



GTFS/RAS/198/ITA
Support to the Regional Programme for Food Security in the Pacific Island Countries

FAO/ITA/PAL/01

Development of Value Adding for Improved Food Security

TERMINAL REPORT

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Executive Summary

This project sought to increase the production and consumption of value added products from locally grown food crops through appropriate capacity building. Value adding to locally grown food is considered as one of the potentially most sustainable livelihoods available to rural residents. And the proportion of impoverished and vulnerable households is three times greater in rural areas than the urban centre. A major characteristic of the heads of these households is they are mostly female. Over 50% of rural households are economically disadvantaged.

The Republic of Palau shares with other island nations the need to improve its food security at the national, community and family level. The Republic is constrained by low agriculture productivity, critical gaps in technology transfer and adoption of new technology and inputs, poor market integration of producers and consumers, low export earnings, over reliance on food imports, fragile environment and economic uncertainty. Palau will need to address the above constraints in order to achieve its national stated objectives as contained in its national development plans and plans of action.

In addressing the above constraints, the Republic with the kind assistance of FAO through this project strengthened food security by improving the value adding of agricultural produce. We improved value adding through training a core team of trainers. This core team will further develop training materials and train our citizens in the techniques and skills of value adding. To assist the team in this endeavour we propose a TCP which will further train the team through attachment and further support them by developing and manning a National Food Processing Unit.

1. Introduction

Background:

Agriculture in Palau appears to be entering an 'extended dualism' phase. That is, crops are produced for subsistence and for sale in typical dual-economy mode, but traditional crops of importance to both social activities and subsistence, principally taro, are also now often produced with the assistance of hired, foreign labour. The challenge before Palau is to develop a sustainable economy in which the private sector generates sufficient revenues to finance public services without need for external operational subsidies. Equally important, development must be undertaken in a manner, which maximises the benefits, which accrue to Palauans while sustaining the environmental and cultural resources for future generations.

A previous FAO sponsored value adding mission noted that a small processing unit - spu (kitchen type) is needed for training and demonstration purposes. There was also a need to introduce and demonstrate simple, inexpensive time saving equipment and

other tools to bring potential food processors up-to-date and to enable them to produce more efficiently and compete with imports (which are using similar equipment). Problems related to packaging are caused by the hot and humid climate and limited local selection of available packaging materials. These problems have resulted in the closing of at least three value-adding enterprises. There was thus a need to introduce and demonstrate suitable packaging. Furthermore, quality control equipment and other tools for health reasons, e.g. tools that measure sugar, acid, etc, needed to be introduced and demonstrated.

Available arable land in Palau is in excess of existing needs and those of the immediate future. There is considerable room for expanded production of vegetables and fruits, staple crops, trees and tourist attractions such as botanical gardens.

Palau is blessed with a uniform mild climate, in temperature and rainfall and is outside the typhoon belt. Multiple crops may be grown at the same location. Traditional knowledge of agriculture, microclimate and ecology is widespread and there exists a strong tradition of agro forestry.

There is good potential for establishing a local fruit industry to improve the nutrition of the population and to nurture an export industry. Furthermore, appropriate downstream processing to serve local demand and for export offer viable option for development.

The current market system is cumbersome and problematic. Little information is available about returns from agriculture, nor is there any provision of formal market information e.g. production and price trends. There has also been little or no thorough investigation into export market potentialities including 'suitcase' exports.

Perhaps the greatest single constraint on development of agriculture in Palau relates to human resources. Agriculture is considered to have low status, to be hard work, and to be typified by low returns. Palau is seriously lacking in agriculture professionals. Less than a handful of Palauans have higher degrees in agriculture and even fewer are working towards such degrees. This project will contribute to

reversing this prevailing situation as entrepreneurs received specialised training which resulted in farmers receiving higher returns by selling of specialised products.

Main Official Arrangements:

This assistance was approved by FAO in 2004 under the Technical Cooperation Program project FAO/ITA/PAL/01 Development of Value Adding for Improved Food Security, with a financial contribution of US\$ 92,650. Project activities commenced in February 2005 and some project activities are not yet completed. The Ministry of Resources & Development was designated the national counterpart organization responsible for project execution, and the project's immediate counterpart was the Bureau of Agriculture. A Steering Committee was formed with an administrative/advisory role.

Objectives:

The overall objective of the project is to improve food security of the nation by developing and galvanizing a national cadre of trainers who will conduct on-request trainings in value adding, food hygiene and sanitation in support of and nurturement of a viable value adding industry.

The specific objectives are by the end of the project: 1) a core team of trainers will be able to train others in value adding, food hygiene and sanitation: 2) a small scale processing unit will be established, equipped and operational and 3) a system will be in place for the continued provision of trainings in value adding, food hygiene and sanitation.

This project proposed to undertake capacity building through a two-step approach. The first step is the training of a core team of trainers, in assessing value adding opportunities and techniques and value adding technologies. An international consultant was to be engaged and was engaged to undertake an 8 week (60 days) mission to train the core team of trainers. The second step was for the national trainers to conduct a national training programme for interested farmers, processors and entrepreneurs in value adding technologies. It was envisioned the core team of trainers will provide the continuing assistance.

Brief of the Program of Work:

Please be referred to revised logical framework, revised workplan and activity report in the annex.

2. Project Organization and Budget Arrangements

A Steering Committee was formed with an administrative/advisory role over the project. Originally per the Project Document, the project organization consisted of a National Project Coordinator (22 months), National Project Director, National Consultant (22 months), International Consultant (8 weeks) and a steering committee. The National Consultant services were discontinued after 11 months. With the unplanned operational gap cause by discontinuing the services of the National Consultant the development of the training manual, implementation of the study tour, further trainings and development of the core team of trainings was discontinued. An International Consultant was recruited to activate the project and complete activities included in the Terms of Reference of the National Consultant. Also a National Project Implementation Assistant was recruited. Most of budget allocated has been disbursed. During the first year of the project, budget delivery slowed down project activities for various reasons. Official FAO procurement procedures are time consuming and difficult to met on our resource scarce limited vendor island. Some equipment and supplies arrived too late for the first training. Some equipment and supplies never arrived.

3. Project Outputs

Per Original Project Document:

- Improved income and food security of participating farmers and processors through diversification
- Sufficient trained personnel in value adding, food hygiene and sanitation, to build the critical mass necessary to sustain a value adding industry
- Appropriate equipment, supplies, tools and facilities and funding support is made available for purposes of continuing experimentation and development of new value added products even after the end of support of RPFS.

- Tourists and the general public have a greater supply of nutritious locally processed products.
- A national cadre of trainers to train producers, processors and entrepreneurs
- Provides ongoing assessment of value adding opportunities
- Provides a plan of action for developing value adding
- Provides a plan for the continued transfer of skills in value adding
- A national cadre of trainers trained to provide value-adding trainings to producers, processors and entrepreneurs.
- Lower risk and improve income and food security of participating producers, processors and entrepreneurs through diversification.
- Lower risk and improve income and food security of participating farmers and other processors through diversification.
- Locally generated products will increase thereby contributing revenue into the National Economy and saving the nation cash through improved health of the population and import substitution.

Per revised logical framework:

1. Completed training manual
2. Completed Small Scale Processing Unit (SPU)
3. Conducted national training on Value Adding
4. Completed study tour

The projects outputs contributed to achieving the project purpose: increased value added products in Palau. To illustrate:

- a. Over 27 value added products were produce during the trainings.
- b. Over thirteen trainees are marketing chips, coconut candy, noni capsules, molasses, perfumed coconut oil and other value added products.
- c. Over five core trainers and over 53 practitioners were trained.

- d. Over a dozen entrepreneurs have expressed in interest in building the solar dryer or purchasing value adding equipment and supplies demonstrated during the trainings and special events, e.g. World Food Day and Agricultural Fair.

We were unable to make use of the final Project Implementation Review Summary, since we do not have a copy of the final Project Implementation Review Summary.

4. Major Issues and Concerns in Project Implementation

The trainers are well prepared (skill wise but not resource wise) to carry further the work after the termination of the project. One shortcoming is there are little local backup or other resources for trainers. Additional training, equipment and supplies are needed to support the trainers and the SPU.

BOA faces crucial constraints: budgetary cuts occurring with increasing responsibilities/mandated activities; staffing limited; few staff with degrees or the equivalent years of experience; too few extension staff; extension staff have little time for skill/knowledge transfer; no per diem allowance, shortage of properly functioning vehicles and low morale. These constraints need to address by an additional influx of funds and other resources.

Due to lack of end-of-mission reports, Project Implementation Review Summary, project evaluation reports and budget reports our recommendations are based on incomplete information and as such may be revised if additional information becomes available.

Official FAO procurement procedures are time consuming and difficult to meet on our resource scarce limited vendor island. Some equipment and supplies arrived too late for the first training. Some equipment and supplies never arrived.

The project failed to achieve some of its objectives and activities, this suggests that for project effectiveness and smooth implementation, major decisions concerning project staff based in-country should be executed nationally by the Palau government.

A program was developed and participants selected for the study tour. The study tour was cancelled because of time constraint. The cancellation of the study tour leaves a critical gap in the knowledge base, hands-on experience and capacity of the trainers

5. Conclusions

Much progress has been achieved and much more needs to be done to achieve overall objective of the project is to improve food security of the nation by developing and galvanizing a national cadre of trainers who will conduct on-request trainings in value adding, food hygiene and sanitation in support of and nurturement of a viable value adding industry. The trainers have been trained and to support their training activities a training manual has been developed. A SPU is on its way to completion and with its completion there will be improved access. Many value added products and technologies have been developed, tested and await further dissemination. Several trainees are applying the newly learned skills to improve their income. The momentum gained needs to be accelerated through greater support to the Bureau, the trainers, trainees and potential entrepreneurs. The trainers need to scout out appropriate equipment and supplies, gain first hand experience with suitable technologies and build up an effective technical support network through an attachment to Thailand. A mentor relationship with a leading value adding institution in Thailand would foster a struggling value adding industry in Palau. The trainees need on-site advice/assistance, additional training in the areas they requested and up-date their skills in the rapidly improving techniques of food safety/quality. Potential entrepreneurs need an incubator or other facility to test their planned products.

5. Recommendations

We recommend that FAO source further resources for the implementation of a TCP project which builds upon the many accomplishments of this project to begin next year. As to ensure that new and better value adding technologies are transferred to rural farmers/producers to ensure food security and improve livelihoods. Globally high prices of food and oil are contributing to the increased world poverty. Palau is highly vulnerable because 80%-90% of its food is imported. Agriculture development

is a high priority for Palau and a project which builds upon and reinforces this value added project will help build capacity within the Bureau of Agriculture to address the issue of food security. The proposed TCP project would include upgrading the SPU, packaging equipment and supplies, a training attachment, a mentor relationship with a leading value adding institution, and trainings and other capacity building activities.

We further recommend that:

- a. the new project be nationally implemented and executed rather than regionally implemented;
- b. Palau be allowed to select the National Consultants, International Consultants; and other personnel assigned to the project;
- c. A National Consultant be recruited to ensure the project smooth operation and to activate/support national counterparts and to be a catalyst to project success;
- d. An administrative assistant be recruited to ensure paperwork is done on time and in full compliance with FAO's regulations;
- e. All correspondences including inception reports, progress reports and end-of-assignment reports be routed through and/or copied to the National Project Director, National Correspondent and Minister of State.

Decisions which are requested to be made by the government are:

- a. There are requests to extend the area and scope of value adding services provided by the Bureau. Is this a continued priority and are additional resources available?
- b. There are requests from farmers to train/demonstrate value adding techniques which enhance livelihoods such as plant-based cosmetics, biofuels, vacuum frying and cassava based snacks using an extruder. With the assistance of Palau Visitors Authority, The Small Business Development Centre, Chamber of Commerce, National Development Bank, private banks

and other organizations which support entrepreneurs, the Bureau may be able to obtain funding to provide these services.

c. There are requests to train/demonstrate proper/safe produce, food and agro-processing management/quality systems and biogas systems. These systems are beyond the current resources of the Bureau. It may be possible for the Bureau to combine resources with the Environmental Protection Quality Board and the Division of Environmental Health to provide these services.

Food processing is relatively new to the country and in order to maintain the momentum created by the project, further assistance from FAO would be necessary to encourage the continued interest of farmers and communities and Government assistance required to support the Small Processing Unit's (SPU) food security activities.

The SPU should be upgraded and formally established as the National Food Processing Unit under the portfolio of the Bureau of Agriculture. The National Food Processing Unit should have a full-time National Consultant that would oversee the operations of the Unit ensuring its activities are integrated into the national development plans and plans of action.

The main activities of the National Food Processing Unit would be to continue training of personnel in value adding, food hygiene and sanitation, to build a critical mass necessary to sustain a value added industry, to train more farmers and to provide a base for purposes of continuing experimentation and development of new value added products.

Annexes:

FAO/ITA/PAL/01: VALUE ADDING PROJECT IN PALAU REVISED LOGICAL FRAMEWORK

	Intervention Logic	Objectively verifiable indicators of achievement	Sources and means of verification	Assumptions
Overall objectives	IMPROVED FOOD SECURITY THROUGH IMPROVED INCOMES AND ACCESS			
Specific objective or Project Purpose	Increased value added products in Palau	Country Performance Indicator i. Compiled training manual ii. Number of trainings iii. Number trainees iv. Number of value add products	Surveys and Bureau's quarterly reports	Stakeholders interest and participation
Expected results	1. Completed training manual 2. Completed Small Scale Processing Unit (SPU) 3. Conducted national training on Value Adding 4. Completed study tour	1. Manual completed, printed and distributed 2. Number of survey conducted 3. Number of workshops conducted	1. Purchase invoices and project records 2. Field visits	<ul style="list-style-type: none"> • Smooth implementation of procurement procedures • Continuous availability of adequate skilled human resources (Bureau staff)

Activities	<ol style="list-style-type: none"> 1. Complete training manual <ol style="list-style-type: none"> 1.1. Consulting with FAO-SAPA & consultant 1.2. Issuing LPO 2. Translate manual into Palauan <ol style="list-style-type: none"> 2.1 Hiring of translator 3. Construct Small Scale Processing Unit (SPU) <ol style="list-style-type: none"> 3.1. Processing of work order for Bureau of Public Works for design, estimate materials and construct SPU 3.2. Issuing LPO 4. Implementing LOA with contractor <ol style="list-style-type: none"> 4.1 Drafting & implementing and agreement with director of Public Works 5. Promoting of Local products <ol style="list-style-type: none"> 5.1 Organizing and agricultural fair 6. Conduct state consultations <ol style="list-style-type: none"> 6.1 Communicating with all Governors to set up community meetings 7. Conduct a Value Adding Training <ol style="list-style-type: none"> 7.1. Organizing with consultant to identify materials and support needed 7.2. Securing venue 7.3. Issuing LPO 8. Identify management for SPU <ol style="list-style-type: none"> 8.1 Conduct meeting with all stakeholders 9. Conduct study tour <ol style="list-style-type: none"> 9.1 Select candidates for study tour 9.2 Communicate with FAO-SAPA on progress 10. Monitor the project <ol style="list-style-type: none"> 10.1 Submit progress reports 	<p>Means:</p> <p>Human resources:</p> <ul style="list-style-type: none"> • National Project Coordinator • National Project Implementing Assistant • Consultant • Bureau Support Staff <p>Material resources:</p> <ul style="list-style-type: none"> • Raw materials (Cassava, banana, etc.) • Processing equipments 	<p>Sources and costs:</p> <p>Sources:</p> <ul style="list-style-type: none"> • FAO • BOA <p>Estimated costs:</p> <ul style="list-style-type: none"> • US\$ 18,000.00 	<ul style="list-style-type: none"> • Constructive and effective cooperation between and among main actors taking part in the action.
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REVISED WORK PLAN

Main Activities	Sub-activities	J	F	M	A	M	J	J	A	S	O	N	D	Remark
1. Complete training manual	1.1 Recruit consultant	█	█											
	1.2 Review and edit manual	█	█	█										
	1.3 Submit manual for clearance	█	█	█	█	█								
2. Translate training manual into local language	2.1 Hire a local translator						█	█						
	2.2 Translate manual								█	█	█			
	2.3 Print and distribute copies of manual											█	█	
3. Construct small processing unit (SPU)	3.1 Secure work order from Bureau of Public Works for design, and construction of SPU						█	█						
	3.2 Construct SPU								█	█	█	█		
	3.3 Install equipment												█	
	4. Implement LOA with contractor						█							
5. Promote local products	4.1 Draft and execute an agreement with Director of Public Works													
	4.2 Submit report													
6. Conduct state consultations	5.1 Identify national events for promotion						█	█	█	█				
	5.2 Organize an agricultural fair										█			
7. Conduct value adding training	6.1 Liaise with Governors to set up community meetings						█	█						
	6.2 Conduct state consultations						█	█						
	7.1 Organize with consultant a national training/	█	█	█	█									

	workshop on value adding																			
	7.2 Conduct training																			
	7.2 Submit training reports																			
8. Identify management for SPU	8.1 Conduct meeting with all stakeholders for crafting a management plan for SPU																			
9. Conduct study tour	9.1 Select candidates for study tour																			
	9.2 Submit request to FAO																			
	9.3 Conduct study tour																			
	9.4 Submit report to FAO																			
10. Monitor the project	10.1 Submit progress reports (monthly/quarterly)																			

ACTIVITY REPORT (list activities implemented during the project)¹

Original Activity	Output	% completion
• Establishment and appointment of project secretariat.	Completed	100%
• Selection and briefing of core team of trainers.	Completed	100%
• Selection and preparation of SPU site.	Completed	100%
• Recruitment of consultant.	Completed	100%
• Provision of space and utilities for SPU.	Completed	100%
• Establishment and equipment of SPU.	Minor equipment not received	75%
• Arrangement and preparation for training of trainers.	Completed	100%
• Training supplies for training of trainers (tot).	Completed	100%
• Implementation of tot: assessment of value adding opportunities.	Completed	100%
• Implementation of tot: assessment of materials available, inc. packaging.	Completed	100%
• Implementation of tot: plan of action to build assets & lessen constraints.	Completed	100%

¹Activities and sub-activities should be numbered according to the numbers indicated in the latest workplan)

• Implementation of tot: value-adding technologies.	Completed	100%
• Development and printing of training materials.	Halted when NC services discontinued by FAO-SAPA	50%
• Arrangement and preparation for national training.	Completed	100%
• Training supplies for national training.	Completed	100%
• Implementation of national training.	Completed	100%
• Attachment to training institutes to further upgrade skills of trainers.	Halted by FAO-SAPA request for previously supplied details	33%
• Evaluation of national training and plan for continued skill transfer.	Halted when NC services discontinued by FAO-SAPA	50%

#	Revised Activity	#	Sub-activity	Output	% completion
1	Complete manual	1.1	Recruit consultant		
		1.2	review and edit manual	Completed	100%
		1.3	submit manual for clearance	Completed	100%
			print copies for distribution	Printing in progress	85%
2	Translate training manual into local language				
		2.1	Hire a local translator	Compiled short list of translators	25%
		2.2	Translate manual	No progress yet	
		2.3	Print and distribute copies of manual	No progress yet	
3	Construct Small Processing Unit	3.1	Secure work order from Bureau of Public Works for design, and construction of SPU	Completed	100%
		3.2	Construct SPU	In progress	20%

		3.3	Install equipment	No progress yet	
4	Implement LOA with contractor	4.1	Draft and execute an agreement with Director of Public Works	BPW will take care of this	50%
		4.2	Submit report		
5	Promote local products	5.1	Identify national events for promotion	Completed	100%
		5.2	Organize an agricultural fair	Completed	100%
6	Conduct consultations state	6.1	Liase with Governors to set up community meetings	Informal discussions began	20%
		6.2	Conduct state consultations	No progress yet	
7	Conduct value adding training	7.1	Organize with consultant a national training/workshop on value adding	Completed	100%
		7.2	Conduct training	Completed	100%
		7.3	Submit training reports	Completed	100%
#	Activity	#	Sub-activity	Output	% if applicable
8	Identify management for SPU	8.1	Conduct meeting with all stakeholders for crafting a management plan for SPU	No progress yet, lack resources to do this	

9	Conduct study tour	9.1	Select candidates for study tour	Completed	100%
		9.2	Submit request to FAO	Completed	100%
		9.3	Conduct study tour	Cancelled by FAO- SAPA	
		9.4	Submit report to FAO		
10	Monitor the project		Monitor the project	On going	90%
			Submit reports to FAO	On going	90%

National Workshop on Food Processing and Value Adding



Endorsed by: _____

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