

Extension Materials production Workshop



Front row, third from the left : Hon. Ano Pala , PNG Minister of Agriculture and Livestock

Inside this Issue:

The Fiji Papaya Project.....	3
PNG Minister closes workshop with a speech	5
Japanese Ambassador visits USP.....	6
Pruning of Cocoa Trees.....	6
Vanuatu Root Crops.....	8
Solomon Islands Organic Farming.....	10
Cocoa Industry of PNG.....	13

Editor in Chief : Mohammed Umar
Publication Officer : Taranaki Seiuli

A sub-regional workshop on producing agricultural extension was held at the Madang Resort Hotel, Madang, designed to improving the capacity of participants in developing appropriate extension materials.

The two-week workshop organized by the Technical Centre for Agricultural and Rural Cooperation (CTA) in collaboration with the Institute for Research, Extension and Training in Agriculture (IRETA) of the University of the South Pacific and the Department of Agriculture and Livestock of Papua New Guinea to improve production of simple technical information relevant to agriculture.

Writing and producing simple extension materials is proving to be a difficult task as few researchers and other agents in the agriculture sector possess the know-how to simplify research reports and bulletins in formats that could be easily understood and used by extension field staff as well as farmers in the South Pacific.

The workshop held from 10 -21 January 2011 was attended by more than 20 participants representing various agricultural research, extension institutions and the private sector from the South Pacific including PNG.

The workshop was aimed at improving the practicalcont pg 2

Extension Materials Workshop...from page 1

communication skills of participants and enhance their ability to write and produce extension materials for extension field staff and farmers. It was geared towards enabling participants to identify sources of agricultural information and acquire skills to develop materials in formats appropriate to the farming communities to which they serve.

Course participants were able to identify sources of agricultural information and relevant statistics, appropriate to the needs of their clients and choose appropriate media to disseminate the information.

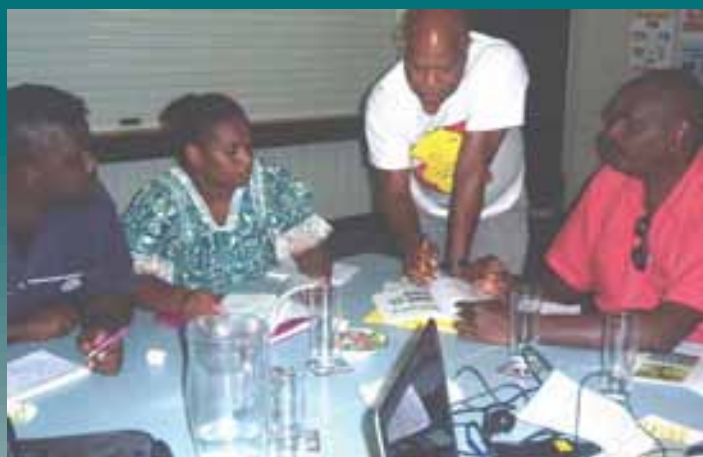
The workshop also provided an opportunity for the participants to understand the importance of agricultural extension materials in the business of technology transfer and discuss the fundamental principles of communication and look at how existing materials could be improved for their target audience.

The workshop which was conducted through a mixture of lectures and practical work including field testing and validation of materials produced enabled participants to prepare action plans for follow-up action in their home countries and their respective institutions.

CTA also commissioned the development of an extension materials tool kit which was field tested during the training. The field testing exercise enabled participants to analyze whether what they have produced during the training was relevant to the client's needs and made adjustments where required.



Extension materials prepared by participants



Participants discuss the content of the extension materials.



Farmers were given the final draft of the materials to find out whether the message was clear.

The Fiji Papaya Project

Fiji Papaya Project Newsletter

The Fiji Papaya Project (FPP) is an applied research project aimed at improving the competitiveness of our industry for the benefit of its members.

Field trials are proving to be very fruitful

The FPP team has been able to collect weekly data from current field trials and the results are proving to be very useful as the team continues its analysis. To date the team has been harvesting fruit for four months from the Phase 1 field trials.

FPP Field trials are proving to be very useful learning ground for nearby farmers and any visitors interested in the work of the FPP. The team looks forward to hosting more workshops at the two trial sites in 2011 and we invite anyone interested to contact us for a visit.



Yield from organic treatment exceeds expectations

The organic treatment is outperforming the conventional treatment by 5%. The conventional treatment however had a higher percentage of exportable fruit (46%). The average fruit weight for the organic block is slightly higher than the conventional block (approx 2%). Analysis of field data will continue in the coming months in this very useful trial.

Seed blocks selections look promising

Eight very promising selections have been made from the FPP seed block trial. These selections were based upon early vigour, early fruiting, high yield, high average fruit weight, sweetness and good shape. Flowers have been bagged from the eight selections and seed will

be harvested in the coming months.

These selections using University of Hawaii foundation seed are beginning to reflect the best performing trees under our Fiji conditions, it is envisioned that in just a few generations Fiji can develop its own selection of 'Solo Sunrise' that is ideally suited to our growing conditions.

Non-irrigated vs. Irrigated vs. Irrigated + fertigation

This new trial was part of the Phase 2

field trials and was planted out on August 29th. This trial aims to compare the performance of papaya trees under three treatments 1) irrigated system using drip irrigation 2) non irrigated or conventional system 3) irrigated system with drip irrigation with the addition of fustigation. Irrigated trees outperformed the non-irrigated trees during the

establishment and early growth phase particularly during the very dry winter months. As the rainy season set in the non-irrigated trees quickly caught up to the other two treatments. Sexing in the block was completed in December 2010 and the team continues to collect data.

Kumu Farms/FPP production trial

The Kumu Farms/FPP production trial consists of approximately 1.5 acres planted under plastic mulch with drip irrigation. The trial was planted on September 5th 2010 and has performed well during the dry winter months with the aid of irrigation. Sexing in the trial block is nearing completion and the first injection of liquid fertiliser is scheduled for late January.

.....continue to page 4

The Fiji Papaya Projectfrom page 3



Extreme rain event affects Sabeto field trials

The Nadi area has been subject to many climatic challenges in 2010. From the drought conditions faced in the period June-September, the Nadi area was then hit with an extreme rain event in November that saw nearly 200 mm of rain fall in a single week. This rain saturated the soil and caused standing water on many farms in the Sabeto area including the FPP trial block. As a result of this rain event the Sabeto trials suffered a near 25% loss in its Phase 1 trials. Thankfully these trials were replicated at the Sigatoka trial site which was unaffected.

Post-harvest assessment report completed

A series of harvest and post-harvest assessments were carried out on October 18-25 2010 in collaboration with our Australian partners DEEDI. These assessments tracked the supply chains of two local papaya exporters to try and investigate where the greatest level of physical damage was occurring and make recommendations as to how this could be better managed. Physical damage was observed through the various steps of the supply chain however the assessment revealed the transportation sector from Sigatoka to Nadi as having the most significant impact on physical damage to fruit.

Papaya seedling production model underway

The Fiji Papaya Project has been working with the AusAID funded Small and Micro Nursery Enterprise Development Project for Sustainable Seedling Supply to develop a model for the cost-effective production of high quality papaya seedlings. The FPP is currently trialing the proposed model at the Sabeto trial site.



Farmer surveys

A total of 20 farmers were surveyed over the work period to determine the incidence of pests and diseases on the farm as well as other major issues facing the farmers. The survey areas included Raki Raki, Sigatoka and Tailevu. Key findings indicated a high incidence of cat facing of fruit, freckling of fruit and increasingly problems of phytophthora fruit and root rot as we enter the wet season. The local market price for papaya remains low and this discouraging to many farmers particularly because there has also been a decrease in exporters willing to buy.

Upcoming activities

Date and venue set for 3rd International Papaya Symposium

It has been decided that the 3rd International Papaya Symposium will be held in Chiang Mai November 24-27, 2011 as part of the Royal Flora 2011. For more details check out the ISHS Calendar of events page at http://www.royalflora2011.com/index_eng.html

The PNG Minister of Agriculture and Livestock closes the Extension Materials Production Training

“In the Pacific region, a strong demand exists for simple technical information relevant to the agriculture sector. The information is often available in forms that are not directly useful to extension agents. These forms include research reports, technical bulletins, etc. Extension materials become more relevant and useful if they can be restructured, rewritten and simplified, according to the needs of different target groups.

Farmers have the power and freedom of choice and when good simple information is provided they can make good judicious decisions to adopt technologies to improve production and productivity resulting in increased profitability. It is our responsibility to ensure that our people have access to good information, technology and other resources so that they can be empowered to participate meaningfully in the market economy and contribute to meaningful agriculture development.

I understand that the course you have participated in during the past two weeks has been designed to improve your aptitudes and capabilities to identify sources of agricultural information and acquire skills to develop materials in formats appropriate for the rural communities you serve. You all come from different cultural backgrounds and I am sure that whatever you have learnt will be put to good use in helping the farmers to enhance their farming skills. The knowledge and skills you have gained should not only benefit yourself, I ask that you share what you have acquired with your fellow staff, the institution and organization you represent, the farmers and general public.

On behalf of the Government of PNG I wish to express my appreciation to CTA and IRETA for



The Papua New Guinea Minister of Agriculture and Livestock, Hon. Ano Pala

agreeing to conduct this training in PNG and providing the funding and technical expertise to support this regional training programme. I thank the resource persons, Professor Anthony Youdeowei and Mohammed Umar, for making yourselves available to come to PNG and share your experiences and knowledge to educate and train the participants on production of extension materials. I also thank my department and the Madang Provincial Administration for their support in making this workshop a successful and memorable one for all. My special thanks also to the respective commodity boards and agencies namely Livestock Development Corporation, Fresh Produce Development Agency, Cocoa Board and Coffee Industry Corporation for supporting the workshop in one way or another.

To the participants from Solomon Islands and Vanuatu and the two resource persons from Nigeria and Samoa respectively, I hope you have enjoyed your stay in Madang and will go back home with fond memories. We hope to see you again here in the future.”

Japanese Ambassador visits the USP Alafua Campus



Ambassad Hideto Mitamura third from the right

SPAN Reporters

His Excellency, Ambassador Hideto Mitamura from the Embassy of Japan (EOJ) in New Zealand paid a short visit to the University of the South Pacific in Alafua, on Wednesday 26 January 2011. The purpose of the visit was to see the USP-IRETA farm where the Senior JICA Volunteer, Mr. Shigeru Nishida works.

The Head of the School of Agriculture & Food Technology, Professor Ekpo Ossom and the IRETA Director, Mohammed Umar were present to greet and welcome his Excellency to the USP campus.

On JICA's long term assistance to the USP the Vice Chancellor Prof. Rajesh Chandra said in the USP Beat, "the Government of Japan has a

longstanding relationship with USP and historically the University has benefited greatly from the support of the Government of Japan and its people."

Some of the initiatives funded by JICA for the Farm alone not including other projects for other campuses of USP include the new Feed Mill and the current senior JICA volunteer Mr. Shigeru Nishida. Ambassador Hideto Mitamura, in responding to Mr Nishida's briefing of the Farms progress and its future work plan said that he found it very interesting and encouraged USP to continue the good work that they are doing. Mr Umar also expressed his gratitude and conveyed the IRETA's hope for continued JICA support in the future.

Sanitary Pruning of Senile Cocoa Trees

Anton Varvaliu, PNG Cocoa Coconut Institute

Sanitary pruning is the art of shaping a cocoa tree which will respond positively by producing more pods. It is done in relation to cocoa cropping cycle to increase sunlight penetration and air flow. It prevents and reduces pests diseases and weed problems. It improves tree health prior to pod formation. Pruning also corrects tree height, for better branching and yield.

Cocoa (*Theobroma cocoa*) originated from the Amazonian forest in South America, the common cocoa in PNG are now the trinitario, upper Amazonian and the hybrids. Hybrids are progenies of crosses between the trinitario and upper Amazonian. The PNG cocoa is fine because

of the trinitario genetic traits. It is also of high chocolate flavor because it is fermented for 5-7 days.

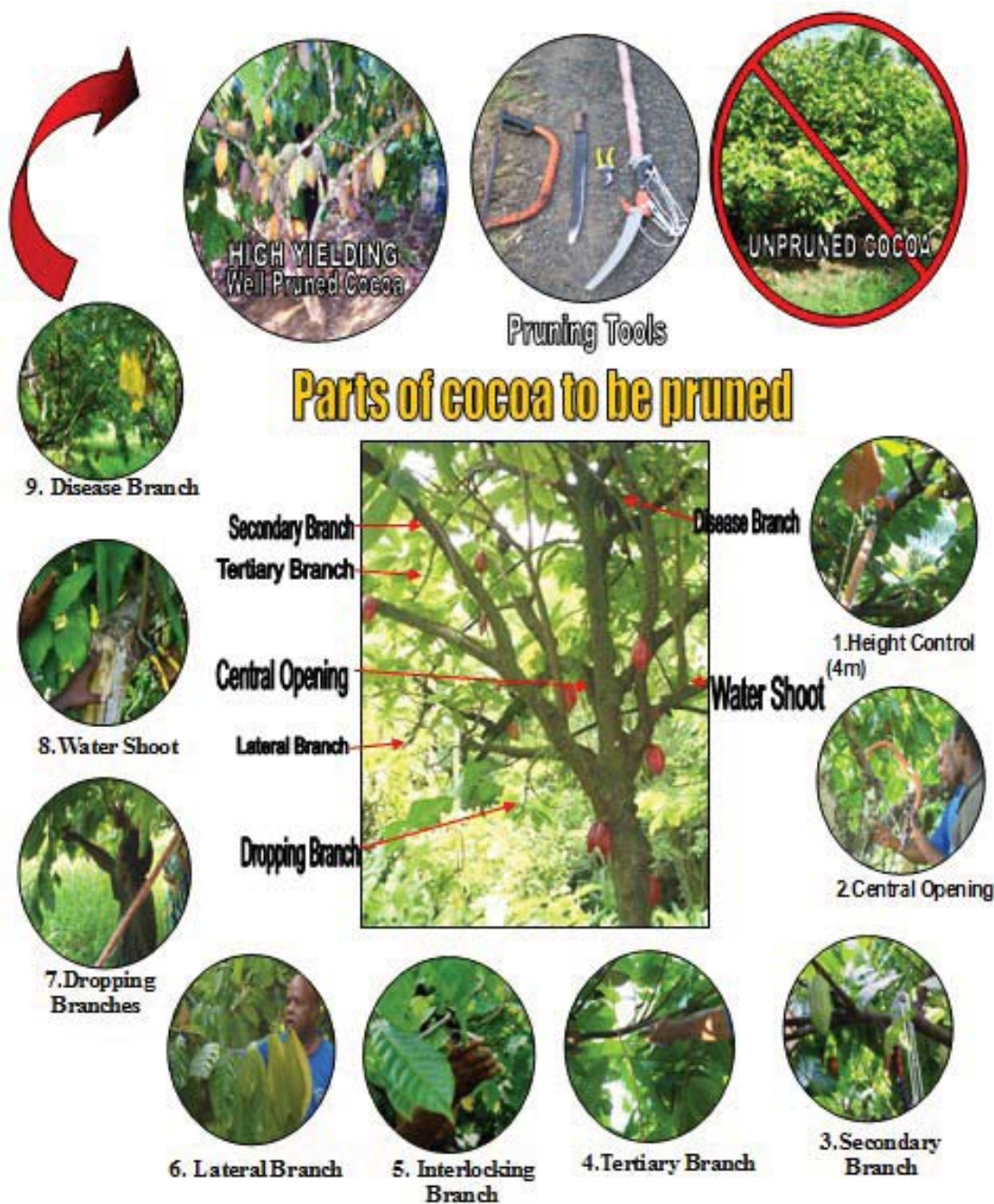
Cocoa is a tree that can grow for a very long time (100 years). It is grown from seed or by vegetative budding of a bud from a branch of a mature cocoa tree onto the branch of another cocoa plant. A tree that grows from a seed has the main stem or trunk, and then branches off forming the jorquotte. A young cocoa tree will have at least five (5) branches from the jorquotte. These are the primary branches. Developing out of the primary branches are secondary and tertiary branches.

Water shoots or chupons grow out at the main stem or trunk, or even from the primary branches. The others are the twigs and hanging branches.

.....continue to page 8

Sanitary Pruning of Senile Cocoa Trees

PRUNING COCOA TO INCREASE YIELDS



Sanitary Pruning of Senile Cocoa trees ..from pg 6



The other feature is the flower cushion that is located inside the woody stem. The cocoa leaves are important for the generation of energy, which ensure the flowering.

Cocoa with all management practices employed will generate good income to the farmer. This in return will address other social and economic issues in the community. The Cocoa industry initially sustains the livelihood of the many people through; employment generation, increased rural income and mitigation to urban drift and also address food insecurity.

Cocoa is an economical crop for the livelihood of the coastal and island provinces in PNG. It is one of the major revenue earners for the rural population and the government.

Root Crops in Vanuatu

Tarikole Molisale, Vanuatu Dept of Agriculture

Vanuatu comprises of more than 240,000 people with 82% living in rural areas. The cultures and traditions are based on root crops that include varieties of yams, taros, manioc (cassava), sweet potatoes and other food crops such as bread fruit, bananas etc. Compared to local food crops the imported rice & wheat flour are becoming the staples.

Since the introduction of rice into Tanna, Efate and Santo, its future as sustainable crop is being ascertained because rice demands a lot of work compared to local food crops. The works associated with rice include planting, maintaining, harvesting, packaging and the associated problems of pests & diseases.

....continue to pg 9



Root Crops in Vanuatu...from pg 8

At present Vanuatu continues to import rice and wheat flour from Australia, China, Vietnam, Thailand, Indonesia and Fiji. It is possible that these countries may not be able to continue to export due to their increasing population and local demand.

Therefore the government may need to look at other commodities as substitutes for imported rice and flour. One obvious option is to put more emphasis on the production of root crops and rice in the National Food Security Policy and implement in its Action Plan.

Vanuatu has several varieties of local foods that can be grown successfully using different techniques. They are rich in nutritional value that needs to be well documented and publicized.

Vanuatu must comeback and produce its local food such as root crops in order to maintain its culture and ensure food security.



KWAI ISLAND ORGANIC FARMING MODEL IN THE SOLOMON ISLANDS



Peter Trena, MAL Solomon Islands

Just on the eastern coastline of Malaita Island is a little known Island called Kwai. This lovely island is about 2km from the main land. It is approximately 500 meters long and 100 meters wide and around three meters above sea level. It has a community with 120 households with the population of around 700. It is joined to a sister island by a sand dune where access to either island can be made by walking especially when the tide is low. Both islands have been the icon to the natural serenity and beauty of this coastline for many years as they are well harbored by protective reefs providing the source of protein to the communities of both Kwai and Ngongosila. Their culture and the church both play a prominent role in influencing the daily life of the people of these islands. Sharing and helping for survival are inducted into the life of the people by the leaders of the community.



Despite its isolation and limitation there are no barriers to the development of its food diversity and security to feed the increasing population. This vision gave birth to the concept of growing organic vegetables and fruits. The project is the brainchild of Pastor Philip and his wife who saw the need to support the disadvantaged in the community, thus providing a holistic approach to the target group within the community and its neighbors. Dr Ravindra Joshi, senior advisor to the Ministry of Agriculture and Livestock assisted in this project.

Basically the idea of organic farming revolves around the better use of the rejected materials from households, which are piled and are allowed to decomposecontinue to pg 11

KWAI ISLAND ORGANIC FARMING MODEL...continue from page 10

for several weeks allowing the natural process to take its course. These are then put back into the soil turning it into a live soil which is ready for planting.

Besides the idea of composting the members of the community were also trained to grow their own fruits and vegetables using the organic methods. This included, turning the dead sandy soil into live soil by incorporating the organic matter followed by planting different varieties of vegetables and fruits. The community were also encouraged to collect their own seeds for future planting.

Member of the community plant their own organic garden, sustaining their families healthy diet. There are virtually no more trips to the market on the main island for vegetables and root-crops. The whole country has taken note and are eager to learn more about Kwai's organic gardens.

The project has had a positive effect on Kwai island and so they are a testament to the surrounding communities and the whole country that, to have healthy communities they ought to have healthy food, to produce healthy food they first need healthy soil. The organic farming model is one way to achieve that.

You can travel to Kwai island by boat or by plane.



Fiji Minister welcomes EU extension of trade agreements.

Sofaia Koroitanaoa, fijivillage.com



Minister Ratu Inoke Kubuabola

Foreign Affairs Minister Ratu Inoke Kubuabola has welcomed the decision of the European Union extending its trade agreements with Fiji and Papua New Guinea following a vote by members of the EU Parliament.

The Interim Economic Partnership would further increase the economic opportunities and in turn enhance the strong bilateral relations Fiji has with the European Union.

Ratu Kubuabola reiterated the importance of the agreement to the survival of the Fiji Sugar Industry.

He hoped that after 2015, the agricultural reforms undertaken by the European Union will ensure that the interest of Fiji and other ACP Sugar producers will be maintained in the European Union market.

Ratu Kubuabola is also positive regarding the future development of Fiji's fisheries industry and fish exports under the agreement.

The Interim Economic Partnership Agreement was initialed by Fiji and PNG in 2007, in order to ensure that preferential exports of Sugar and Fish, respectively, into the European Union market continue after the expiry of the trade preferences.

Pests located during container inspections

NZ Ports Newsletter,

During recent container inspections from the vessel Southern Fleur inspectors Brendan Wakeman and Heidi Weston located and removed two live spiders and a centipede.

A large female brown widow spider was located under a container of scrap metal number PCIU 3859345 ex Port Vila.



Very attractive markings on the *Latrodectus geometricus* spider.



The underside of the brown widow spider showing the distinctive hour glass marking.

Cocoa Industry of Papua New Guinea

Albina Rarau, Cocoa Board of PNG

The Cocoa Board of Papua New Guinea (PNG) is a statutory arm of the government. Its function is to monitor, regulate and make policies concerning cocoa. Its primary aim is to produce good quality cocoa and maintain the fine or flavor characteristic which is inbuilt in the modified hybrid cocoa varieties. The hybrid cocoa varieties are modified by PNG Cocoa Coconut Institute (PNG CCIL) through its breeding program to maintain the Trinitario genetic traits, and the materials that is released by Research and transferred to the farmers by its extension body. The PNG CCIL was established by an Act of Parliament and it is a company owned by Cocoa Board and Kokona Industri Koporesen that regulates the Copra Industry. PNG CCIL aim is to conduct research on various disciplines and its extension arm then delivers the result to farmers. PNG CCIL is important for maintaining a prosperous cocoa industry for PNG.

The cocoa industry is ranked third after oil palm & coffee in terms of its contribution to the National GDP. In 2007/2008 cocoa year an achievement was set where exports reached 51 513 tonnes of cocoa with the value of K335



million. The most recent achievement was that the fine or flavor status moved up to 95% as ranked by the International Cocoa Commodity Organization, PNG Cocoa is Excellent.

Fiji Papaya lands into new markets

Fiji Papaya Project Newsletter

The last quarter of 2010 saw Fiji papaya land itself into two new markets. Produce Specialties Ltd (PSL) has begun the first ever commercial shipments of Fiji Papaya into Hong Kong and Holland utilizing good flight routes and the availability of high quality fruit. PSL has also returned to exporting small volumes to Japan after a lapse.



Extension Materials Production Workshop



Extension Materials Production Workshop

