

KORU BIOSECURITY MANAGEMENT

C. JACK CRAW, PRINCIPAL
jackcraw57@gmail.com
+64 21 2229064

To: Josie Tamate, Director General, Ministry of Natural Resources
Brendon Pasisi, Director, DAFF
Sauni Tongatule, Director, DoE
Poi Okesene, DAFF
Huggard Tongatule, DAFF
David Moverley, SPREP

Date: 31 March 2016

Report on Niue Feral Pig Management Pilot Programme, October 2015

This is the final progress report on the pilot programme. It covers the visit to Niue September 8 to September 18 2015, with master hunters Glen Osborne and Peter Peeti. The purposes of this trip were to continue the hunting training, progress the toxin trial and attempt to progress the lured enclosure trial.

This report is also accompanied by the Niue Pig Management Plan.

Lured enclosure

Unfortunately the phone camera sent to the US manufacturers over a month previously had not been replaced with a 2G-specific model so we were unable to determine if pictures could be sent by cellphone. The manufacturer (Covert) was very confident that this can be achieved as it has been doing this in the US for many years. The US and most other countries have upgraded to 3G and beyond and the newer model we were originally sent was claimed to be able to operate on 2G and 3G networks. Covert stated that an earlier 2G-only model had better 2G coverage so we were hoping to be able to use it. In addition local coverage was generally too weak over most of Niue at this time to allow for pictures to be sent via cellphone.

We had success and absolute reliability in activating the enclosure gate via simple text messages (from Niue and New Zealand). This was very pleasing

to witness and operate. However the concept relies on real time decisions to activate the gate, based on pictures sent via cellphone, so the lured enclosure cannot be used until the lack of cellphone picture capability is remedied.

In addition, since the enclosure was built, there have been no pigs recorded in either of 2 cameras placed on existing pig runs in the vicinity, nor any coconut lure (or other lures) taken, nor evidence of damage to crops in the area. This all despite use of coconut as a lure proven elsewhere on Niue. This indicates that the presence of the enclosure has acted as a strong incentive for local pig owners to keep pigs penned. It is therefore unlikely that the enclosure technology would ever be useful in reducing pig numbers on Niue, despite its very low (labour and ammunition only) running costs.

Furthermore, the data extracted from cameras deployed throughout Niue, and the reports from hunters, indicates a general paucity of family groups of pigs. As the lured enclosure is specifically designed to catch all members of a family group, rather than single pigs, the use of this technology is not now considered appropriate for Niue, where the pig problem is mostly due to single wandering domestic pigs and escaped/released single pigs rather than family groups of feral pigs. This is in clear contrast to most other countries (e.g. USA, Europe, New Zealand, Australia) but may be typical of small well-populated Pacific islands where pigs are the most significant food source and are widely kept but casually managed.

It is recommended that the electronic gate switches be removed and stored for other use (e.g. security doors, release mechanisms on cargo hoists etc). The troughs and tanks can be used to lure pigs to toxin bait boxes or sites where pigs can be hunted. The grain bait feeders can be used at the Niue Government pig research unit or other site where staff are otherwise required to be on hand every day to feed pigs, as the feeders activate at pre-set times each day. These feeding periods can be easily adjusted. Alternatively the feeders can be used in a chicken farming or research facility. The fencing materials can be used for a variety of other uses. The pre-feed lure (10 litre pails) and grain can be used as domestic pig or chicken feed. The drop gates can be easily converted to piggery sides. The deep cell long-life batteries can be used for a wide range of purposes.

The cameras are already being used to detect and study pigs for the hunting programmes.

Approximate cost of the lured enclosure trial:

The electronics, gates, troughs, tanks, fencing materials etc cost approximately \$6,400. Of this perhaps only the electronic switches (\$1,100) will not find a use on Niue. Consultant costs were approximately \$7,000. Total cost approximately \$13,400.

Encapsulated Sodium Nitrite (ESN) toxin trial

The ESN trial had to be restarted due to other staff priorities since the previous visit. The trial procedure is:

1. install cameras at all three sites to observe pig behaviour (completed last visit)
2. place split coconut lure in open bait boxes and adjacent to the boxes until pigs find the coconut (completed last visit)
3. from that point place split coconut lure ONLY in the open boxes, refilling as necessary
4. when pigs are feeding from the open boxes, lower the box lids until they are 100 mm or less from fully closed, refilling boxes as necessary
5. when pigs are opening the box lids, leave the lids totally closed, refilling as necessary.

The aim is to see if pigs can be made to open closed bait boxes. If so, then ESN can be deployed with no risk of poisoning other animals.

Despite demonstrating the luring procedure to the Project Officer on the previous visit, and communicating it several times via email before this last visit, I was unable to get the procedure implemented properly, and items 3-5 were not followed. Staff did place split coconuts in the general area of some boxes (some of which remained closed throughout) but this was of no value to the trial other than confirming the previous learning that fresh split coconut is an excellent lure. I do not know if this reticence was due to a cultural issue, a dislike of the toxin option because it does not allow for meat recovery, or a desire to progress hunting as the only option. Despite making repeated enquiries I was not able to determine the reason for this.

The recommenced trial attempted to answer two major questions:

- is coconut oil a suitable carrier for ESN?
- can pigs open closed bait boxes or can they be trained to do it in 2-3 nights?

The ESN toxin is supplied in pure granular form and needs to be mixed with a carrier/lure. The grain and fish oil carrier/lure provided by the toxin manufacturers (Connovation) was previously established to be not attractive to pigs on Niue, even when combined with a US pig lure product, fish products and maize. So it was necessary to find an alternative carrier for the ESN. Coconut oil was suggested, as oils keep ESN stable indefinitely, and coconut oil should be attractive to pigs and is available on Niue. Coconut oil (solid at ambient temperatures) was added to the coconuts used in the trial and was eaten by all the pigs. Wherever more coconuts were available than were necessary (i.e. not all coconut flesh was consumed) and only some coconuts had added coconut oil, the pigs consumed all the coconut oil and only some of the flesh, indicating a very strong preference for the oil. The oil also proved to be rainproof during 2 nights of moderate rain when the box lids were fully open. This part of the trial was an outstanding success. These results were communicated to Connovation.

Perhaps the most important procedure trialled during this trip was the ability and propensity of pigs to open closed bait boxes, so as to obviate any threat to other animals and children. Three bait boxes were each placed in 2 different locations (6 sites total) for 4 days each during the 9 days, and each loaded with split coconuts and coconut oil in the boxes only, i.e. no coconuts placed on the ground. The box lids were fully raised. Pigs were drawn to 2 of the 3 bait boxes which all had cameras in place. Pigs returned frequently each night and occasionally in the early morning and late afternoon. 4 individual pigs visited 4 of the 6 sites, and all 4 pigs ate from the boxes. The next day, the lids were lowered so that the opening was 10 cm or less. All 4 pigs returned and opened the boxes. The following night all the boxes were closed and all were opened by the 4 pigs. In one case, the pig knocked the lid closed on the first night but immediately opened it with its snout.

This was the result sought i.e. we now know that pigs will open closed bait boxes within 3 nights and may do so on the first or second night. This ensures target specificity i.e. removes risk of other animals being exposed to the toxin. The results here were more immediate than in earlier trials in New Zealand, indicating that the Niue pigs had probably had previous exposure to feeding troughs, therefore likely to be wandering domestic pigs rather than truly feral animals.

The pictures taken at the bait box sites indicated that all 4 pigs were domestic crosses, i.e. wandering domestic pigs, not true ferals.

Unfortunately there was no time remaining on the trip to actually deploy ESN. This was frustrating given the time spent. However, given that ESN is a very effective toxin proven in trials and in the field in New Zealand, it can be stated with confidence that ESN can be used, with coconut oil as a carrier, in the bait boxes, as a safe and effective tool for pig control on Niue.

Approximate cost of the toxin trial:

Toxin, pre-feed and bait boxes: \$790.

Consultant, airfares, accommodation: \$6,000

Total cost: \$6,800.

Scientific hunting with dogs

Unfortunately, due to the trip being rescheduled, Glen's vet had overlooked a key date on the vaccinations for one of Glen's dogs, and this dog required a further vaccination and travelled up on Friday 11 September. The hunting details of the trip are included in Glen's and Pete's reports (attached). Some of my time was spent with Glen and Pete and locals on hunting activities.

The dramatic decrease in pig sign and crop damage, first noticed last trip (July 2015), persisted with this visit. There was very little crop damage detected in 9 days surveillance across virtually all of Niue. This is discussed below.

Estimates of feral/wandering pig abundance had previously been made by hunters and plantation owners, ranging from 500 - 1500. My own initial estimate was approximately 300 or less. In Glen's previous trip (July 2015) he estimated 150 - 200. At the end of this trip Glen and Pete, with the benefit of wider surveillance and hunting effort, had confirmed this number to be likely 100 - 200. I consider this to be a very reliable estimate range.

The hunting programme was an outstanding success, both in terms of pigs culled and in training locals to hunt effectively. 20 pigs were culled in 7 days. The progress made with training the local hunters (Kala Ogatau and Huggard Tongatule) was excellent, with them and several others (Dan, Hele) becoming proficient with GPS use and general hunting techniques. The community clearly supports hunting, as a significant amount of meat is returned to the families and for cultural events. Almost all of the pigs caught on both trips were domestic breeds, in good-to-excellent condition, and the recovered meat was of high quality despite being mostly boar meat. This indicated that most

of the pigs were 2-4 years old and very few older than 5 years, which was confirmed by assessment of teeth number and condition.

The hunting option is clearly very popular with staff and others, therefore is likely to be maintained indefinitely without morale slipping.

Approximate cost of the scientific hunting trial

Airfares, accommodation, salaries of NZ hunters, ammunition, dog importation, veterinary, freight, quarantine, GPS collars, etc \$71,000

Consultant, airfares, accommodation: \$7,000

Total \$78,000.

The commitment by DAFF to implement a knockdown programme on wandering/feral pigs is to be applauded.

Case study - Liku piggery

On 16 September a full hunting party, including the Director and Minister, inspected and hunted at Liku, in a bush block immediately behind a large piggery. There was a huge amount of pig rooting around the piggery and outwards into the bush, to a distance of 200 metres, and thinning further out. A 40 lb black and white domestic breed sow in good condition was tracked and shot within 200 metres of the piggery. The large amount of pig rooting indicated that 3-4 pigs would be wandering outside the piggery at most times. These pigs will not be feral. The piggery was typical of most others seen on Niue.

Executive Summary

Four pig control methodologies (scientific hunting with specialised bred/trained dogs, sodium nitrite toxin, lured enclosure and snare) were tested, over 4 separate visits to Niue. The lured enclosure concept proved inappropriate for use in Niue due to pig population dynamics, telecommunications limitations and pig owner behaviour. Use of snares also proved unsatisfactory as it is both ineffective and inhumane.

The toxin programme was not fully completed but was trialled to proof-of-concept level (including modifications to suit local conditions and pig lure

preferences) and proved to be cost-effective and easily manageable. There remains a degree of reticence by locals to employ this method, which was not articulated but believed to be based on lack of meat recovery rather than fear of the toxin.

The scientific hunting programme was an unqualified success, with local staff and private hunter rapidly becoming trained in all aspects. The option is popular with the community as meat is distributed. The only drawbacks are the high cost of bringing suitable dogs to Niue to maintain a breeding programme; the moderately high cost, and lack of incentive for pig owners to contain pigs.

The surveillance of pig rooting, plantation damage, camera and hunting records, all show that the feral/wandering pig issue is largely confined to the eastern and north-eastern side of Niue, i.e. from Mutalau to south of Liku.

The above data, when combined with the breeds and sex of the pigs recovered and/or photographed also proves that the pig issue is essentially one of piglet release and not a feral population issue.

Thanks to: Josie Tamate, Ross Ardern, Brendon Pasisi, Sauni Tongatule, Huggard Tongatule, Emeline Laufoli, Poi Okesene, New Aue, Tom Misikea, Kala, Hele, David Moverley, Peleni's Travel, BCN and Niue Star newspaper.

APPENDIX

Hunting reports from Glen Osborne and Pete Peeti.

Niue Pig Pest Control

Glen Osborne

Day 1 08/09/2015

Arrived back in Niue at 2.30am, for the 2nd stage of the "Pig Pest Control". As I expected, myself, Pete Peeti and Jack Crow were welcomed with the utmost hospitality. Unfortunately one of the Dogs (Ace) did not make the MAF export regulations so was left home until sorted. But we had two dogs (Awa and Chum) that were able to do the job needed. The dogs were collected from Biosecurity, then loaded and taken back to our accommodation in Lakepa, Lialagi.

No hunting was done today, as it is not good for the dogs to hunt after coming straight off a plane due to jetlag. However we still went looking for sign, and found one small pig hanging around one of the piggeries on the western side of Liku also a lot of sign down the eastern side of the Island, with fresh rooting. We will head here in the morning.

Day 2 09/09/15

6.00am start, hunted the first track, south of Liku, no sign, then headed further south where there was fresh sign from the day before, Pete's dog Chum found a good sized boar but was hurt badly, with two deep rips to the side of the body, one rip had punctured the stomach cavity bringing air inside its body. It was quickly stitched, antiseptic applied and superglue put on to hold the stitches in place. The wounds were cleaned, antibiotics taken, and a shot of penicillin was given. Chum was taken back to the accommodation. I carried on down the track with Awa to try and get on to the scent of the boar but Awa caught a young boar of about 70lb, it was shot and carried back to vehicle then to the accommodation.

The afternoon hunt we caught up with our local hunter Kala, he had his 2 dogs, Roxy and Mufasa. We only hunted Kala's 2 dogs, as Awa had cut her paws on the coral and Chum was out of action for a couple of days. We then went along the main road heading toward Liku checking the side tracks and eventually found another good boar of about 110 lbs which was shot by Kala. There were other pigs that were in the same area and will return and hunt toward the north. Returned and cleaned pig.

* Must return and hunt toward the north.

* Keep teaching Kala with GPS

*Chased 3 *Caught 2

Day 3 10/09/15

6.00am start, again we picked up Kala with his 2 dogs. Three plantations checked in the inner part of the Island, because of complaints of pig damage, but no fresh sign was found. We then checked other plantations in the area, with no success. We finished the morning hunt early due to the weather being too hot. On returning back to Lakepa, fresh pig sign was found on the side of the road near Toi, so we will return here this afternoon.

The afternoon hunt, we headed back to Toi with Kala bringing his 2 dogs and I had Awa. The first boar of 70 lbs was caught just 50 metres off the road. This boar had a snare around its snout, which meant it was not able to drink or eat. It was in bad condition for that reason. We carried on west of Toi where a 60 lb sow was caught. A good catch by the dogs, and again there were more pigs than just the one. We will return here at a later date.

*Getting more confidence with Kala.

*Chased 3 *Caught 2

Day 4 11/09/15

Started the morning hunting at the rubbish area heading toward Liku, a young piglet was caught by the dogs, which we did not recover. The dogs then chased another pig in the same area around for about 10 minutes before losing it. We carried on to another area just past Liku where we had lost a good boar in the previous contract. On arrival the dogs left immediately, they chased and caught a 200lb boar thanks to Pete waiting on the road.

2.30pm, we went to the airport to pick up Ace as he had passed his quarantine inspection in New Zealand, which I was really happy to see him as we only had Awa who had sore paws at that stage.

In the afternoon we meet Kala who had 3 dogs and a pup. We headed to Mutalau, and drove inland, there was a lot of sign, but Kala's dogs caught a cat and scared the pigs in the area. There was lots of pig sign, and the pigs were there, however the noise of the dogs killing the cat disturbed them and they were gone.

We went further along the track, and Kala and his dogs chased another pig, one of the pigs ran right past me which I shot, then I released Ace and he found another pig just 50 metres in and a 80 lbs sow was brought to the track. It was another good day out hunting.

*It is time for Kala to take over the tracking gear.

*Must train Kala's dog to only chase pigs.

*Slow down and watch the dogs.

*Chased 4 *Caught 3

Day 5 12/09/2015

We started hunting north of Lakepa, with no sign on the first couple of tracks on the sea side of the road. We headed inland and found a very good boar of about 130 lb, it was shot and brought back to the truck. Ace again tracked and found and killed another young piglet, which we could not find, so we returned back to Huggard's place to singe the pig.

The afternoon hunt we check the area on the Alofi - Hakupu road where someone had seen pigs that morning, but nothing was found. We then headed to the northern side of Hakupu on a sea track. Ace and Awa found another good boar this one was of a pure white colour. It was shot and carried back to the truck. Ace was found with a small rip to his right shoulder but should be fine to hunt on Monday.

*I will keep checking Ace and give him an antibiotic

* Chased 3 * Caught 3

Day 6 13/09/2015

Today is Sunday and everyone on the Island is at church, so this morning we only looked for sign. Kala came around about 3.00 pm and wanted to go for a hunt, so Pete went and showed him how to use the GPS and keep him company. They missed a good sized boar on a track near Mutalau. Tomorrow we will go back and cover this area.

Chased 1 Caught 0

Day 7 14/09/2015

This morning we went and picked up Kala's 2 dogs to work with Chum. We headed inland to where Jack had seen a sow and piglets walk across the track. The dogs worked the area but no sign of the pigs were seen. The afternoon we hunted at Namukulu and were surprised to catch 4 smaller pigs in this area near the old primary school.

We then hunted an area between Mutalau and Toi and checked the place where Kala had lost a good boar the night before. No pigs were found.

We then headed down to Namukulu. Four pigs were caught in this area near the old primary school. 3 of the pigs were from the same litter and the other was just a small piglet.

A good day catching pigs. However the dogs are getting tired and sore, must rest them in the afternoon.

*Chased 4 *Caught 4

Day 8 15/09/2015

We started the morning hunt at Liku where we had seen a young pig around a pig pen. This 20 lb pig was caught quickly and put into the nearest pig pen. I then carried on along the same track where I had caught pigs in the last contract. Ace left again and caught and found a very good sized boar of about 150 lbs which was shot and carried back to the vehicle.

We hunted around another piggery further along, there was a lot of sign and Ace tracked off and found something but it was hard to say if he killed anything for it was too far to hear anything and the bush was too thick to look for any small dead pigs.

We then carried on down to Hakupu where Ace found another boar, however Ace was badly injured with a large rip to his left shoulder. The wound was cleaned and stapled, penicillin was injected and oral antibiotics given. He was taken back and rested.

Pete and the boys also chased and lost a good sized ginger sow and saw a few other small pigs but could not get a shot away.

*Chased 4 *Caught 2 *Saw another 4

Day 9 16/09/2015

This morning we headed to an area in Liku which we had never hunted, it was a level down closer to the beach. There is only a couple of ways down which we were shown, we hunted this new place and caught a nice young boar which Huggard shot. I was very pleased with Huggard and his safety with the gun. We returned to the main road and while waiting, a young sow appeared. Awa gave chase but lost it, however 2 of her piglets were caught. They were brought back alive and put into pens.

That afternoon we hunted with the Minister and Brendon. We split up and I had Kala with me and Huggard with Pete. We hunted directly behind the village of Liku where there was a lot of sign. We found the pigs immediately, but they were chased away by Kala's dog. However Pete had just caught a 40 lb black and white sow, making it a very good day.

Chased 6 Caught 4

Summary

Over all it was successful campaign during the 10 days, with 20 pigs being caught in 7 days of hunting, plus lots of learning done. From here it is just about building confidence for our 2 hunters, spending as much time in the bush as possible and learning from each other. You are always learning every time you go out hunting.

Again most of the pigs caught were in the north and eastern side of the island, between Namukulu to Mutalau and Mutalau to Hakupu, with a large number based around the Liku area. One reason I believe why there are large numbers of pigs in this area is the poor condition of many of the pig pens. On a number of occasions I had seen pigs wandering outside of the piggeries and around villages, they are obviously domestic pigs but for how long.

In terms of dogs, there would always be difficult challenges with heat, ground surfaces, fatigue, not to mention injuries. As it so happened to our main dog (Chum) injured on the first day and Ace injured on the 6th day on the island but there is nothing that you can do about it. The risk of injury is very high because of the large number of good sized boars on the Island.

As for the breeds of dogs on the Island used for hunting, I don't think they have the traits and qualities to be top pig dogs. However they are doing as good as they can with what they have and hopefully leaving Awa will help in this area. I would like in the future to send a couple more specifically-bred dogs up to help in this campaign but that would be a couple of years away.

One of the key aspects I saw a big improvement in is the actual observation when hunting. In the beginning our local hunters were moving too quickly through the bush and I told them to slow down and observe the bush, pig-sign, and dog movements. This is vital when hunting for any type of animals.

Our hunters showed great potential and the willingness to continuously learn. Huggard grew in confidence every day and even more after shooting his first good boar. I was extremely happy with the performance of Huggard and he was fun personality. As for Kala, he was already an experienced hunter and only needed some tiny things to change which he did with no hassles at all. Once again Kala was a lovely person to work with, and I am sure he will keep sharing his knowledge with Huggard.

I am now confident that Huggard and Kala have enough experience and technology to carry out the job needed in keeping the numbers down in the pig pest control programme. Obviously having the support of the people and DAFF will help in this as well.

Recommendations

- * Work on a two year plan for another 2 trained dogs to be taken to Niue. As Awa will be getting older and a little slower, and may get injured or be used for breeding.
- * Purchase Dog Staple Guns and Dog Medical Kits for both hunters to carry while hunting, for emergencies. As we have experienced in the last contract, 2 dogs were seriously injured and luckily we carried this equipment with us to take care of the dogs at the time of injury. There is a lot of good sized boars on the Island which can easily damage more dogs. These kits can be purchased at any "Hunting and Fishing Store" in New Zealand.
- * Small medical kit for hunters

- * Look at doing a gun safety course or even getting a New Zealand gun licence. I have had my gun licence for many years, however I completed a "Gun Safety" course last year and it was the best thing I have done for a long time. Remember safety is the key.
- * Return the Garmin GPS tracking systems A.S.A.P. Recharge and clean before putting equipment away.
- * Gamegear covers to be placed on collars every time when used.
- * Have someone carry out inspections of all pig pens for maintenance. This will help reduce the feral pig population.

Niue Pest Control Sept 9th – 19th 2015:

Pete Peeti

Tuesday 8 Sept, Day 1:

Arrived in Niue. Travelled to Lakepa Village and set up base at Lialagi accommodation. Late afternoon local DAFF (Department of Agriculture, Forestry and Fisheries) officer Huggard Tongatule took Glen and I straight to where he had seen a large boar earlier in the week feeding along the main road, about 1km south of Liku. The fresh sign was evident that pigs were in the area. After that we headed down an eastern track towards the coast between Lakepa and Liku finding a little bit of fresh sign and spooking a pig on the side just before dark.

We also checked a track on the eastern side of the main road in the same area where Glen caught a good boar on his last trip. This track has a piggery which had a little 20 lb white and black boar taking off into the bush as soon as we arrived. This we noted and plan to catch and pen or kill later on in the week.

Tally: 0 – Saw 1 Small Boar / Heard 1 Pig

Wednesday 9 Sept, Day 2:

Huggard, Poi, Hele and I took my dog Chum to check out the track where we spooked a pig the evening before, with no luck. Next we headed to where the big boar was sighted by Huggard. Chum quickly picked up a scent almost immediately along the coastal side of the main road. He ran 100 metres down the road before cutting 20 metres in on the left side pulling up and trying to hold a large boar. After a 30 second scrap Chum came back to the main road with rip wounds bad enough to put him out of action for at least a week. Boar got away. Not a good start! Staple stitches, penicillin, antibiotics and super glue were needed to fix Chums wounds. Glen used Awa to track down a 65 lb black boar south of Liku 200 metres in on the coastal side of the main road.

Afternoon hunt with local Mutalau hunter Kala Ogotau. Kala's dogs caught a 120lb black and white boar 250 metres in on the coastal side opposite Hikulagi Sculpture Park.

I've noticed that feral pigs or past escaped farm pigs tend to hang around not too far from the piggery, especially the boars which may be lured in by the penned sows.

Tally: 2 – 65 lb Black Boar, 120 lb Black and White Boar / Lost 1 Large Boar

Thursday 10 Sept, Day 3:

Early morning hunt towards the centre of the Island to check out plantations, with no result. The odd sign evident but very old. On our way back to Lakepa we spotted some fresh sign along the main road just before the village of Toi. That afternoon we went back to that fresh sign at Toi with Kala and his dogs to where Glen. A 70lb skinny ginger boar was caught by Kala's dogs Roxy and Mu as soon as we let them out. The boar had a snare still wrapped around its mouth which prevented it from feeding so it was good to put this pig out of its misery.

Further down the road heading west just out of Toi we headed down a side track taking us towards the northern coast side when Kala's dogs bailed a pig 300 metres in, as that pig broke Awa managed to catch a 50 lb black and white sow before she could get to bail up. Good pig sign there.

Tally: 2 – 70 lb Ginger Boar, 50 lb Black and White Sow / Lost 1 Pig

Friday 11 Sept, Day 4:

Awa stayed home all day to heal sore pads from running on coral inside the bush. We started off hunting 3.54km south of Lakepa. We headed for the rubbish dump track that Glen and I checked on Day 2 where Awa seemed keen. Kala's dogs winded immediately tracking off the main road catching and killing a weaner. Minutes later same dogs had a good bail up 230 metres in from the main road but unfortunately the pig broke. No idea what size it was. Where the dogs stopped bailing there was also plenty of good sign and fresh pig beds.

Further down the main road, Kala, Glen, Huggard and Hele worked 500 metres west on another track along the same side. I stayed out on the main road to monitor the team's progress. The GPS showed that the dogs were moving fast heading back towards the main road then running parallel with the road 100 metres in. I caught up with one dog which was trail barking behind a pig chasing it back towards Lakepa and stopping it. I stalked in and shot a 20 lb black and white boar trying to hide in a hole under tree roots.

Ace arrived at the airport, used him for back up only for his first hunt. Late evening hunt with Kala and his dogs 1 km southwest of Mutalau resulted with one of his dogs bailing and killing a cat. There was plenty of sign in the area but pigs were scared off by the ruckus. Kala and I pushed on ahead anyway catching up with the pigs again 500 metres inland scaring an 80 lb ginger black sow out to the track where Glen shot and killed it. A 20 lb ginger black boar ran out between the boys which managed to escape.

All in all a successful days hunt. For me today would have to be the best day so far recording a large area of pig sign around Mutalau village.

Tally: 3 – Weaner, 20 lb Black and White Boar, 80 lb Ginger Black Sow / Lost 1 Pig / Saw a 20 lb Ginger Boar

Saturday 12 Sept, Day 5:

Morning hunt 10 minutes north of Lakepa with Ace and Awa checking for sign around Hele's family piggery. Sign was evident within a 100 metre radius. Drove down the next track off the main road, headed about 400 metres in. Both dogs tracked away on the right, Awa returned after 5 mins but Ace kept searching out to 150 metres. Half a dozen runs were quite clear indicating that pigs were in the area so Hele and I walked further up the track with Awa who began to show a bit of interest sniffing the ground and heading right 40 metres in to find and bail a 130 lb ginger black boar. We crept in and I shot the boar immediately. Ace took off again back towards the main road catching and killing a smaller pig on the opposite side of the track.

Afternoon plan was to hunt the east coast between Hakupu and Liku. First track checked resulted with a 100 lb white boar bailed by Ace and Awa. Harder terrain for dogs closer to the coastline with much more coral cutting the dogs paws. Ace was slightly ripped on the shoulder by the boar but will be ok to hunt on.

Tally: 3 – 130 lb Ginger Black Boar, 100 lb White Boar, Weaner Pig

Sunday 13 Sept, Day 6:

Headed out alone this morning with Chum to check for sign. Headed down all tracks in Lakepa after leaving Lialagi. Found a little bit of sign on the coast side before heading into Hakupu Village. Drove 2 km out of Hakupu towards Toi and found a lot of fresh sign on both sides of the road. Afternoon hunt with Kala and his dogs in Hakupu. The idea for this hunt was to show Kala how to operate the Garmin T100 GPS and Collars as these will be staying with Poi to make life easier for pig hunters. I sent Kala into the bush with Glen's GPS to check the pig runs. This plantation had a bit of pig damage that I had recorded earlier in the day. 350 metres in Kala had previously seen a lot of beds and pig runs under the main bush canopy but his dogs did not pick up on any pigs. I stayed out and checked the other side of the road and found more pig rooting opposite where I sent Kala in. Definitely the most fresh pig damage I have seen so far whilst working this contract.

After catching up with Kala again we decided to head home down the Bike 4 track hunting all the way. I spotted some fresh sign of about a 40 lb pig walking down the track. About 500 metres in of the main road the dogs got onto a scent and bailed a pig. It broke immediately with Kala's dogs chasing and trail barking. The pig ran around in a circle. At that time I was showing Kala how to work the GPS explaining where the dogs were and what direction they were travelling. The dog's GPS coordinates indicated that they were coming our way and fast. I set Kala up on a pig run ready for the shot. A large ginger black boar of about 140 lb ran out, Kala took the shot, and unfortunately it was a little too high missing the pig altogether.

Tally: 0 / Saw & Lost 140 lb Ginger Black Boar

Monday 14 Sept, Day 7:

6am hunt with the team again, Huggard, Poi, Hele, Glen and new comer Dan. I picked up Roxy, Kala's dog to run with Chum. We started halfway along Alofi – Lakepa Rd on the Northern side as Jack had seen a sow and 5 large suckers walk across the track the day before while setting his trail cams and coconut traps. The dogs didn't seem to take much notice as the trail were they crossed was a day old and not fresh enough. We hunted the south side of the main road between Mutalau

and Toi. Plenty of sign there but no luck. We also checked where Kala and I had a shot at the boar the day before and walked to where it had run off too, still no luck.

About 11am we decided to hunt off the main road between Tuapa and Namukulu. Local residents and tourists had said they had seen pigs close by so Glen took Awa and Ace to the inside bush while I took Chum along the coastal side. Immediately Chum grabbed a little ginger black weaner boar. Chum then searched the edges and found and held a 30 lb black and white boar. Once we killed that, he then took off to the old abandoned school building and bailed another pig. This ran past me and I shot it with the shotgun then the dogs held it. This was a 30 lb black and white sow. Another 30 lb black and white boar ran out past us and Ace caught this further down the main road. Definitely rockier terrain closer to coastline.

Tally: 4 – Weaner Ginger and Black Boar, 30 lb Black and White Boar, 30 lb Black and White Sow, 30 lb Black and White Boar

Tuesday 15 Sept, Day 8:

Early start with a plan to catch the small pig outside piggery we had seen on day 1 in Liku Village. Team was Hele, Huggard, Dan, Glen and myself. Dogs used were Ace, Chum and Awa. On arriving at the pen we walked down the track and spotted the pig running off into the bush. Ace was released to catch but spooked pig back out to Chum. The pig was caught and put into the pen for the owner. Glen decided to walk Ace further in where he had caught a good boar on his first trip. 100 metres down the track Ace wandered off to the left, found and bailed a pig. The boys and I crept in to investigate the action, the boar was sighted and despatched immediately. The biggest boar so far on this trip weighing in at about 160 lb with huge tusks and gingery black in colour. A great half an hour start to the day.

We decided to hunt another piggery perimeter further south down the main road on the left hand side. The spot where Chum got ripped 2nd day in. All dogs were keen there too with fresh sign evident again around the outer perimeter of the piggery. Ace tracked out to 300 metres, looped around, treed but no squeal or grunting heard. Glen thinks he may have killed a small pig which we don't record unless we hear it. Hele and I remained on the main road just in case a pig was chased back to us. It so happened that a 100 lb ginger black sow walked across the road which was too quick to take the shot. We released Chum but as he got to where it crossed he back tracked instead. Both dogs arrived back to the crossing and went the right way this time. Little bit behind now but still they tracked on with no luck.

When we got the dogs back we headed south towards Hakupu. Hele and I headed down a track with Chum 200 metres in towards the coast then walked north parallel with the road while the team followed along the road. 100 metres off the track Chum picked up some fresh scent and tracked away towards the road. I showed Hele where the dog had gone in on a pig run and decided to stay put and explained that if there are more than one sometimes they sneak back on the run. 5 minutes later a small 20 lb ginger boar was trying to sneak away from the dog. I couldn't take the shot as too obstacles in the way. 2 minutes later another 20 lb ginger black pig was heading our way but again shot was too difficult. 2 minutes after him a 50 lb fully white boar trotted past and yes again too hard to take a clear shot. The boys on the road could hear Chum running around in fern chasing a pig also but with no luck.

Next plan Glen and Huggard with Ace decided to hunt the other side 200 metres in head and walk north parallel with the road. Ace picked up on a fresh trail and spooked a pig back across the main road around the corner. Now Ace was on the other side still tracking. Eventually he caught up and bailed a boar for 20 seconds before he too got ripped up trying to battle the pig. The boar came out onto the track in front of me and Hele so we let Chum go but the boar was too far ahead once he hit the thick scrub. Ace received a large rip on the left shoulder resulting in stitches, powder, super glue and penicillin. Game over for Ace for most of his remaining days on the Island. Plenty of pig sign noted close to main road. Pigs have been camped up in the fern for a while, pig runs everywhere weaving through the fern and out to the main road.

Tally: 2 – 20 lb White and Black Boar, 160 lb Ginger and Black Boar / Lost and Saw 100 lb Ginger Black Sow, 50 lb White Boar, 20 lb Ginger Boar, 20 lb Black and Ginger Pig, 120 lb Black and Ginger Boar

Wednesday 16 Sept, Day 9

Hunted this morning just out of Liku again. Our team Poi, Hele, Glen, Huggard, John Lone and myself. We hunted with Awa, Mu and Roxy. We drove down a track just past the village heading towards the coastline. Glen's plan is to train Huggard on how to use the GPS and to carry a shotgun to finish the job if a pig is bailed. All hunters except myself and Hele walked the sea track. John had suggested we try this track as he knows the pigs use this area frequently. 30 minutes later Awa bailed a 75 lb Ginger and Black Boar. Huggard crept in and shot it, a first for him. Hele and I hunted for Uga and managed to catch one for lunch. We decided to have a little hunt of our own walking back up the track with Mu and Roxy. The dogs took off immediately to one side tracking then they crossed over and caught up and bailed a pig for at least 20 seconds before it broke for good.

Poi and John came back to pick us up and as soon as we hit the main road we saw a good sized 70 lb black and white spotted sow cross the road heading inland. We released Kala's dogs again but no luck. We also found out that Glen and the boys had seen another 70 lb ginger sow on the road. She headed into the bush quickly leaving her suckers behind. Glen managed to grab 2 and just missed a third piglet. Pigs moving everywhere after heavy night of rainfall.

Afternoon hunt with Brendon (DAFF Boss) and Billy (Minister of Niue). The plan was to split up behind John Lone's place taking separate tracks towards the coastline. I had Brendon while Oz took the minister. After 5 minutes Chum managed to find and hold a 40 lb black and white sow. At the same time we could hear Kala's dogs barking and chasing in the distance on the other track but no luck. Plenty of sign here behind 2 large piggeries.

Tally: 4 – 75 lb Ginger and Black Boar, 40 lb White and Black Sow, 2 Piglets / Lost 2 pigs / Saw 70 lb Ginger Sow, 70 lb Black and White Sow.

Thursday 17 Sept, Day 10

Hunted Hakupu this morning with no luck.

Tally: 0.

Conclusions

After studying the habitat, terrain, the food and the amount of pig sign on the Island I've come to a conclusion that most feral pigs live, feed and breed more towards the East side. Hakupu, Liku,

Lakepa, Mutalau, and Toi. It's important to push in at least 100 metres either side of tracks and main road to check for sign as this is how far we had to go in to actually monitor if pigs are in the area. Where many pig runs are evident indicates that amount of pigs living there. Some places were quite good. Other places like the centre of the Island not so busy telling me that feral pigs are pretty much just passing through if damage has been done to central plantations.

After inspecting around local piggeries resulted in us catching 1 or 2 pigs most times in that general vicinity tells me that maybe these pigs probably belonged to this sty or a stray boar has escaped from another piggery and has come to visit a sow on heat. From the amount of sign that I have noticed during our stay in Niue I believe that the feral pig number population ranges between 150 – 200 which includes the young weaners. With Glen's last trip and this trip I honestly believe that culling many of the large wild boars and half a dozen sows will definitely assist with the feral problem in the future.

Recommendations:

From my experience as a hunter I can only suggest these possibilities in order of preference that may work here on Niue.

- 1) Use DAFF employees and good local hunters with the right dogs and equipment to keep feral pig numbers under control. GPS tracking system for both dogs and hunters is a must for better and faster results. Hunters should wear DAFF Hi Vis gear at all times to prove their presence as a feral pig control officer and not just a hunter. This may help to prevent possible future conflicts amongst villagers.
- 2) The Niue Government should create a law to have piggeries and each individual pig registered at no charge so that they can be monitored at all times. When officers pay that site a visit and pigs are missing then they have the power to catch and return to the owner or kill the pig depending on situation at hand.
- 3) Or employ overseas help again once a year to hunt and train locals when possible and if budget allows.