

Agriculture Field Reports

APRIL 2014

Ministry of Agriculture, Arorangi - April Edition, by Dr M Porea, William Wigmore, Dr Maja, Ngatoko Ta, Patrick Arioka, Tim Nubono, Junior Torotoro, Patu Katu, Noo Tokari, Brian Tairea, Tiria Rere, and Edwin Apera



New Outbreak of Oriental Fruit Fly (OFF) in Tokerau, Ruaau District, Arorangi, Wednesday 9th April 2014.



Rarotonga

It was a shock for everyone to learn that one male Oriental Fruit Fly was collected from one of the surveillance ME Steiner Trap in Tokerau, Ruaau district, Arorangi. This recursion was a shock because Rarotonga has been without Oriental Fruit Flies for the past 8 months, until now when Dr Maja (*Agric Entomologist*) discovered one male fly during routine checking and monitoring, on the 9th April 2014. **Note:** Trap checking was changed in January 2014 from weekly to fortnightly after having 6 months zero catches of Oriental Fruit Flies. The last re-dipping of the cotton wicks in ME was during week 14, while Cue-lure was done during week 16. The cotton wicks were re-dipped this month of April 2014. (4 months gap).

In response, Protein Bait Spraying and ripe fruit collecting were carried out immediately while 11 more new Steiner Traps, charged with ME plus Malathion insecticide were quickly laid within 50 - 100 meters apart from each other around this hot spot area.


Two days later on 11th April, 18 more male flies were collected from one of the new traps located next to the surveillance trap within the hot spot area where the first OFF was collected. Three other OFF were also collected from nearby traps further downwind 200 meters away, giving a total of 22 OFF from around this area. More Protein Bait spraying and fruit collecting were carried out on Saturday 12th April. Twenty more new traps were distributed extending inland and towards a kilometer westward.

On the 14th April, traps were checked and six OFF were caught. CocoMATS blocking were carried out focusing around Tokerau Hot Spot area. CocoMATS nailing, Fruit Collecting, plus 15 more new Traps were distributed on the 15th April, extending Eastwards, while CocoMATS nailing continued towards the Rarotonga Hospital and Social Center / Golf Course Beach side and as far Westwards to Rae Maru. Sport Field. Dr Maja's team collected Six OFF on the 15th April. On the 16th April only one OFF was found in one of the new traps from within the Hot Spot area. **On Thursday the 17th April, no OFF was collected (ZERO).** Protein Bait Spraying and Fruit Collecting were also carried out on Thursday. Daily checking of ME Steiner Traps within the Hot Spot Area from the 17th to 24th April reveal **Zero Oriental Fruit Flies**. It had been one week with Zero catches. The plan was to continue the daily trap checking of all the ME traps (*now a total of 46 new ME Steiner Traps*) in the Tokerau, Ruaau Hot Spot area, while the rest of the Surveillance Traps (ME & Cue-lure) around the Island of Rarotonga were checked every 14 days. For now there is need to focus on the cause of the re-occurrence of the Oriental Fruit Fly (OFF) on Rarotonga after 8 months zero catches from all the ME traps around Rarotonga.

MORE ON FIELD WORK

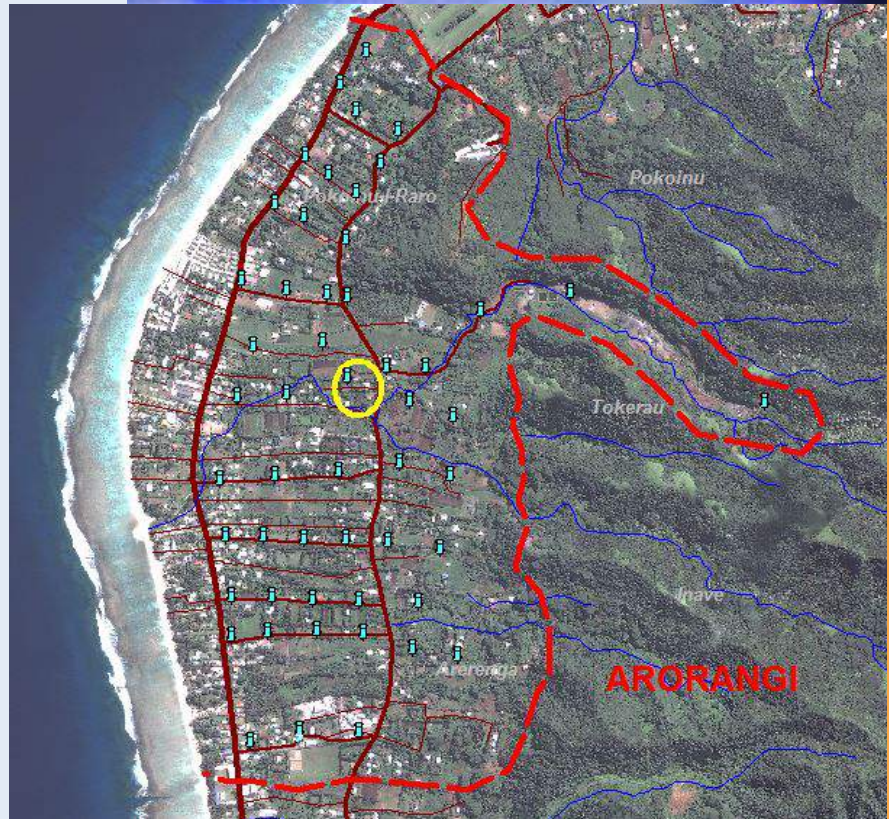
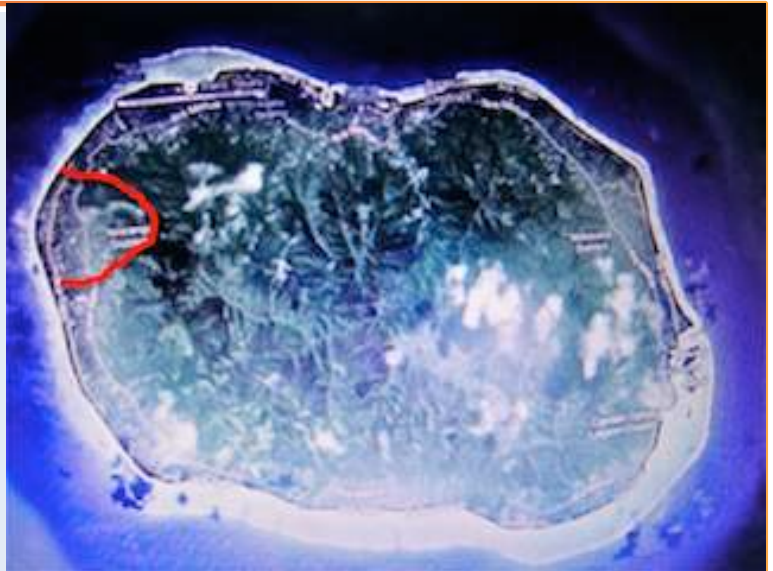
The picture of the Map of Rarotonga (Right) shows the contaminated area in the Vaka of Arorangi.

The priority for the Ministry is to try manage and eradicate the recursion of the Oriental Fruit Fly (OFF) from Arorangi. The surveillance traps that were set around the Island (*see Map of Rarotonga on front page*) showed the location of these surveillance traps, proved very useful for early detection of incursions. As mentioned above, the Ministry responded quickly following procedures set for emergency response to incursions. It is also very important to have the capacity and resources (*trained officers and having readily available traps, baits and chemicals*) in order to respond quickly to prevent the spread of OFF to other areas on the Island.

The picture, (Map) on your immediate right shows an aerial view of the contaminated site in Tokerau, Ruaau District, Arorangi. It also shows the HOT SPOT marked in **yellow**, where the first male Oriental Fruit Fly was caught. You will also note the new ME Steiner Traps distributed at these approximate locations  on the picture map at a distance of approximately 100 to 150 meters apart. But, not shown on the map are the locations of the CocoMATS Blocks, numbering around 3,000 nailed (*at eye level height*) at approximately 50 meters apart on trees (Fruit trees, Mangoes, Papaya, Carambola, Citrus, etc.) throughout Tokerau, Ruaau district, Arorangi.

Ripe fruit picking and collecting were also carried out within the boundaries of the Oriental Fruit Fly infested area. As required, the daily loads of fruits (800 to 1,200 Kg) were dumped in a pre-dug hole, sprayed with insecticides, prior to covering with soil.

Protein Bait spraying was also carried out as one of the important activities to ensure poisoning of the female Oriental Fruit Flies.



Aitutaki

The trapping field data collected weekly by Mr. Fred Charlie and Team, continued to show Zero Oriental Fruit Flies in Aitutaki, that is, “Zero” for the past 3 months (February, March and April 2014).

Mr. William Wigmore, (Oriental Fruit Fly Project Leader and Director of Research) visited Aitutaki for 4 days (29th April to 2nd May 2014) to backstop the project. While in Aitutaki he made assessments (stock take) on the leftover chemicals (ME, Fipronil, Malathion, etc.) available on Aitutaki. Such records are important to note, for times of re-incursions.

April Data – 10th	17th	23rd
B. Xanthodes 419	515	271
B. Melanotus 6	5	6
B. Dorsalis 0	0	0

PICTURE SHOTS OF VARIOUS ACTIVITIES DURING RECURSION OF ORIENTAL FRUIT FLY - AT TOKERAU, RUAU DISTRICT - ARORANGI.



ACTIVITY LISTINGS

Four Teams / Groups set up, (1 Environment & 3 Agriculture teams) - to carry out, trapping, ripe fruit collecting, Protein Bait Spraying and CocomATS Blocking - Up to 30 staff involved.

RE-TRACKING GAPS OF THE ERADICATION PROGRAMME

Re-tracking the source

We can not really pin point where this OFF came from but we assumed 3 scenarios:

(1) That a contaminated Fruit may have been smuggled from Aitutaki during early January to around end of January when data records of Oriental Fruit Fly showed present in Aitutaki.

Possible reasons for this Gap:

- Weak internal Quarantine systems
- Poor checking/inspection of luggages on departing passengers for fruits and vegetables-smuggled from Aitutaki
- Rarotonga Quarantine Officers were not double-checking at the Rarotonga Airport for fruit and vegetable items on passengers arriving from Aitutaki.

(2) That a contaminated Fruit was smuggled from French Polynesia (Cook Islands have a weekly flight from Tahiti)

Possible reasons for this Gap

- In-efficient inspection of passenger's luggage's on arrival at the Rarotonga Airport from Tahiti. No inspections were carried out.
- Quarantine Officers basically agreed with what was written on the arrival form by the arriving traveller.
- Lack of resources

(3) That the Oriental Fruit Fly were from Rarotonga itself – (it has survived without detection for 8 months). ????

Possible reasons for this Gap

- Surveillance ME Traps around Arorangi were distributed too widely (*see map on front page.*)
- Re-Dipping of the wicks (servicing) was perhaps too long (i.e. the gaps between re-dipping the wicks were too far apart – 3-4 months apart)

PROGRESS AT THE PUNANGA NUI RE-CLAIMED AREA

Coconut Planting

One row of Coconuts was planted among the Rocks (Rock Wall). These were planted in between the Rock gaps in early April. Pictures on your right showed Agriculture Staff planting Coconut seedlings in the Rock gaps and placing the seedling on sandy soil pockets, and ensuring that the seedling was facing towards the Eastern side. The assumption behind this coconut planting was to ensure the Coconut roots anchor onto the Rocks for stability from shifting.



Up to 65 - 70 Coconut seedlings (mix dwarf and tall) were planted on the 1st & 3rd of April 2014 however recounts of seedling numbers in the field showed some missing. There is need to replace them.



The Picture above displays the westward view of the reclaimed area showing ground leveling using light brown sandy soil. The Picture below showing the northward view.



PROGRESS

Apart from the above **Tree planting** activities at the Punanga Nui reclaimed area, which began in late March 2014, the month of April activities focuses on:

- (1) Drainage laying and setting of outlet drains as shown in the Picture on your right.
- (2) Leveling of the ground to ensure the right sloping of the ground for good flowing of runoff.
- (3) Application of a fine layer of sandy light brown soil to ensure quality growth of grass cover.

Follow-up activities includes:

- Grass growing and
- Foot-path building.
- Bus Depot
- Landscaping



Pictured above showing Deputy Director of the National Environment Services (NES) Mr. Joseph Brider planting a Tou seedling next to the Rock Wall barrier.

The Commission on Phytosanitary Measures Opened for its 9th Session, 31 March - 4 April 2014, Rome Italy.
Wednesday, 2 April 2014 by Ngatoko Ta Ngatoko

On the first day of the ninth session of the Commission of Phytosanitary Measures (CPM-9) at the Headquarters of the Food and Agriculture Organization, the Commission was welcomed by the Assistant Director General of the Food and Agriculture Organizations, Mr. Ren Wang, and with a video welcome from Mr. Nathan Guy, Minister of Primary Industries of New Zealand. Mr. Ren Wang emphasized the importance of the role of the IPPC in developing and implementing global standards for phytosanitary measures, as these standards facilitate safe global trade of plants and plant resources. The work of the IPPC and its contracting parties is critical to address the FAO's five Strategic Objectives.

Mr. Nathan Guy recognized the hard work of the people involved in the CPM and noted the progress by the Standards Committee and Capacity Development Committee of the IPPC. He also encouraged the CPM to engage in productive discussions during the meeting.

Throughout the week, CPM-9 plans to address various issues including adoption of new international standards and CPM recommendations. Additional notable achievements by the capacity development committee, on-going communication efforts, ways forward for dispute settlement, and improvements in national reporting obligations will also be discussed. CPM-9 participants will also benefit from many side-events planned between the Sessions.

Countries attended CPM9 from the South West Pacific Region are from Cook Islands N.T.Ngatoko, Niue – New Aue, Samoa – Talei Widow, Tonga – Pila Kami and PNG – Pere Kokoa.



PROGRESS IN THE NEW WHITE AND PINK GINGER - INTRODUCED TO COOK ISLANDS FROM THE WEST INDIES DURING FAO 2009 Floriculture Workshop

Two exquisite and popular varieties of Ginger - *Madikera White* and *Alpingera Martinica Fushia* (Light Bulb Pink) varieties. (Arrangement setting by Ms. Lani nee Framhein). For your eyes-only!!!



AGRICULTURE TRAINING ASSISTANCE TO MITIARO – FOR THE MAMA MAIRE PRODUCERS.

GROWING UNDER SHADE HOUSE AS PART OF THE AGRICULTURE SUPPORT TO THE MITIARO MAIRE - JAPANESE PROJECT.

INTRODUCTION

This project aimed at supporting the rural Maire growers, - the Mitiaro Mamas via the Cook Islands National Council of Women (CINCW) and the Cook Islands Ministry of Agriculture (MoA) in strengthening their capacities, to work towards delivering effectively, through up-skilling of techniques and simplified technical information to all the Mama Maire growers, to up-lift the production / quality of Maire Leis exported from the Cook Islands.

MAIRE

The Japanese Government sponsored the attachment training for selected Maire growers from Mitiaro. Two participants (*The Mayor Fred Tereva and Tokai Vaingorae, Head of Agriculture in Mitiaro*) had 5 days attachment up-skilling in basic Maire growing and management techniques including, seed scarification for faster seed germination, management of seedlings in shade house, type of shades required by Maire plant, planting and mulching, checking for pests and diseases, techniques of increasing the young branches (i.e. harvestable branches), duration of recovery for new shoots and when should these become ready for the next harvest, fertilizing (chicken manure), stripping (*kuku*) and (*the rule of thump*) i.e. the practice of monthly organic matter adding to the rows of Maire plants and water requirements to ensure the Maire is healthy.

VANILLA

The two participants were also exposed to Vanilla growing and management during the Vanilla Grower's Association Training Workshop where they learnt all aspects on growing Vanilla for income generation. Three Vanilla Experts from Tahiti carried out hands-on practical field training on management, pollination, bean management for quality, processing of green matured beans, marketing and issues on challenges in the Vanilla industry e.g. pests and diseases such as virus, etc.

MAIRE GROWING UNDER SHADE HOUSE

The two participants from Mitiaro were shown techniques of growing Maire under Shade House as shown in the attached pictures.

The Picture on the far right showing the two participants making assessments on the volume of Maire eis that could be harvested from these two rows of Maire aged 14 months for the back rows, 11 months for the fore rows as shown in this picture.

The Picture below showing Maire planting practical exercise by the two participants under the guidance of Mr. Patu Katu Research Officer, Ministry of Agriculture.

The Picture on the bottom far right showing Fred & Tokai.



NEWS FROM THE LIVESTOCK DIVISION

Kia Orana akaou to our Pig Farmers. For this month's report I would like to bring up two issues.

One is, Service payment for the injection of your animal or Field Calls.

With the rising cost today, we have also raised the costs of our field call services to the Public, however our advisory services are still free. We have to remember that drugs are expensive and we also have to consider other charges before we can use them.

The Second issue is that; we still find, some people are not paying for their field calls. Now, people just ring in and we visit their animals. But when payment is due they do not come down to settle their account. We have also people promising to come down but never turn up. Remember we do keep records of those who paid and those who are still to pay. It is advisable to settle your account or you may not get a visit in future. As for issues like old folks and handicapped, we do provide assistance and may reduce the charge considerably.

There are also people out there who have repeatedly ignored sound advice and we keep helping them out of the same situation. This must stop. If you cannot look after animals don't feed them, it will only cause friction between you and your animal and will eventually drag us in. Remember, we will be chasing after our costs. So if you don't want to pay more, listen and follow the advice given to you.

While on the issue of drugs, some of the drugs we use are so dangerous and if an accident happens, it can kill a person. There is no proper protection in case of accidents.. For example, we are using Phenobarbitone to euthanize dogs and other animal. It is advisable not to think you are a scientist and try and cure your animals by yourself. You may cause further or more damage, by affecting others eating your meat or, accidentally infect yourself with these toxic drugs, which may cause death. As the saying goes, "Leave it to the professionals"

For any advice and enquiries, please contact the Livestock Division on Phone 28711 or email tiria@agriculture.gov.ck or eapera@agriculture.gov.ck or even visit us at the Main Office at Arorangi.



The picture above showing an example of - Poultry Production in Permaculture Farming – an FAO programme for meat and egg production.



The picture on your upper right showing Mr. Edwin Apera Senior Livestock Officer, checking on the Mother Goat's blocked Udder. The Goats Udder was blocked causing severe pain to the Mother Goat.

The picture on your lower right showing an example of a Duck Farm based in Fiji – an FAO Food Security programme that our farmers can adopt here in the Cook Islands.

