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PLANT PROTECTION NEWS

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The first Plant Protection News was published in the *South Pacific Bulletin* (1979, 29 (2): 35-39). This, second, edition will be published both as an SPC Information Circular and in the *South Pacific Bulletin*. The Information Circular format will allow for quicker preparation and publication and for wider distribution to agricultural departments. The inclusion of the news in the *Bulletin* will continue to serve the useful purpose of bringing plant protection to the notice of a wider public.

PESTICIDE APPLICATION TRAINING

The Commonwealth Fund for Technical Cooperation provided funds for an SPC training course in pesticide application held in Rarotonga, Cook Islands in April 1979.

Fig. 1: Course participants preparing to spray cabbages for the control of Diamond-back Moth.

SPC was also fortunate to have assistance from both the New Zealand Department of Scientific and Industrial Research (DSIR) and the Ministry of Agriculture and Fisheries (MAF). The course was held at DSIR's Totokoitu Research Station on Rarotonga and DSIR plant pathologist Bob Fullerton, who has a wide knowledge of plant protection problems in the Cook Islands, was a course consultant. MAF arranged for Horticultural Adviser Richard Wood, who has considerable experience in extension work, to act as second consultant.

The training was intended mainly for staff of the Cook Islands Department of Agriculture's research and extension d[illegible]s, but some local growers also attended. In

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addition to the eighteen Cook Islands participants there was one participant from the Department of Agriculture, Niue, one from the Department of Agriculture, Western Samoa and one from the School of Agriculture of the University of the South Pacific who also came from Western Samoa. A fuller account of the course has been published in the *South Pacific Bulletin* (1979, 29 (4)).

Using some of the information gained during the course Mr A. Tangatakino, Senior Agricultural Officer, held meetings about pesticide safety on Mangaia Island which were attended by over one hundred growers.

PLANT QUARANTINE MANUALS PUBLISHED

All those concerned with quarantine in the region will welcome the publication of *Plant quarantine procedural manual for island countries of the South Pacific* and *Plant quarantine treatment manual for island countries of the South Pacific.* The manuals were written by Oliver Stout as one of the requirements of the project *Survey of Agricultural Pests and Diseases in the South Pacific.* This was a UNDP/FAO project coordinated by the South Pacific Bureau for Economic Cooperation on behalf of the Governments of Cook Islands, Fiji, Kiribati, Niue, Tonga, Tuvalu and Western Samoa. The procedural manual is a guide for plant quarantine organisations and for reference by plant quarantine inspectors. It contains recommended policies, procedures, methods, information and instructions about many aspects of quarantine. The treatment manual describes methods to be used for eliminating the pests and diseases that may be in association with articles moving in international trade.

Fig. 2: Participants at an SPC Plant Protection Workshop inspect fumigation facilities in Auckland; fumigation treatments are described in the new quarantine manuals mentioned in this article.

ORIGIN UNKNOWN

Pennisetum clandestinum (kikuyu grass) can be an important pasture grass or a noxious weed according to circumstances. In Oakland, California, U.S. Federal Quarantine Inspectors clearly considered it to be a noxious weed and reported intercepting a one ton shipment of it from the New Hebrides.

But, as the Director of Agriculture in the New Hebrides pointed out to them, kikuyu grass has never been grown there with the exception of a five square metres plot on an experimental station. So where *did* the seed originate? Clearly it was not in the New Hebrides.

Errors of this type can be more serious when they concern reports of the presence of diseases and pests in certain countries. Recently, for example, the Australian Department of Health has asked us to note an incorrect record of 'Moko' disease of banana in that country. The report appears in the SPC publication *Exotic plant pests and diseases* so we take this opportunity to put the record straight. Other such erroneous reports in the region have been noted by Dr Dorothy Shaw in Plant pathogens and other micro-organisms in Papua and New Guinea, *Research Bulletin No. 1*, 1963, Department of Agriculture, Stock and Fisheries, Port Moresby, as follows:–

> "Dumbleton (1954) published a list of diseases for the South Pacific Territories, the 'Australian New Guinea' compilation having been made by officers of the Territory Administration at a time when no pathologists were working in Papua and New Guinea. The compilation was apparently made from some published records, from unpublished records of some identifications made by pathologists outside the Territory, and from symptoms. No specimens are extant in the Territory... The diseases caused by the fungi were not given in the list. A few of the more serious inclusions which have never been confirmed ... (are) ... Panama disease of bananas (*Fusarium oxysporum* f. *cubense*), smut of sugar cane (*Ustilago scitaminea*), gumming disease of sugar cane (*Xanthomonas vasculorum*) and leaf scald of sugar cane (*Xanthomonas albilineans*)."

Countries may wish to notify us of other, similar, errors and these can be mentioned in future editions of Plant Protection News.

NEW PEST AND DISEASE REPORTS

The fungus *Marasmiellus cocophilus* is reported from Solomon Islands where more than 7 000 coconut seedlings were affected by it. Previously the fungus was only known to occur in Kenya and Tanzania. A full account of the Solomon Island situation is given in *SPC Information Circular* No. 83, 1979.

Fig. 3: *Hypothenemus hampei* - Adult beetle and its entrance hole in the coffee bean. (From *An atlas of coffee pests and diseases* Coffee Board of Kenya).

In the last Plant Protection News we noted the presence of *Hypothenemus hampei*, the coffee berry borer, in Fiji. It could become a problem as new coffee plantings there come into bearing. More details supplied by the Department of Agriculture reveal that it was

observed boring beans and stems of *arabica* coffee at Naduruloulou (near Nausori, Viti Levu) and at Soqulu, Nua and Nayalayala estates on Taveuni. It is also reported that *Hypothenemus pulverulentus* was found boring the beans and *Xylosandra compactus* the stems of coffee at Soqulu and Nayalayala estates respectively.

The Serpentine leaf miner, *Liriomyza sativae,* has recently been found in the Cook Islands where it has been particularly damaging to tomatoes. A description of this pest is to be found in the Insect Pest Series (No. 2) published by Cooperative Extension Service, College of Tropical Agriculture, University of Hawaii. It is considered to be a major pest in Hawaii and within the SPC region is also found in Tahiti and in Guam. Over 20 hosts are recorded, mainly in the families Cucurbitaceae (cucumbers, melons, etc.), Leguminosae (legumes, beans, etc.) and Solanaceae (tomato, eggplant, capsicum, etc.). SPC has alerted all countries of the region about the new occurrence. The significance of this disease of course is not only the damage it causes to the growing crop but the fact that export of leafy vegetables to countries not having the pest may be precluded.

Some interesting interceptions made in New Zealand provide useful pointers to SPC region quarantine officers on sources of danger. The warehouse beetle, *Trogoderma variabile* (a close relative of the khapra beetle), was intercepted in sunflower seed from America and in dried herbs from the Middle East; rust fungi were intercepted on orchids from Central America and complete colonies of ants have also been found established inside imported orchid bulbs; maize seed was found contaminating a shipping container and this is a source of danger because many of the maize diseases not found in the region can be carried by seed. So quarantine officers will be watching out, among other things, for sunflower seed, dried herbs, orchids and contamination of shipping containers.

ASIA AND PACIFIC PLANT PROTECTION COMMISSION (APPPC)

This is to be the new name for the former Plant Protection Committee for the South East Asia and Pacific Region. Another change that must be recorded is that after 12 years as the FAO Regional Plant Protection Officer and the Executive Secretary of the Committee Dr D. Bap Reddy has been appointed FAO Deputy Regional Representative for Asia and the Pacific. All concerned with plant protection in the SPC Region will want to congratulate Bap on his new appointment and join with members of the past Committee in thanking him for his enthusiastic work over the years.

NEW POSTERS

The harlequin bug (*Murgantia histrionica*) and the plum curculio (*Conotrachelus nenuphar*) are featured in the most recent of a series of quarantine posters produced by the New Zealand Ministry of Agriculture and Fisheries

WORKSHOP ON BIOLOGICAL CONTROL

The biological control of insect and other agricultural pests utilises natural parasites and predators and so it is a way of reducing the use of expensive pesticides.

A workshop on this subject was held at SPC headquarters in August 1979, and provided an opportunity for participants from ten Pacific Island countries together with observers from several regional and international organisations to discuss their experiences in the biological control of insects, weeds and other pests.

A full report of the proceedings has been published and an account of the workshop will also appear in the *South Pacific Bulletin.*

AIRCRAFT DISINSECTION

The 'on arrival' aerosol spray is often, erroneously, thought by passengers to be applied as a plant quarantine requirement to guard against the entry of insects of agricultural importance. This is not so; the spray is actually applied to deal with insects such as flies and mosquitoes which carry human diseases. *Plant* quarantine officers are more concerned with treating the cargo holds and even when insects of agricultural importance are found in the passenger compartment this is treated after the passengers have left.

All these aspects of aircraft disinsection were discussed at the SPC Eighth Regional Conference of Permanent Heads of Health Services when Terry Bourke, FAO Plant Protection Adviser in Western Samoa spoke on the subject of 'Plant protection and disinsection of aircraft'. A summary of his remarks is to be found in the report of the meeting (SPC, 1979).

SPC ADVISORY LEAFLETS

At the end of 1979 there were eleven subjects covered in the series of Plant Protection Advisory Leaflets. All leaflets can be obtained in either English or French and a loose leaf binder is now available for the series.

RATS

Dr J. Morgan Williams has written about rat damage to agricultural crops in one of the recently published SPC Advisory Leaflets. He is also a co-author of the SPC Rat Control Handbook. In September, 1979 Morgan was in Kiribati on behalf of the New Zealand Government in connection with its rat control aid programme. The SPC Plant Protection Officer joined him there and, as well as assisting with some of the rat damage assessments on coconuts, had a first opportunity to see the country and to discuss local plant protection problems with agricultural staff there.

Two causes of particular concern at present are the taro beetle *Papuana hubneri,* which attacks the babai plant (*Cyrtosperma chamissonis*) on Tarawa, and the scale insects infesting breadfruit, especially on Butaritari. The Senior Agricultural Officer, Mr Rui Williams, presented details of these and other problems at the SPC Workshop on Biological Control referred to above.

Fig. 4: Morgan Williams examines a rat bait on a coconut palm on Tarawa, Kiribati.

Fig. 5: Children on Butaritari, Kiribati were also keen to help control rats.

PLANT PROTECTION WORKSHOP

In November 1979 sixteen participants from American Samoa, the Cook Islands, Guam, Kiribati, New Caledonia, the New Hebrides, Niue, Papua New Guinea, Solomon Islands, Tonga and Western Samoa attended an SPC workshop on plant protection in Auckland, New Zealand. The workshop, which emphasised the practical aspects of investigating and handling insects and plant disease organisms, was designed to increase participants' awareness of plant disorders, provide experience in the recognition of major pests and diseases and advise them of assistance available for Pacific Island plant protection workers from the specialist services which exist in New Zealand and elsewhere. Many staff from the New Zealand Ministry of Agriculture and Fisheries and the Department of Scientific and Industrial Research helped in the Workshop. Dr W. Gerlach of the Samoan German Crop Protection Project, Mr J. Guttierrez of ORSTOM, Noumea and Mr L. Smee, a Principal Plant Quarantine Officer from Australia also attended. A full report of the workshop will appear in the *South Pacific Bulletin.*

Fig. 6: Participants at the SPC Plant Protection Workshop share a joke with DSIR plant pathologist Bob Fullerton.

MORE NEWS

News of regional plant protection interest is needed for our next edition. We want to hear about:–

Changes or additions to plant protection staff.

Changes or additions to legislation (e.g. plant quarantine or pesticide legislation).

News of new research programmes, recent important research findings, etc.

News of aid programmes in plant protection.

Recent publications on any aspect of plant pathology, entomology, nematology, weed control, vertebrate pests etc.

New records of, or important outbreaks of, pests, diseases and weeds.

New biological control agents introduced for testing.

New local recommendations for pest, disease and weed control.

News of training courses held or to be held.

News of meetings, seminars etc.

News of local staff in training overseas and of visiting scientists.

Such information should be sent to the SPC Plant Protection Office, Box 2119, Suva, Fiji.

AGRICULTURE

ISSUED IN THIS SERIES

1.	Annual Conference of O.I.E. held in Paris, 13th-18th May 1968. Report of South Pacific Commission Observer: September 1968.	*Livestock Production and Health*
4.	'A' Level: Australia's Notification on Bovine Pleuropneumonia Regulations. March 1968.	*Plant and Animal Quarantine*
5.	Study Tour to Noumea, Brisbane, Territory of Papua and New Guinea and British Solomon Islands Protectorate. March 1969.	*Tropical Crops*
6.	'A' Level: Agricultural Education - Bulletin No. 1. April 1969.	*Agricultural Education and Extension*
9.	'A' Level: Agricultural Education - Bulletin No. 2. May 1969.	*Agricultural Education and Extension*
10.	'A' Level: Agricultural Education - Bulletin No. 3. November 1969.	*Agricultural Education and Extension*
11.	Agricultural Extension Workshop - Western Samoa. November 1969.	*Agricultural Education and Extension*
12.	Asian-Pacific Weed Science Society. December 1969.	*Tropical Crops*
13.	The Status and Potential of the Chilli Industry in the Solomon Islands. December 1969.	*Tropical Crops*
22.	Breadfruit Diseases in the South Pacific. June 1970.	*Tropical Crops*
23.	Second World Consultation on Forest Tree Breeding. June 1970.	*Forestry*
24.	Agricultural Research in the South Pacific. July 1970.	*Tropical Crops* *Livestock Production and Health*
25.	Crown-of-Thorns Starfish. July 1970.	*Fisheries*
26.	Counter-Attack - Crown-of-Thorns Starfish. September 1970.	*Fisheries*
28.	Asian Coconut Community. January 1971.	*Tropical Crops*
29.	O.I.E./F.A.O. Regional Conference on Epizootics in Asia, the Far East and Oceania. January 1971.	*Livestock Production and Health*
30.	Plant Pest Control. January 1971.	*Tropical Crops* *Plant and Animal Quarantine*
31.	The Effect of Cultural Method and Size of Planting Material on the Yield of *Colocasia esculenta.* February 1971.	*Tropical Crops*
33.	Weed control. August 1971.	*Tropical Crops*
34.	Taro. August 1971	*Agricultural Research*
35.	Transmission of Virus Samples. August 1971.	*Plant and Animal Quarantine*
37.	Training Programmes for Out-of-School Rural Youth. March 1972.	*Agricultural Education and Extension*
43.	The Fifth FAO Regional Conference on Animal Production and Health in the Far East. December 1972.	*Livestock Production and Health*

47.	Useful References for Animal Production and Agricultural Extension Workers of the South Pacific Commission territories. March 1973.	*Animal Production*
50.	South Pacific Agricultural Extension Survey - 1967. April 1973.	*Agricultural Education and Extension*
52.	Fruit Cultivation. June 1973.	*Tropical Crops*
54.	Shellfish Poisoning in the South Pacific. February 1974.	*Fisheries*
55.	Special Project - Vegetable Production in the South Pacific. January 1974.	*Tropical Crops*
56.	Comments on Experiments Recently Undertaken in some Pacific Islands on certain varieties of Vegetables. March 1974.	*Tropical Crops*
58.	Some Aspects of Pasture Research and Development. April 1974.	*Livestock Production*
62.	Potential of Animal Feed Production in Western Samoa. November 1974.	*Livestock Production and Health*
63.	Names of Food Plants in Niue Island (South Pacific). November 1974.	*Tropical Crops*
64.	Some Effects of Temperature on Pasture Germination and Growth. April 1975.	*Livestock Production and Health*
65.	The Marketing of Fresh Vegetables. May 1975.	*Vegetable Production*
66.	Special Project on Vegetable Production - Results of 1974 Variety Trials. June 1975.	*Tropical Crops*
67.	Principal 1974 Vegetable Crowing Results for the Pirae Agricultural Research Station, Tahiti (French Polynesia). June 1975.	*Tropical Crops*
68.	Evaluation of Broiler (Meat Chicken) Performance. September 1975.	*Livestock Production and Health*
71.	Preliminary Information on the Intestinal Parasites of Livestock in Tongatapu, Tonga. March 1976.	*Livestock Production and Health*
72.	Expérimentation fourragère en Polynésie française. Mars 1976. *(Will not be issued in English)*	*Livestock Production*
73.	Vegetable trials in 'Motu'environment, Huahine (French Polynesia). March 1976.	*Tropical Crops*
76.	Results of 1975-76 soya bean trials in certain South Pacific Territories. October 1976.	*Tropical Crops*
80.	Special project for the development of vegetable production in the South Pacific. April 1978.	*Vegetable Production*
82.	Red ring disease and palm weevil - threats to the coconut palm. July 1979.	*Plant Protection*
83.	Coconut disease caused by *Marasmiellus cocophilus* in Solomon Islands. October 1979.	*Plant Protection*