which contains 39,036 hectares of cane respectively, 14,212 hectares were surveyed by IBCPS staff and the co-operative growers and therefore the figure below is based on 36% of the region.

Estimated crop losses associated with feral pig damage only in across the Innisfail Babinda region are given in Table 1. These figures do not take into account the financial losses incurred with damage cause to drains and headlands. Every grower involved in the survey also mentioned that each damaged block that was harvested, cut well below mill average, most condemned.

Table 1. Estimated value of cane losses associated with feral big damage across the Innisfail/Babinda region.

YEAR	ESTIMATED LOSS IN INCOME (\$)
2016 Season	\$1,475,280

Figures are based upon a sugar price of \$35/t of cane, using the cane pricing equations

As this is the first year of data collection since previous surveys several years ago, 2016-17 figures show high crop yield losses (tcph) and higher losses of income and industry compared to other pests such as Canegrub or Wallabies.

Subject to staffing matters, field validations were carried out where possible and not across all survey answers. Over a two months period IBCPS extension staff carried out several field validations, and they all indicated no significant difference between growers reported estimate yield losses and field validation figures. Therefore this indicates that grower crop damage estimates are adequate when attempting to estimate crop loss in income across the region.

6. HOTSPOTS ACROSS THE IBCPS AREA

Across the region for Fishery Falls to Bells Creek (Silkwood), several hot spots have been indicated on the map in Figure 2. These hot spots have been further detailed in the appendix. IBCPS staff sat down with the local contracting aerial shooter to confirm these hot spots with his records.

6.1 Possible habitat influences

Interpreting the maps provided in this report, it is quite evident that majority of hotspot locations and cane farms run adjacent or opposite to forestry plantations, grazing properties, protected land area (i.e. National Parks), forests and grass areas, therefore these cane blocks are more prone to significant increases in feral pig damage.

- Refer to appendix for detailed maps of individual districts.



Figure.5
Snapshot of the IBCPS region and the hotspots
identified across it, 2017 survey data

7. GENERAL CONCLUSION

In conclusion, various control management strategies mentioned in this report are all fundamental for the management of feral pigs; however this survey demonstrates to industry that there is no one approach that will singularly manage feral pigs in a landscape.

With the opportunity to resource an employee for the purpose of 1080 baiting and a round the clock trapping and monitoring, this would be the most vital tool in the management of feral pigs for our region. While we have no data for this year, during previous management strategies run across the region and from feedback of other CPS's with successful management strategies in place, the use of 1080 is the most efficient and effect, humane and species specific pesticide available for the management of feral pigs (Anon,2009). Strict management of 1080 is essential through trained and accredited personnel in the application and handling of the product to ensure that the product is not misused.

In the Wet Tropics area, it appears that banana and paw paw is the most suitable bait material. IBCPS acknowledge that the ability to access these resources is essential for the continuation of baiting and trapping throughout the year in order for cane growers restocking, and IBCPS will look at the option of organising baiting material through local fruit farms, and providing our growers with a list of suitable contacts for these materials. Feral pig control should be undertaken simultaneously at all properties within a population to reduce recolonisation, and within reason this would be a certain percentage of a growers business responsibility and at the end of the day a small price to pay financially and ?? to gain back a profit in the long term.

In addition to this, in the meantime cane farmers are advised to manage varieties planted adjacent to non-cane habitat areas in which feral pigs are found or utilise identified feral pig susceptible varieties (like Q208) as a trap crop to lure feral pigs to where baiting activities can occur.

Long term funding security is essential to maintain feral pig management programs in the region. Failure to maintain investment into feral pig management will result in pig populations increasing and significant increases in cane losses and the costs associated with repairing infrastructure like headlands and drains on farming land. This is already being observed after several years of no real collaborative approach for managing feral pigs across the region.

Environmental impacts caused by feral pigs should not be ignored either when considering a feral pig management program. Feral pigs are a declared Class 2 pest in Queensland requiring land managers to take reasonable steps to keep their properties free from feral pigs (Mitchell, 2011).

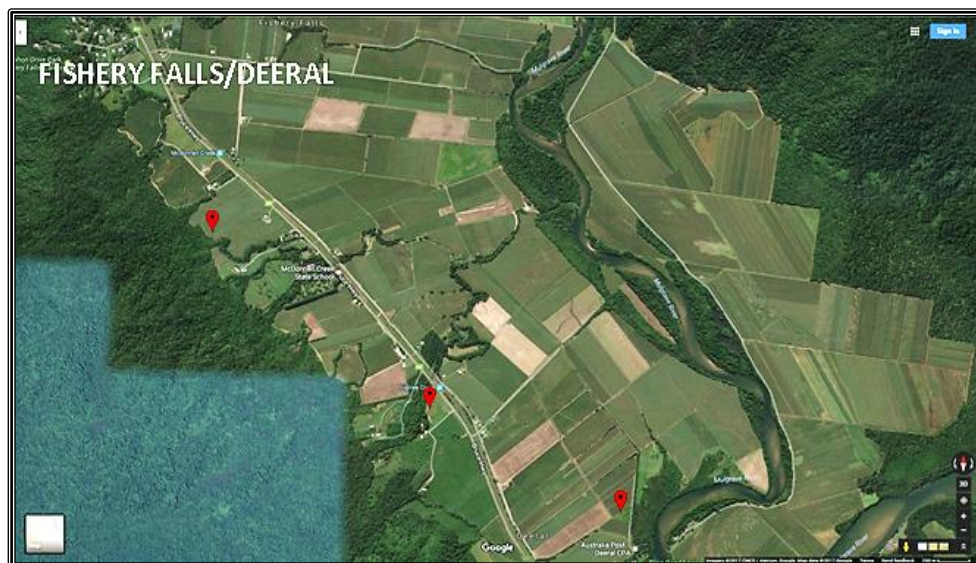
IBCPS recognise the need to the cane industry across Innisfail/Babinda and throughout Australia will need to work collaboratively with other land managers to manage this pest that knows no property boundaries if it is to be successful in minimising the damage incurred to the sugarcane industry.

8. REFERENCES

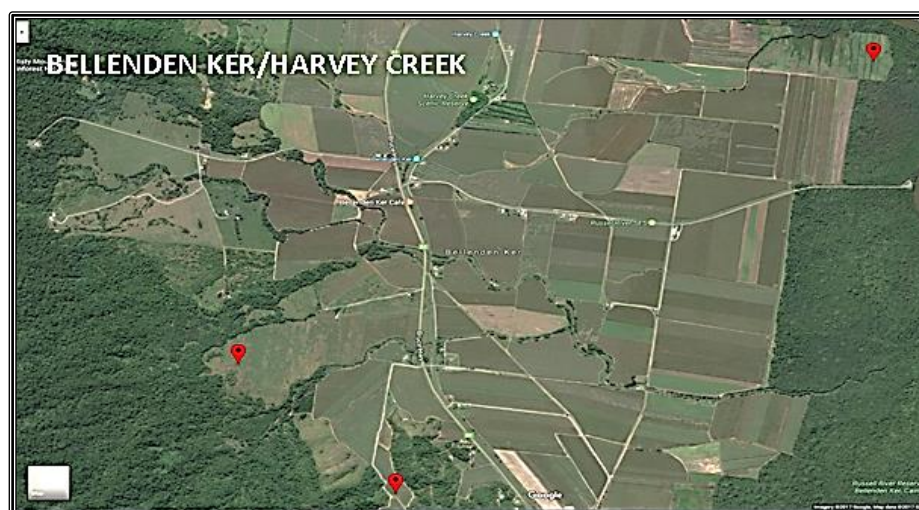
- Anon. (2009) Toxin 1080- A guide to safe and responsible use of sodium fluoroacetate in Queensland. The State of Queensland, Department of Employment, Economic Development and Innovation, 1/2009, Brisbane
- Di Bella L, Fuller S, Stallan R, Buchman M, Bacchiella D (No date) The impact and management of Feral Pigs in the Herbert cane growing region of North Queensland
- Mitchell J (2011) Feral pig control. NQ Dry Tropics, Townsville.

9. APENDIX

Map 1.



Map 2.

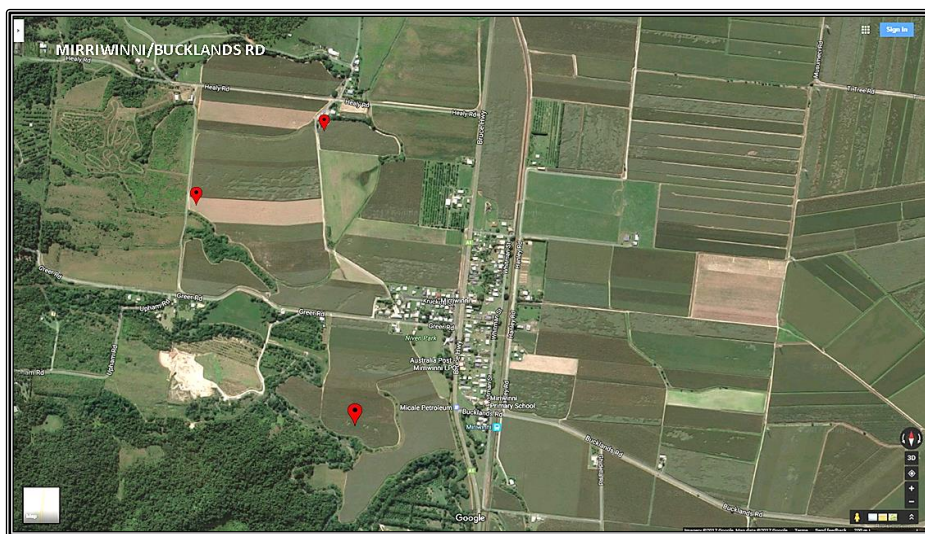


Map 3.



THE CURRENT IMPACT AND MANAGEMENT STRATEGIES FOR FERAL PIGS IN THE IBCPS CANE
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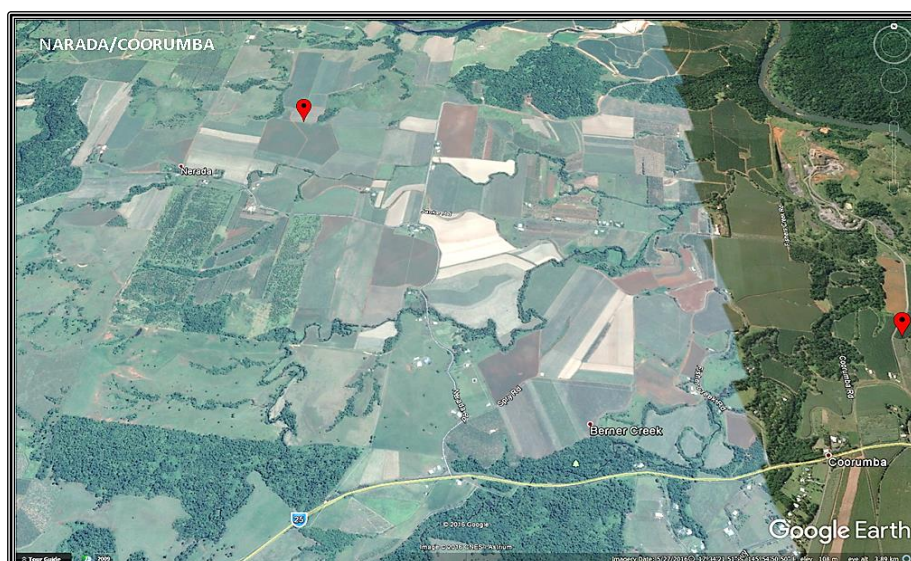
Map 4.



Map 5.



Map 6.

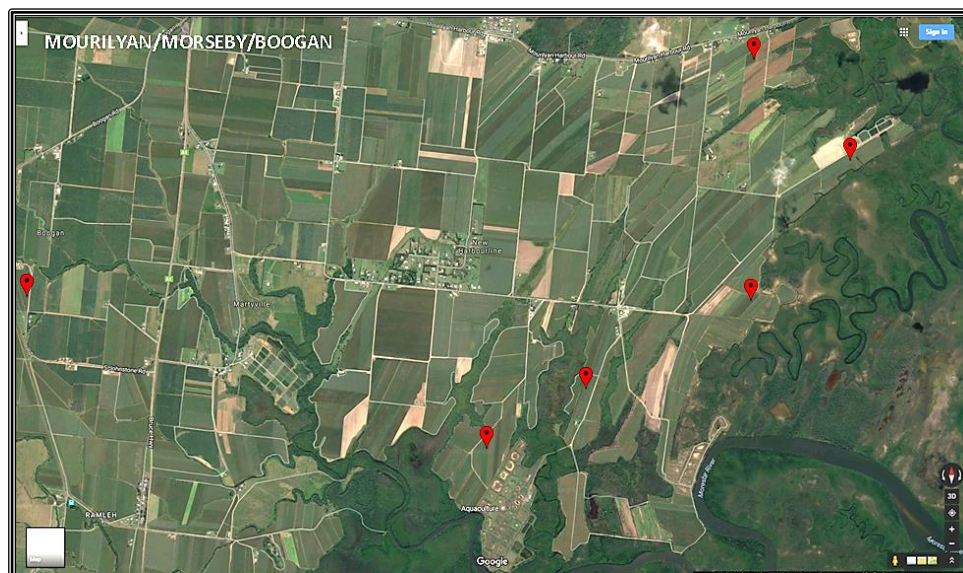


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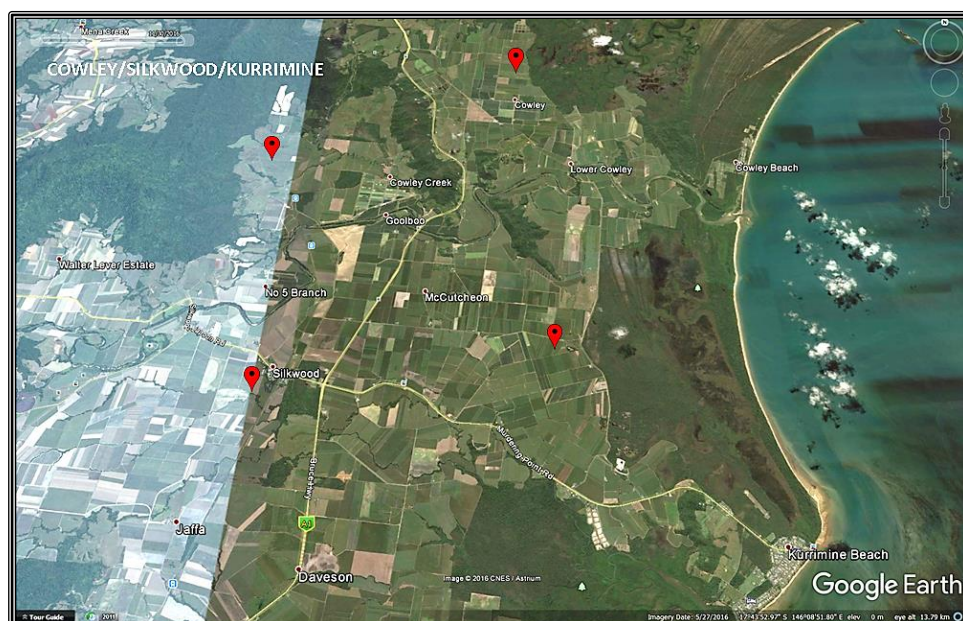
Map 7.



Map 8.



Map 9.



Map 10.

