



Pacific Pest Info

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1. More trials on Confidor®, an insecticide for control of taro beetles

Positive results on Confidor® insecticide as a control for taro beetle were discussed at the Taro Beetle Management technical meeting in Suva in November 2003. The meeting agreed to further expand the trials to evaluate dosage and frequency of Confidor application and for the trials to be conducted in Vanuatu where taro beetle damage is high.

PPS Taro Beetle Technician Fereti Atu visited Vanuatu 13–16 May to monitor progress of the trial and to apply the second round of treatments. The research trial, 32 sub-plots of 21 plants each, was planted in February. The taro plots are due for harvest in August and the results should further confirm Confidor as an effective insecticide to control taro beetle.

2. Vanuatu Post-entry quarantine facility nearing completion

PPS is helping fund the construction of a Post Entry Quarantine (PEQ) and insectary to help with biological control work in Vanuatu. Vanuatu is aiming to introduce biocontrol agents from Fiji for the control of the weeds water hyacinth (*Eichhornia crassipes*) and the broom weeds, *Sida rhombifolia* and *S. acuta*. Once completed the PEQ facility will have two rooms — one a high security PEQ containment room and the other a general rearing room. The facility will be mainly used for weed and insect pest biocontrol work.

Warea Orapa, PPS Weed Extension Officer, visited Vanuatu in February and again in early May to inspect construction of the PEQ facility. During this trip Warea worked with quarantine staff Messrsr Sylverio

Watsivi Bule and David Tau to develop a work plan in anticipation of the arrival of the biocontrol agents in July 2004.

3. Wallis et Futuna – 12th PICT to receive Pest List Database

Wallis and Futuna is the 12th Pacific Island country to receive the Pest List Database (PLD) being developed by PPS Information Staff Richard Vernon, Makelesi Kora-Gonelevu and Sarah Pene. The two PLD Information Assistants, Makelesi and Sarah, visited Wallis and Futuna 4–6 May to introduce and establish the Wallis and Futuna Pest List Database. The two discussed the features of the system with those planning to use it and provided hands-on operational knowledge to those likely to use the system in their work, such as quarantine and plant protection staff.

The SPC team acknowledges the support of Mr Atoloto Malau, Chef du Développement Rurale, for helping organise the training.

4. Plant health survey to update weeds and diseases for Wallis et Futuna

Wallis and Futuna were well surveyed in 1981 by plant pathologist Frederic Kohler, and a comprehensive fungal disease list produced. The need to keep the list current formed the basis for a visit by the SPC Plant Pathology team of Dr Jacqui Wright, Dr Richard Davis and Takaniko Ruabete and the Weed Management Officer. The team carried out a plant diseases survey from 8 to 22nd May 2004.

All major crops on Wallis and Futuna were surveyed, with 128 specimens collected. In general, many of the common Pacific fungal diseases were found. Also observed were *Pythium* rots on kape (giant taro), taro and yam anthracnose.

In regard to virus diseases, Richard observed (no test results) typical BBTV-like symptoms on banana plants at several locations on Wallis Island, but nowhere on Futuna Island. It may be that the virus is not present on Futuna. In addition, no symptoms of kava dieback disease or leaf symptoms typical of infection by cucumber mosaic virus (causal agent alone or in combination with other unknown factor/s of kava dieback) were found on any kava plants examined.

Very large numbers of plants (mostly common weed species) showing phytoplasma-like symptoms were found on Futuna Island. One disturbed site (a pine plantation) appeared to have thousands of infected plants. Information on weed occurrences is reported but no physical surveys have been conducted in Wallis and Futuna, according to Mr. Atoloto Malau. The Weed Management Officer surveyed for weeds and found interesting distribution patterns of some of the more troublesome weeds known elsewhere. Preliminary observations found many weeds present in Wallis Island were absent in Futuna and nearby Alofi Island. Of particular concern is *Mikania micrantha*, already a major weed on Wallis and may spread to Futuna in the future.

5. Tonga wants improved trade facilitation for export crops

Fruit fly management is crucial to Tonga's lucrative main export market, New Zealand. This was the message Director of MAFF Mr Haniteli Faanunu relayed to PPS Extensionist Stephen Hazelman when they met early this year. Tonga has identified a list of crops for which it plans to develop export pathways or to review existing ones. This work will also involve non-host status studies for export of produce to the New Zealand market. Topping the list of crops are squash, bananas and plantain, pineapple and beans. In trade facilitation, assistance is required in the development of post harvest technologies for export crops. Interceptions in New Zealand of scales, mealy bugs and ants are a major concern to agricultural officials.

MAFF Entomologist Ms Siutoni Tupou is progressing well with awareness activities for rhinoceros beetle. An awareness poster produced by PPS in Tongan language has been distributed. Targeted islands for awareness activities include Vava'u and Ha'apai. The MAFF Director wants to see a major push for the biological control of this coconut pest.

6. Vaini agricultural station receives equipment for plant pathology lab

The plant pathology lab at Vaini Agricultural Research Station in Tonga has a new upgrade: serological diagnostic test equipment. The lab equipment, funded by PPS, will be used to detect plant-infecting viruses. The primary component of this upgrade is the Enzyme Linked Immunosorbent Assay (ELISA) microtitre

plate reader. Dr Richard Davis, PPS Virologist, was in Tonga in April to check on the equipment and to organise, with MAFF scientists, a research trial that will make use of the new equipment. The research trial is on kava dieback disease, a disease caused (alone or in combination with some other factor) by cucumber mosaic virus (CMV). A practical research experiment phase has been planned to commence in 2004. Also collaborating on this research are the Fiji Islands Ministry of Agriculture, Sugar and Land Resettlement (MASLR). The equipment will also be used to investigate certain aspects of virus induced mosaic diseases of export squash (*Cucurbita maxima* x *C. moschata*). In this work, serological studies and other experiments will be conducted to investigate sources of epidemic initiation and methods of spread.

7. Taro 'pula' disease investigated in Samoa

Last year farmers and researchers noticed an alarming increase in the number of taro leaf blight (TLB) resistant taro varieties in Samoa affected with the yellowing disease *pula* or petiole disease. At the same time a corm rot disease (*Pythium* suspect) was affecting the new lines of TLB resistant varieties, particularly P10. A Participatory Rural Appraisal exercise conducted in late 2002 recommended a scientific investigation be carried out to determine what is causing the problems. Dr Jacqui Wright, PPS Plant Pathologist, travelled to Samoa in early April to look into the taro problems. Collections of diseased corms and petioles were taken for specific lab work to determine the causal organisms. It is hoped that colonies grown from the lab work can be subcultured to appropriate media and allowed to grow to a sufficient size to be subcultured to tubes to be sent to a diagnostics lab.

In related crop protection work, a borer insect was ring-barking lime trees at Atele Fruit Tree Station and killing the citrus trees. Most of the lime trees are now dead from insect damage. Ms Faalelei Tuatagaloa was advised by Dr Wright to rear the insect caterpillar and to send the adult to PPS Entomologist Sada N Lal for identification.

A visit to a private flower grower to investigate a problem with teuila (*Alpinia purpurata*) confirmed the presence of symptoms of a new disease now also present in Fiji Islands and under investigation by SPC and Fiji MAFF. Teuila samples were tested at Nuu Research Station and researchers there will continue to identify the causal organism.

8. Fiji quarantine stations receive latest PLD upgrade

The PLDs in Nadi, Sigatoka and Lautoka quarantine stations have now been upgraded to Version 1.2/519. The upgrades were carried out by Makelesi Kora-Gonelevu, PLD Information Assistant, who drove out to the west of Viti Levu island 18–20 May to install the upgrades. Persons responsible for data entry were given an upgraded copy of the User Manual and a sample copy of the reports now contained in the new upgrade. Fiji Quarantine and Inspection Division Nadi requested the Fiji PLD be installed at their premises in Nadi (which is also the location site for the HTFA plant), so as to allow them to monitor interceptions on exports. This has not yet been completed, as they do not have MS Access 2000. Once they have the new version of MS Access the PLD will be installed.

9. Glassy-winged sharpshooter reported in Hawaii

Homalodisca coagulata, the glassy-winged sharpshooter (GWSS), was reported by a home-gardener in Pearl City on the island of Oahu on 4 May. The half-inch insect with smoky-brown wings has caused millions of dollars in damage to California's grape growers and could potentially wreak havoc on local citrus, coffee and avocado. GWSS reproduce rapidly and feed on dozens of plant varieties. While feeding, the shooters also excrete copious amounts of watery excrement, which gives plants a whitish appearance once it dries. The major threat with GWSS is the associated bacterium, *Xylella fastidiosa*, which they can bring with them. If this were to happen, the pest could bring disease to many varieties of plants — from nut trees to ornamentals. So far, no evidence of the lethal bacterium has been found, with results outstanding on test samples sent to a lab on the mainland. (Source: Honolulu Advertiser May 14, 2004).

10. Completed PPS activities in PICTs

<i>PPS Staff</i>	<i>Dates</i>	<i>PICT Activity</i>
Makelesi K Gonelevu Sarah Pene	1-8 May	Wallis et Futuna: PLD workshop
Sada N Lal Fereti Atumuaria	1-10 May	PNG: NARI Field Day, TBM work
Richard Davis	6 May	Fiji: Kava field trial #2
Takaniko Ruabete Jacqui Wright Richard Davis Warea Orapa	8 – 18 May 8 – 22 May	Wallis et Futuna: plant disease survey Wallis et Futuna: weed survey
Naca Waqa	15 – 20 May	Niue: Quarantine training
Steve Hazelman	15 – 28 May	Solomon Is: PESTNET review
Konrad Englberger	17-22 May 26 – 29 May	Marshall Islands: quarantine training Kosrae: quarantine training
Sada N Lal	26 May	Fiji: pheromone trapping and vegetable pest problems
Salend Kumar Emil Adams	28 May	Fiji: Andrews Primary School, Nadi, presentation on plant protection, quarantine and health and nutrition. Hand-over agricultural tools funded by PPS.

11. PPS staff travel calendar

Dates	Country	Staff	Activity
29 May – 5 June	New Caledonia	Sarah Pene	PLD update
24 May – 4 June	Tokelau	Bal S Narayan	Coconut flat moth biocontrol
8 – 15 June	Tonga	Sada N Lal	Entomology work
14 – 18 June	Samoa	Emil Adams	National workshop: developing extension materials
20 – 25 June	Chuuk	Konrad Englberger	Quarantine training
26 June – 3 July	New Caledonia	Sada N Lal	TBM and cabbage pests

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