



# Pacific Pest Info

Pest & Quarantine Information  
SPC Plant Protection Service

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to appropriate staff who do not have an e-mail connection.*

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*Those with Internet access can find a wide range of Plant Protection Service outputs on the PPS Web site at [www.spc.int/pps](http://www.spc.int/pps). A CD version is available for those without Internet connection.*

## Contents

1. Information on High Temperature Forced Air (HTFA) Treatment .....	1
2. Rat Control in the Pacific.....	1
3. Plant Protection Internet Sites .....	3
4. Do you have something to contribute? .....	3
5. Suspending implementation of ISPM No. 15 .....	3
6. Plant Protection Service Staff travel.....	4
7. SPC Plant Protection Service Events .....	4

### **1. Information on High Temperature Forced Air (HTFA) Treatment**

*Emā Tora Vueti & Dick Vernon*

High Temperature Forced Air (HTFA) treatment offers exporters a non-toxic way to kill fruit fly larvae in fruit for export. Information on the supplier of HTFA equipment can be found on their Internet site: <http://us.geocities.com/qtiwill/index.html>. The following information is from the site:

*Currently there are eleven commercial units in operation. They are in Cook Islands, Fiji, Hawaii (USA), New Caledonia, Philippines, Tonga, & Vanuatu; Samoa has an experimental / commercial unit and the University of California has an experimental unit. The latest chambers can be configured to provide High Temperature Forced Air (HTFA) or Vapour Heat (VH) treatment protocols for almost any commodity.*

### **2. Rat Control in the Pacific**

*Salend Kumar & Dick Vernon*

The Republic of Kiribati is just embarking on a rat control programme in the light of the damage rats cause particularly to coconuts. This is not a new problem to the Pacific. SPC published long

ago 'Rat Control in the South Pacific' by Rowe as Handbook No. 1 and such was its demand that a revised edition was brought out in 1975. An advisory leaflet on the same topic was issued in 1979 and revised in 1984. Although long out of print we recently sent photocopies to the Solomon Islands in response to a request for advice on rat control. Clearly rats are a continuing problem and we take the opportunity to provide some information and summarise a few other cases from which lessons might be learned. If you have experience that you can share please let us know.

There are three widespread species of rats in the Pacific Islands: the Polynesian rat (*Rattus exulans*), the roof rat or ship rat (*Rattus rattus*) and the Norway rat (*Rattus norvegicus*). All three species cause agricultural damage though the nature of attack, and effect on the crops, varies from species to species. Apart from agricultural damage these introduced species are a threat to Pacific Islands' biodiversity, because along with a wide range of fruits, grains and other plant materials, small animals, eggs and young birds are also part of their diet. Ship rats are the major concern as they are good climbers, physically strong, are primarily nocturnal in habit and they are very cautious. Ship rats have been blamed for the extinction of several land bird species and significant economic loss in coconut and cocoa production in the Pacific.

A good example of the success of integrated control for rats is the Takitumu Conservation Area located on the southeast side of Rarotonga, Cook Islands, where a rat control programme proved to be the key activity in the success of the Kakerori bird (*Pomarea dimidiata*) recovery. Kakerori is endangered mainly because of introduced predators, particularly the ship rat, which preys on nestlings. Since 1989, in an attempt to protect the nests, the conservation team scattered the high valleys with bait stations – blocks of rat poison placed inside plastic tubes to protect them from rain. They also wrapped wide aluminium bands around the trunks of trees to keep rats from climbing up to where the Kakerori had built nests. Census results indicate that the bird population rose during the project from 29 in 1989 to 144 in 1997.

It has been found that bait laying is one of the most effective means for successful rat eradication on islands, although it is labour intensive. New Zealand's campaign to remove rodents from its offshore islands is a good example. On the 170 hectare Breaksea island off Fiordland baits were laid out in 743 stations made of plastic piping at 50 metre intervals and replenished daily. The idea was to exterminate the whole rate population on the island in one intensive effort leaving no opportunity for the rodents to recover or become bait-shy. The Breaksea campaign was the first successful rat eradication on larger islands and was completed in 1988. It was followed in 1989 by the 230 hectare Mana Island, the largest island cleared of rodent at that time, and which required 5,400 bait stations.

Banding tree trunks with an aluminium strip and bait laying can reduce rat damage in coconut plantation. Rat populations fluctuate and there is possibility of a sudden increase every five or seven years. Therefore, regular control is necessary to keep rat populations at a continuously low level.

The Republic of Kiribati is just embarking on a rat control programme. The TCP Project on Strengthening Ecologically-based Management of the Rat (*Rattus rattus*, *Rattus exulans*) in Coconut Plantations has been approved. The US\$279,000 project is planned to run for 18 months. Coconuts and coconut products (copra) constitute an important element of the national diet and the country's main export crop. During the past 15 years coconut production has constantly decreased, resulting in reduced copra production and export earnings. This is attributed to an increased population of rats in coconut plantations and copra storage facilities as well as poorly trained research and extension officers. Presently, the losses in coconut production are as high as 60-65 percent. The TCP project aims to reduce production losses to less than 10 percent, through local capacity building of Ministry officers and farmers in ecologically sound rodent management, and development of a sustainable integrated control package for coconut

farmers. It will provide technical assistance on agronomic issues and copra storage buildings. We look forward to learning how Kiribati gets on in this project.

### **3. Plant Protection Internet Sites**

*Dick Vernon – thanks to Jim Hollyer for bringing these to our attention.*

#### **American Samoa Technical Reports :**

[http://www2.ctahr.hawaii.edu/adap2/ascc\\_landgrant/technical\\_papers.htm](http://www2.ctahr.hawaii.edu/adap2/ascc_landgrant/technical_papers.htm)

This site has about 40 brochures and reports from 1985 to 2001, many of them on plant protection. Here are some examples:

No. 43. Brown root rot disease (brochure) (Fred Brooks, November 2001): Incidence and distribution of *Phellinus noxius* in native and disturbed forests, host list, and suggested management practices.

No. 42. Taro leaf blight (brochure) (Fred Brooks, September 2000): History and incidence of BBTV in American Samoa including step-by-step control measures.

No. 40. Banana bunchy top virus (brochure) (Fred Brooks, September 2000): History and incidence of BBTV in American Samoa including step-by-step control measures.

#### **College of Tropical Agriculture and Human Resources, University of Hawai'i at Manoa**

<http://www2.ctahr.hawaii.edu/ctahr2001/PIO/FreePubs.html>

This site has a large collection of agricultural publications, including, on plant diseases:

- 'Awa dieback in Hawaii
- 'Awa root-knot disease
- Banana bunchy top virus
- Coffee decline caused by the Kona coffee root-knot nematode
- Foliar nematodes on orchids in Hawaii
- Management practices to prevent and control plant diseases
- Tomato spotted wilt virus on anthurium
- Plant-parasitic nematodes and their management

and the following on insect pests:

- Alien Pest Alert: Red imported fire ant (*Solenopsis invicta*)
- Bougainvillea looper
- Hibiscus erineum mite
- Managing fruit flies on farms in Hawaii
- Scouting for thrips in orchid flowers
- Root mealybugs of quarantine significance in Hawaii
- Taro root aphid

and on weeds:

- Before you buy or apply an herbicide . . .
- Summaries of herbicide trials for pasture, range, and non-cropland weed control--2001
- Woody plant control for the home, pasture, and forest

### **4. Do you have something to contribute?**

*Dick Vernon*

In the last issue we presented an interesting piece 'Orchid weevil in American Samoa' by Mark A. Schmaedick, Entomologist at the American Samoa Community College. If you have an interesting story within plant protection or quarantine that you think would be of interest to other Pacific Island countries and territories, we would like to hear from you.

### **5. Suspending implementation of ISPM No. 15**

*Mick Lloyd*

The following message has been received from N.A. van der Graaff, Secretary, International Plant Protection Convention.

To: All IPPC contact Points and RPPOs

Subject: Suspending implementation of ISPM No. 15  
Importance: High

*Effective immediately, all governments are encouraged to suspend implementation of ISPM No. 15, Guidelines for regulating wood packaging material in international trade.*

*The subject standard was adopted by the Interim Commission on Phytosanitary Measures at its Fourth Session in March 2002. A key provision of the standard is the use of a mark for the certification of approved measures. Difficulties have arisen as a result of efforts by FAO to legally protect the mark for use according to the standard. The FAO Legal Office is recommending that governments temporarily suspend implementation of the standard until these legal issues are resolved. In the meantime, the IPPC Secretariat is undertaking to establish a new mark. It is anticipated that this will require approximately 5 months. Members will be notified immediately when the standard can be implemented again.*

N.A. van der Graaff, Secretary, International Plant Protection Convention.

## **6. Plant Protection Service Staff travel**

M. Kora .

Month	Dates	Country	Staff	Purpose
July	3-18	Pretoria, South Africa	Dr. Mick Lloyd	BioNET 3 <sup>rd</sup> Global Taxonomy Workshop.
	6-14	Palau	Konrad Englberger	Set up fumigation chamber and fumigation training.

## **7. SPC Plant Protection Service Events**

M. Kora.

Month	Dates	Country	Leader; PPS Contact	Participants	Event
July	8-12	Cook Islands	Dr Jacqui Wright, Eric McKenzie and Richard Davis		Cook Islands Disease Survey.
	8-12	Fiji Islands	Ema Tora Vueti, Peter Wilkins (NZAGRI-QUALITY), Sidney Suma (NAQIA, PNG)		Emergency Response Planning Workshop.
	8-19	Tonga	Dr Jacqui Wright	Quarantine staff from Cook Islands, Niue	Quarantine attachment training.
Aug	20-22	Fiji	Dick Vernon, Makelesi Kora	Quarantine and Plant Protection staff from Fiji and Vanuatu	Pest List Database workshop
	12-19 25-	Kapingamarangi Marshalls	Dr Jacqui Wright, Konrad Engelberger		Disease survey
		Tonga	Dr Jacqui Wright, Richard Davis		Tonga Pest Survey

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