

**PROJECT ON REGIONAL MANAGEMENT OF  
FRUIT FLIES IN THE PACIFIC  
(RAS/97/331)**

*Funded by:* UNDP, AusAID  
New Zealand Government

*Executed by:* SPC  
*Implemented by:* FAO

**REPORT  
ON THE  
SECOND STEERING COMMITTEE MEETING**

[Tokatoka Resort Hotel, Nadi, Fiji: 4 March, 1998]

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**12 March, 1998**

## BACKGROUND

The First Meeting of the Steering Committee of the Project on Regional Management of Fruit Flies in the Pacific (RAS/97/331) (RMFFP) was held in September, 1997. The meeting recommended that the Second Meeting of the Steering Committee be held in conjunction with the meeting of the Pacific Plant Protection Organization (PPPO), with the view of reducing the costs of conducting the meeting. The second meeting was held at the Tokatoka Resort Hotel, Nadi, Fiji on 4 March, 1998.

The Committee was reminded of the purposes for the meeting, namely:

- to review and advise on project activities to be performed;
- to recommend changes to project activities in accordance with national and regional needs and within the scope of the Project Document;
- to recommend timeframes for the commencement and completion of activities; and
- to comment on national human and financial resources required to perform the activities.

The Steering Committee consists of two national representatives from each of four sub-regions in the Pacific, together with representatives of donor agencies (AusAID, UNDP and New Zealand Government), the Executing Agency (SPC) and the Implementing Agency (FAO). A representative from the Nauru Government was specifically invited to present information on the proposed eradication programme and the prospects for establishing a plant protection and agricultural quarantine service in Nauru. The Government of Fiji provided the Chairperson. Attachment 4 contains a list of representatives.

Attachment 1 contains the Agenda that was accepted by the members of the Steering Committee.

This Report summarizes the meeting's deliberations and recommendations and provides guidance to the project management on activities to be performed through the Work Programme for 1998.

## DELIBERATIONS AND RECOMMENDATIONS

### Agenda Item 3: Actions from Recommendations from First Steering Committee

The Committee **noted** the progress that was made since the previous meeting in September, particularly in the areas of improved quarantine surveillance regionally, successful modification of brewery waste yeast to protein for bait spraying and control of fruit flies in Tonga and Fiji, and new quarantine treatments for commodities, such as papaya, fresh and pickling mangoes, eggplant and breadfruit using forced hot air for the New Zealand market. Approval of generic treatments for High Temperature Forced Air (HTFA) has allowed the export of other varieties of mangoes.

It also **recognized** the value of non-host status as a potential quarantine treatment for a range of commodities from Pacific Island countries and territories (PICTs), e.g. pineapple, squash, cucumbers from Vanuatu.

The Committee **recommended** that the RMFFP negotiate the acceptance of non-host status as a quarantine treatment with overseas quarantine authorities, this to be done in parallel with gaining international acceptance of the Standard on non-host status jointly developed by RMFFP and New Zealand MAF Regulatory Authority through the PPPO. (Also, see recommendation under Agenda Item 9 : Work Programme for 1998).

The Steering Committee **noted** the progress made in production of public awareness materials, especially Pest Advisory Leaflets and the release of the Proceedings of the Symposium on Regional Management of Fruit Flies in the Pacific held in October, 1996. It **recommended** that these activities continue as a high priority and be expanded to include production of a video on fruit flies.

The Steering Committee **noted** that the work programme in Papua New Guinea (PNG) was behind schedule due to the problems associated with the drought in PNG, slowness in recruiting two Junior Scientific Officers, and lack of approval of the parallel project on fruit flies in PNG to be funded by AusAID and ACIAR. This parallel project will provide specialist identification services to the RMFFP.

In general, the consensus was that the project had made good progress (with the exception of activities in PNG).

#### **Agenda Item 4: Progress Report**

Attachment 2 comprises a Progress Report on the activities of the RMFFP from May 1997 to February 1998. The Report identifies the Immediate Objectives, the Expected Outputs and the Actual Outputs achieved. This Agenda Item was covered concurrently with Agenda Item 3, so comments on Agenda Item 3 also apply.

#### **Agenda Item 5: Reporting at National and Regional Levels**

The Chief Technical Advisor (CTA) of the RMFFP commented that very few countries responded to the request for progress reports in December, 1997. It was **recommended** that PICTs provide reports on progress and problems on a quarterly basis (March, June, September and December) and that the RMFFP provide reports on a six monthly basis (June, December) as required in the Project Document.

#### **Agenda Item 6: Technical Capacity and Sustainability, Including PEACESAT**

The CTA reported that there were no requests from the Governments of the PICTs for additional human resources, with the exception of replacing the United Nations Volunteer (UNV) in Solomon Islands and the recruitment of the two Junior Scientific Officers in PNG. It

was **recommended** that the RMFFP and UNDP investigate the prospects for replacing the UNV in Solomon Islands as a matter of urgency. The Junior Scientific Officers in PNG have been selected and await signing of Letters of Appointment. They are expected to take up duties in Kerevat in March 1998.

### **Agenda Item 7: Financial Statement**

The financial statement provided to AusAID and UNDP in December 1997 showed that there was significant under-expenditure due primarily to:-

- slowness in recruitment of the Entomologist (Fruit Flies). (To take up duties in April, 1998);
- slowness in recruitment of the two Junior Scientific Officers in PNG (To take up duties in March, 1998);
- less activity in PNG than planned due to lack of approval by ACIAR and AusAID of the parallel project on fruit flies in PNG and due to laboratories in PNG and Nauru not being modified;
- unavailability of specific consultants in 1997 to undertake a study of the benefits of adopting fruit fly control measures to rural employment and poverty alleviation and to take high quality photographs of fruit flies for public awareness materials; and
- non-purchase of specific equipment for PNG and Nauru.

The under-expenditure amounted to US\$241,300 out of a total project budget for 1997 of US\$547,800. This underexpenditure will be rephased into 1998 and in some cases, 1999. The mandatory budget revision to be done by SPC and UNDP in April, 1998 will take this rephasing into account.

### **Agenda Item 8: Identification of Fruit Flies using DNA and other Issues**

This agenda item highlighted areas of activity where the RMFFP, SPC and the Australian Quarantine and Inspection Services (AQIS) may liaise and cooperate. A project sponsored by CSIRO Division of Entomology and AQIS provides identification services for fruit flies using DNA. The Steering Committee **recommended** that PICTs cooperate by supplying dead specimens (dry or preserved in 100% ethanol) to CSIRO for study.

Other areas of activity in which cooperation is likely to be beneficial include:

- cooperating in supplying high quality photographs of economically important species in Australia, South-East Asia and the PICTs;
- exchanging information on fruit fly activities and developments via PEACESAT 'FLYNET' and/or a website or newsletter;
- assisting financially (and technically) with the eradication programme in Nauru and advising on the establishment of a Plant Protection and Agricultural Quarantine Service in Nauru; and
- assisting with conducting training on Pest Risk Analysis (with MAF Regulatory Authority, New Zealand) nationally and regionally.

### **Agenda Item 9: Work Programme for 1998**

Attachment 3 contains the Work Programme for 1998. The Steering Committee **endorsed** the Work Programme.

As well as the specific activities identified in the Work Programme, there were several issues raised by the Steering Committee members that impinge on these activities. These issues are identified below as a series of recommendations to be considered and, where appropriate, actioned by the RMFFP in conjunction with national Governments. Some of these issues carried over as recommendations from the First Steering Committee Meeting.

The Steering Committee recommended that:-

- training on fruit fly techniques and management for Nauru national staff be conducted after April, 1998;
- dried specimens of Oriental fruit fly and melon fly be provided to all quarantine services so that these specimens can be purposely placed in trap catches for auditing quarantine surveillance trapping systems;
- Professor Richard Drew of Griffith University, Brisbane, continue to be the reference entomologist for the identification of exotic fruit fly specimens for the PICTs;
- the commitment to quarantine surveillance by Governments and Administrations of the PICTs be on-going and of a high priority;
- the RMFFP urgently arrange for high quality photographs of the economically important fruit fly species to be taken in Fiji, Tonga, New Caledonia, Solomon Islands, Samoa and later in the Cook Islands, Nauru and PNG;
- the RMFFP and New Zealand's MAF Regulatory Authority develop a Memorandum of Understanding related to supply, on a replacement basis, of materials to commence an Emergency Response should an exotic fruit fly outbreak occur in a PICT;
- the eradication programme for fruit flies in Nauru commence in July, 1998, subject to availability of funding and commitment of the Nauru Government to establishing a Plant Protection and Agricultural Quarantine service or its equivalent;
- national plant protection staff, together with the RMFFP, actively encourage bagging of fruit as a technique for control of fruit flies and, where appropriate, demonstrate this technique at all levels of production;
- national staff trained in fruit fly technologies be used for technical backstopping in other countries e.g. Tonga staff for bait spray experiment in Niue, Fiji and New Caledonia staff in Vanuatu or Solomon Islands for generation of heat tolerance data of immature stages of fruit flies, and French Polynesia staff for the eradication effort in Nauru;
- the RMFFP write to Governments and regional organizations to maintain PEACESAT sites and operators to assist with information exchange;

- the Chairperson of the PEACESAT 'FLYNET' session circulate the minutes of the session to all countries;
- as Emergency Response Plans are developed, they be submitted to the respective governments to obtain commitments in principle to carry out a response in the event of an incursion or outbreak of an exotic fruit fly;
- social impacts be included in the consultancy to determine the benefits of adopting fruit fly management practices on rural employment, poverty alleviation and food security at all levels of production;
- the Standard for Determining non-Host Status as a Quarantine Treatment (MAF Regulatory Authority Standard 150.02.02) be used as a basis for the development of a regional standard, then taken to PPPO for approval as a regional standard and PPPO to submit it to IPPPC to endorse it as an international standard; and
- the RMFFP continues to supply materials for culturing fruit flies to PICTs and that a sunset date be determined, December 1998, at which national Governments become responsible for their own purchasing.

#### **Agenda Item 10: Comments by Donors**

In summary, comments on the progress of the RMFFP were favourable. The frank, open discussion and constructive criticism and suggestions by members of the Steering Committee was seen as symptomatic of a small focussed meeting and indicated a genuine commitment to the activities and the problem of regional management of fruit flies. Some concern was expressed at the size and breadth of the Work Programme.

#### **Agenda Item 11: Closing**

The Chairperson closed the meeting with a vote of thanks to members whose contributions were greatly appreciated and provided important guidelines to the project managers and the PICTs. The need for members of the Steering Committee to maintain contact with PICTs in the respective sub-regional groups to obtain their reactions to project activities and the recommendations of the Steering Committee was strongly emphasized.

The next Steering Committee will take the form of a Mid-Term Review of the RMFFP on 14 - 15 September, 1998.

**Attachment 1**

**AGENDA**

**STEERING COMMITTEE MEETING  
PROJECT ON REGIONAL MANAGEMENT OF FRUIT FLIES  
IN THE PACIFIC**

**Tokatoka Resort Hotel, Nadi, Fiji : 4 March, 1998.**

- |     |   |                 |
|-----|---|-----------------|
| 1.  | Adoption of Agenda  | 8.30 am         |
| 2.  | Welcome and purpose of Steering Committee   | 8.35 am         |
| 3.  | Actions from recommendations from First Steering Committee Meeting  | 8.45 am         |
|     | <b><i>Morning Tea</i></b>   | <b>10.30 am</b> |
| 4.  | Progress Report to cover the following activities:- <ul style="list-style-type: none"><li>• Trapping and host surveys (Quarantine Surveillance)</li><li>• Assessment of damage levels</li><li>• Field control-protein bait sprays (Tonga, Fiji, Niue)</li><li>• Other control methods</li><li>• Quarantine treatments (forced hot air, non-host status)</li><li>• Emergency Response Plans</li><li>• Eradication programmes (French Polynesia, Nauru)</li><li>• Databases</li><li>• Publications (Pest Advisory Leaflets, Proceedings of Symposium, Manual on Fruit Flies, scientific papers)</li><li>• Consultancies</li></ul> | 11.00 am        |
|     | <b><i>Lunch</i></b>   | <b>12.30 pm</b> |
| 5.  | Reporting at national and regional level  | 2.00 pm         |
| 6.  | Technical capacity and sustainability, including PEACESAT   | 2.15 pm         |
| 7.  | Financial Statement   | 2.45 pm         |
| 8.  | Identification using DNA and other issues   | 3.15 pm         |
| 9.  | Work Programme  | 3.30 pm         |
| 10. | Comments by Donors (AusAID, UNDP, New Zealand Government)   | 4.30 pm         |

11 Closing 5.00 pm

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**Attachment 2**

**PROGRESS REPORT : MAY, 1997 - FEBRUARY, 1998.**

**Project:** REGIONAL MANAGEMENT OF FRUIT FLIES IN THE PACIFIC

**Project:** RAS/97/331

**Funding**

**Sources:** COST-SHARED BY AusAID and UNDP.

NEW ZEALAND GOVERNMENT DIRECT TO PACIFIC COMMUNITY

**Executed**

**By:** SECRETARIAT OF THE PACIFIC COMMUNITY (SPC)

**Implemented by:** FAO

Immediate Objective	Expected Outputs	Actual Outputs
<p><b><u>Immediate Objective 1</u></b> To overcome constraints on production and export of fresh fruits and vegetables in FSM, Solomon Islands and Vanuatu caused by the presence of damaging fruit fly species</p>	<p><b><u>Output 1.1</u></b> Valid data on fruit flies and parasitoids in each country, their host ranges, seasonal abundances, and assessment of losses caused.</p>	<ul style="list-style-type: none"> <li>• Completed status report on fruit flies and quarantine surveillance in Vanuatu.</li> <li>• Revised trapping programmes in Vanuatu and Solomon Islands to quarantine surveillance focus. FSM trapping limited to Pohnpei.</li> <li>• Obtained accurate information on fruit flies in Vanuatu (14 species) and FSM (1 species)</li> <li>• 48 species of fruit fly recorded in Solomon Islands, of which 23 are new records.</li> <li>•</li> </ul>
	<p><b><u>Output 1.2</u></b> Quarantine surveillance systems/early warning systems to record introductions of exotic fruit fly species and emergency response plans to cope with any outbreak of exotic fruit flies</p>	<ul style="list-style-type: none"> <li>• Quarantine surveillance systems in place in Solomon Islands and Vanuatu and in Pohnpei (FSM), based on trapping and host surveys.</li> <li>• Procedures for quarantine surveillance documented in Vanuatu - as model for other countries</li> <li>• No action on emergency response plans. (To be done in association with Nauru eradication exercise in mid-1998.)</li> <li>• Fruit fly identification workshops conducted in Brisbane (June, 1997) (funded by RMFFP) and in Solomon Islands (January, 1998) (funded by ACIAR).</li> </ul>

	<p><b>Output 1.3</b> Environmentally sound inexpensive, effective field control systems adopted by subsistence and commercial farmers in order to increase production and incomes of farmers.</p>	<ul style="list-style-type: none"> <li>• No specific activities on protein bait spray development until research is completed in Tonga or Fiji - see previous Steering Committee meeting.</li> <li>• Assisted with introduction, rearing and release of the parasitoid <i>Psytalia fletcheri</i> for melon fly control in Solomon Islands and <i>Fopius arisanus</i> into FSM for control of mango fruit fly.</li> </ul>
	<p><b>Output 1.4</b> Laboratory colonies of economically important fruit fly species for research into non-host status and quarantine treatments</p>	<ul style="list-style-type: none"> <li>• Maintained colonies of <i>Bactrocera cucurbitae</i> (melon fly), <i>B. frauenfeldi</i> (mango fruit fly), <i>Dacus solomonensis</i> in Solomon Islands, <i>B. trilineola</i> and <i>B. umbrosa</i> in Vanuatu.</li> <li>• Colonies of mango fruit fly in FSM died out.</li> </ul>
	<p><b>Output 1.5</b> Increased technical capacity of national staff to be able to identify fruit fly species and develop quarantine treatment based on non-host status and heat.</p>	<ul style="list-style-type: none"> <li>• Training workshops conducted in Brisbane (June, 1997) and in Solomon Islands (January, 1998).</li> <li>• Contact maintained with ACIAR project for in-country hands-on training in Vanuatu in October, 1997 and January, 1998.</li> <li>• Host status reports on pineapple, squash and cucumbers completed in Vanuatu and submitted to NZ.</li> <li>• Host status tests on limes, lemons, pineapples in progress in Solomon Islands.</li> <li>• Negotiations on Generic Treatments with NZ.</li> <li>• Heat tolerance testing for <i>B. trilineola</i> in Vanuatu and <i>B. frauenfeldi</i> in Solomon Islands underway.</li> <li>• Discussions on a small forced hot air unit for testing 300-500kg of produce in Vanuatu in progress. Useful for small countries.</li> </ul>
<p><b>Immediate Objective 2</b> To improve substantially the quarantine preparedness of PICTs to cope with inevitable outbreaks of exotic fruit flies regionally.</p>	<p><b>Output 2.1</b> Quarantine surveillance/early warning systems in all PICTs.</p>	<ul style="list-style-type: none"> <li>• Quarantine surveillance established and partly maintained by RMFFP in Fiji, Tonga, Samoa, FSM, Vanuatu, Solomon Islands.</li> <li>• New surveillance systems established in PNG, Niue, Nauru under RMFFP (NAQS also in PNG).</li> </ul>

		<ul style="list-style-type: none"> <li>Quarantine surveillance maintained wholly by Governments in New Caledonia, French Polynesia, Guam, CNMI.</li> </ul>
	<p><b>Output 2.2</b> Emergency response plans and eradication strategies to cope with outbreaks of exotic fruit fly species, in conjunction with disaster relief groups.</p>	<ul style="list-style-type: none"> <li>Emergency response plans (ERPs) for Niue and Fiji reviewed (need more detail).</li> <li>Plans for national staff from each country involved in Nauru eradication programme to complete ERP for their country while in Nauru.</li> <li>Appointed Entomologist (Fruit Flies) in Project to assist with country ERPs.</li> </ul>
	<p><b>Output 2.3</b> Readily available stockpiles of traps, attractants, protein autolysate, plastic containers and insecticides necessary to commence on eradication effort quickly.</p>	<ul style="list-style-type: none"> <li>No activities as yet.</li> </ul>
	<p><b>Output 2.4</b> Effective, high profile regional and national public awareness programmes using videos, television, radio, posters at ports of entry and other media.</p>	<ul style="list-style-type: none"> <li>Drafts of Pest Advisory Leaflets (PALs) on Queensland fruit fly (<i>B. tryoni</i>), <i>B. facialis</i>, melon fly completed.</li> <li>Drafting of PALs on dorsalis complex, protein bait spraying and <i>B. passiflorae</i> in progress.</li> <li>Discussions with UNDP to set up Webpage for RMFFP commenced.</li> <li>Hiring photographer to photograph fruit flies and damage for PALs posters and brochures for public awareness.</li> </ul>
	<p><b>Output 2.5</b> Improved technical capacity to identify exotic fruit fly species at a national and regional level and to undertake eradication procedures if an outbreak of an exotic species of fruit fly occurs.</p>	<ul style="list-style-type: none"> <li>See Output 1.5 and 2.2.</li> <li>Initial planning completed on eradication programme for at least melon fly and Oriental fruit fly in Nauru and on training of national staff in eradication techniques.</li> <li>Conducted Regional Symposium on Eradication of Oriental Fruit Fly in Tahiti and Moorea in Papeete on 24-27 November, 1997 - 13 countries involved.</li> <li>Provided advice to French Polynesia on eradication of Oriental fruit fly.</li> </ul>

	<p><b>Output 2.6</b> An upgraded, expanded database on fruit fly species in the PICTs, their host ranges, parasitoids, seasonal abundances and levels of damage caused by fruit flies.</p>	<ul style="list-style-type: none"> <li>• Negotiated with Queensland Department of Primary Industries for release of database for Fiji, Tonga, Samoa, Cook Islands, Vanuatu, Solomon Islands, FSM.</li> <li>• Memorandum of Understanding between RMFFP (Pacific Community) and Griffith University regarding database on fruit flies being negotiated.</li> <li>• Vanuatu, Fiji, Solomon Islands, Tonga and PNG using EXCEL spreadsheet for recording data nationally.</li> </ul>
<p><b>Immediate Objective 3</b> To enhance production and export of fresh fruits and vegetables regionally in order to increase farmers' incomes and to assist in providing food security, particularly in those countries not included in the previous fruit fly projects.</p>	<p><b>Output 3.1</b> An assessment of effects of transfer and adoption of fruit fly control in sustaining livelihoods in PICTs.</p>	<ul style="list-style-type: none"> <li>• Discussions with consultant to carry out study on the value of all levels of fresh fruit and vegetable production and the impact of increases in fruit and vegetable production on poverty and the rural labour market, commenced. Consultancy for second half of 1998.</li> <li>• Identified sample countries for consultancy - Vanuatu, Solomon Islands, Fiji, Tuvalu, Samoa.</li> <li>• Pest Advisory Leaflets production - <b>See Output 2.4</b></li> <li>• No PEACESAT 'FLYNET' sessions run so far in 1998 due to difficulties in access to sites. Plan to recommence in April, 1998.</li> <li>• Proceedings of the Symposium on Regional Management of Fruit Flies in the Pacific released: 52 papers in total; 22 of which were written by national staff.</li> </ul>
	<p><b>Output 3.2</b> Transfer of technology related to fruit flies and methods of trapping, host surveys, laboratory rearing of flies and parasitoids, host status testing, heat tolerance testing of immature stages and field control.</p>	<ul style="list-style-type: none"> <li>• One field demonstration of protein bait spray technique in Fiji (Sigatoka Valley) in July, 1997.</li> <li>• Modification of waste yeast for protein baiting continued in Fiji. Tests on guava to be done in March-April.</li> <li>• Field testing of Royal Tongalure on capsicum in Tonga gave excellent results - to be commercially released in March, 1998.</li> <li>• Discussions on generic heat treatments held with NZ MAF Regulatory Authority - concept accepted.</li> <li>• Forced hot air treatments for papaya, fresh and pickling mangoes, eggplant for Fiji. Breadfruit tested in February,</li> </ul>

		<p>1998 and is likely to be cleared.</p> <ul style="list-style-type: none"> <li>• Heat tolerance data from Tonga submitted to NZ for technical assessment.</li> <li>• Cook Islands obtained clearance for heat treatment of mangoes.</li> <li>• Vanuatu has clearance to export squash under non-host status. Need to document quarantine pathway.</li> </ul>
	<p><b>Output 3.3</b> Reduced losses caused by fruit flies at subsistence and commercial levels of production due to adoption of protein bait spraying regionally.</p>	<ul style="list-style-type: none"> <li>• Recommended a bait spray trial at village level in Niue to test the effectiveness of destruction of fallen fruits and protein bait spraying - To be done in first half of 1998.</li> <li>• Completed testing of Royal Tongalure on capsicums. Untreated plots 97-100% damage treated plots less than 10% damage.</li> </ul>
	<p><b>Output 3.4</b> An inexpensive, locally available protein manufactured by national breweries or other private companies from brewery waste in Fiji, Samoa, Vanuatu, Solomon Islands and PNG.</p>	<ul style="list-style-type: none"> <li>• Work completed in Tonga and product to be released in March, 1998.</li> <li>• Research continuing in Fiji.</li> <li>• Vanuatu Brewery interested in process.</li> </ul>
	<p><b>Output 3.5</b> Regional database on the heat tolerance of fruit fly species with the aim of formulating generic heat treatments to cope with a range of fruit fly species and commodities.</p>	<ul style="list-style-type: none"> <li>• No activities on establishing database, except for preliminary discussions with NZ and Hawaii.</li> <li>• Concept of generic or recipe heat treatments accepted by NZ MAF Regulatory Authority.</li> </ul>
<p><b>Immediate Objective 4</b> In cooperation with ACIAR, to develop a separate multi-disciplinary fruit fly programme to address the enormous risk of fruit fly spread through and from PNG into the rest of the region.</p>	<p><b>Output 4.1</b> Increased knowledge of the species of fruit flies and their parasitoids in PNG, particularly adjacent to the Irian Jaya border, and of quarantine risks of these species to the rest of the PICTs.</p>	<ul style="list-style-type: none"> <li>• Established quarantine surveillance in the East New Britain area, by basing a UNV Entomologist there and setting up trapping and host surveys.</li> <li>• Supplied traps to the Post Moresby area in support of the NAQS programme.</li> <li>• Provided two staff with training on fruit fly identification in Brisbane.</li> <li>• Conducted with ACIAR, an Implementation Workshop on Fruit Fly Projects in PNG in August, 1997.</li> <li>• Recruited two National Professional Project Officers with DAL to be located initially at LAES for training and then</li> </ul>

		<p>to be located at Lae and Port Moresby or LAES, Kerevat.</p> <ul style="list-style-type: none"> <li>• Publication of a practical guide for fruit fly surveying in PNG released.</li> </ul>
	<p><b>Output 4.2</b> Dedicated facilities for undertaking fruit fly research at Bubia Research Station (Lae), Keravat (New Britain) and at Kilakila (Port Moresby)</p>	<ul style="list-style-type: none"> <li>• Buildings at Keravat (Lowland Agricultural Experiment Station) modified as fruit fly laboratories.</li> <li>• Buildings at Kilakila and Loloki assessed by the UNV for renovations and modifications.</li> </ul>
	<p><b>Output 4.3</b> Reduced losses caused by fruit flies by adoption of a whole system approach for the control of fruit flies, including protein bait spraying, bagging of fruits and cultural and biological control methods.</p>	<ul style="list-style-type: none"> <li>• Assessments of damage levels to fruits and vegetables done at LAES area. 1083 fruits, representing 8 commercial fruit species have been collected.</li> <li>• Levels of damage to guava (71%) cashew apples (59%), yellow mangostones (18%) and carambola (13%) assessed.</li> <li>• No activities possible during drought.</li> </ul>
	<p><b>Output 4.4</b> Improved technical capacity to develop data on heat tolerances of economically important species of fruit flies and to undertake host status testing of particular commodities not regarded as hosts to fruit flies.</p>	<ul style="list-style-type: none"> <li>• Laboratory colonies of <i>B. decipiens</i> and <i>B. frauenfeldi</i> established at LAES.</li> <li>• No other activities.</li> </ul>
	<p><b>Output 4.5</b> National staff trained in fruit fly identifications and pre and post-harvest control strategies.</p>	<ul style="list-style-type: none"> <li>• Two National Professional Project Officers appointed.</li> <li>• Two national staff attended training on fruit fly identifications in Brisbane in June, 1997.</li> </ul>
<p><b>Immediate Objective 5</b> To ensure sustainable technical capacity for coordination of future activities on fruit flies in the Region.</p>	<p><b>Output 5.1</b> A scientific officer within the Pacific Community trained in all aspects of fruit fly taxonomy, biology, ecology, control and quarantine treatments</p>	<ul style="list-style-type: none"> <li>• Entomologist (Fruit Flies) appointed to commence duties in April, 1998.</li> </ul>
	<p><b>Output 5.2</b> Core funding for scientific officer position from SPC at the completion of the project.</p>	<ul style="list-style-type: none"> <li>• No activities necessary until 1999.</li> </ul>

	<p><b><u>Output 5.3</u></b> Two post-graduate scholarships for national staff, awarded on the basis of contribution to the achievements of the project.</p>	<ul style="list-style-type: none"> <li>• No activities planned until 1999.</li> </ul>
<p><b><u>Immediate Objective 6</u></b> To promote private sector involvement in sustaining quarantine surveillance and research into fruit fly control and quarantine treatments for commodities destined for export.</p>	<p><b><u>Output 6.1</u></b> In countries that are exporting fresh commodities, a scheme of industry levies to support financially surveillance and research and development in field control and quarantine treatment development.</p>	<ul style="list-style-type: none"> <li>• Supported the formation of a Fruit and Vegetable Council in Fiji through which levies may be administered.</li> <li>• Discussed the prospects of imposing levies at export - generally, there is support.</li> </ul>
	<p><b><u>Output 6.2</u></b> Private sector advisory groups to determine how funds derived from levies should be spent to benefit research for farmers and exporters at all levels.</p>	<ul style="list-style-type: none"> <li>• No activities, other than those of Output 6.1</li> </ul>



**Attachment 3**

**Work Programme for 1998**

**Project on Regional Management of Fruit Flies in the Pacific (RAS/97/331)**

<b>Activity</b>	<b>Responsibility</b>	<b>Timing</b>
Maintain/monitor and provide advice on quarantine surveillance activities in Fiji, Cook Islands, Tonga, Samoa, FSM (Pohnpei), Vanuatu, Solomon Islands, Niue, Nauru, PNG, Tuvalu.	CTA/EFF/Govt	Continuing
Documentation of quarantine surveillance systems in above countries	Govt/CTA/EFF	December
Re-establish quarantine surveillance system in Yap, Chuuk, Kosrae, Palau.	Govt/PPT/CTA	August
Establish quarantine surveillance in <ul style="list-style-type: none"> <li>• American Samoa</li> <li>• Wallis and Futuna</li> <li>• Marshall Islands</li> <li>• Tokelau</li> <li>• Kiribati</li> </ul>	Govt/CTA/EFF Govt/CTA/EFF Govt/PPT/CTA Govt/CTA/EFF Govt/CTA	June June June August August
Upgrade laboratory facilities at Bubia (Lae) and Kilakila (Port Moresby) for fruit fly activities. Establish trapping for fauna surveys and quarantine surveillance in the Lae-Madang areas and highlands of PNG.	CTA/UNV/Govt CTA/EFF/UNV/Govt	August August
Develop and document a model Emergency Response Plan (ERP) that may be used by PICTs (Consultation with MAF (NZ) and AQIS)	CTA/EFF/SPC	June
Adapt model ERP to countries' needs while country representatives are in Nauru for eradication exercise.	Govts/CTA/EFF	June-Dec
Workshops on ERP development in Solomon Islands.	Govt/CTA/EFF	August
Conduct sub-regional workshop on identification of fruit flies and refresher training on control in Vanuatu (with ACIAR)	CTA/ACIAR	July
Review and advise on ERPs for Cook Islands, Fiji, Tonga, Samoa, Vanuatu, FSM, New Caledonia, Niue, French Polynesia, Tuvalu.	CTA/EFF/Govt	December
Complete printing of Pest Advisory Leaflets based on <ul style="list-style-type: none"> <li>• species</li> <li>• country</li> <li>• Solomon Islands</li> <li>• PNG</li> </ul>	CTA/Govt CTA/Govt CTA/Govt CTA/Govt	June July August December
Contract photographer from Queensland Museum to photograph economic species in New Caledonia, Vanuatu, Solomon Islands, Fiji, Tonga, Cook Islands.	CTA	May
Commence to compile a video on fruit flies, their control and quarantine importance.	CTA/SPC/ACIAR	Completed by mid-1999
Compile Manual on Fruit Flies for the Pacific	CTA/ACIAR	December
Launch the protein bait spray in Tonga commercially	Govt/Private Sector	March

Continue development of protein bait spray by modifying waste yeast from the Fiji Bitter Brewery and field test it.	Govt/CTA/Private Sector	March
Complete Pest Advisory Leaflet on protein bait spraying physical and cultural control of fruit flies.	CTA	July
Activity	Responsibility	Timing
Complete heat tolerance testing of immature stages of fruit flies in: <ul style="list-style-type: none"> <li>• Vanuatu</li> <li>• Solomon Islands</li> </ul>	Govt/CTA Govt/CTA	October December
Commence heat tolerance testing of species in PNG as part of Pacific data collection.	UNV/NPPO/Govt	October
Establish database on heat tolerances of immature stages of fruit flies in the Pacific.	CTA/USDA/MAF(NZ)	December
Identify method of setting up small stockpile of supplies and materials for eradication of exotic fruit flies.	CTA/SPC/MAFF (NZ)	August
Assess the feasibility of eradication of at least melon fly and Oriental fruit fly in Nauru, develop strategy, obtain Govt. approval.	CTA/Crawford/Govt/EFF	May
Facilitate the training of national staff from PICTs in eradication techniques for fruit flies in Nauru.	CTA/Crawford/AQIS/EFF	June-Dec
Conduct the eradication programme in Nauru.	Govt/CTA/Crawford/EFF	June-Dec
Provide advice to French Polynesia Government on Oriental fruit fly eradication programme.	CTA	Continuing
Assessment of prospects for eradication of Oriental fruit fly in Palau.	CTA/PPT	December
Retrieve the Pacific Fruit Fly Database from ACIAR/QDPI and provide countries with their data.	CTA/SPC	June
Conduct a workshop on Pest Risk Analysis using practical examples.	CTA/AQIS/NZMAF	Aug-Sept.
Contract consultant to assess the value of fruit and vegetables at all levels of production and the effect of adoption of fruit fly control on poverty and rural employment.	CTA/Consultant/SPC	September
Establish webpage using Internet.	CTA/UNDP/PA/EFF	July
Develop Memoranda of Understanding with:- <ul style="list-style-type: none"> <li>• Griffith University, regarding data in Vanuatu, Solomon Islands and PNG.</li> <li>• USDA-Agricultural Research Service, Hilo for exchange of data and technology</li> <li>• NZ MAF, regarding stockpiles of supplies for emergency responses.</li> </ul>	CTA/Drew  CTA/Armstrong  CTA/Ivess	July
Expand PEACESAT 'FLYNET' to all countries that have access to a site.	CTA/Govts	April
Demonstrate protein bait spray technique commercially: <ul style="list-style-type: none"> <li>• New Caledonia</li> <li>• Fiji</li> <li>• Niue</li> <li>• PNG</li> </ul>	Govt/CTA Govt/CTA Govt/CTA Govt/CTA/UNV	July March- April April April-July
• Workshops in Pohnpei in May for export treatment.	CTA/PPT	May
Appoint two National Professional Project Officers to PNG Fruit Fly Project.	Govt/CTA/UNV	March
Report on progress of project		

<ul style="list-style-type: none"> <li>• national</li> <li>• regional</li> </ul>	<p>Govt/CTA/SPC</p> <p>CTA/SPC</p>	<p>March, June, Sept., Dec. June, Dec.</p>
<p>Arrange mid-term Review of RMFFP</p>	<p>CTA/SPC</p>	<p>September</p>

**Attachment 4**

**STEERING COMMITTEE MEETING  
REGIONAL MANAGEMENT OF FRUIT FLIES IN THE PACIFIC  
NADI, FIJI : 4<sup>TH</sup> MARCH, 1997.**

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