

PACIFIC AGRICULTURE POLICY DIGEST

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PACIFIC FARMERS LEARNING EXCHANGE ON OPEN POLLINATED SEEDS

The first Pacific Farmers Open Pollinated Seed Learning Exchange, funded through EU-APP (Pacific) and IFAD, was held in the Solomon Islands on 31 October to 3 November 2016 to promote open pollinated seeds research and development. Open pollinated seeds are genetically diverse and important for the protection of food security and diversity in the future. While many plant varieties are open pollinated and can be grown again from seed, more effort is needed to better preserve, promote and exchange good practices for open pollinated seeds in the Pacific.

This Learning Exchange involved 60 farmers from Samoa, Tonga, Vanuatu, Timor Leste, Fiji, PNG and Solomon Islands and other partners who are actively involved in open pollinated seed research and development. The seed exchange identified five (5) broad areas of focus. These were:

- i. farmer to farmer seed information exchange;
- ii. knowledge and technology transfer between seed producers;
- iii. participatory research in breeding and cultivar performance;
- iv. enhancing formal and informal seed supply systems; and
- v. Support for disaster recovery efforts with appropriate and timely seed supply.

The Learning Exchange, coordinated by the Pacific Island Farmers Organisation Network (PIFON), a key partner for PAPP, included models of open pollinated seed production through the value chain and sharing of practices from the around the region. Participants learned about efforts and strategies underway to increase crop genetic diversity in the Solomon Islands, including planting climatically suited varieties, applying principles of integrated crop management (ICM), protective cropping technologies (nurseries, irrigation, trellising, mulching, pruning), and how to conserve and select seeds (watermelon, corn, eggplant, pawpaw, pumpkin, beans, capsicum, cucumbers, etc.).

The exchange also looked at collaborative plant breeding work led by the World Vegetable Centre (AVRDC) in the Solomon Islands and Fiji to trial new disease-tolerant open pollinated tomato lines such as Solomon Rose (Zai Na Tina, Solomon Islands) and Rio Gold (Sigatoka, Fiji). This work is aimed at enabling farmers and seed producers to select for desired characteristics based on site-specific conditions.

Future activities to be carried out under PIFON's Pacific Breadfruit and Seed Program were developed in the form of country action plans (see below). This learning exchange is just one of several activities undertaken by PIFON and national farmer organisations in the region to promote access to and availability of quality seeds. Find more information here.



SAMOA – Identify/ survey and document existing OP crops varieties and availability; Translate PIFON scoping study as a tool/ manual; Raise awareness of farmers in OP seeds through a farmers meeting.

TONGA – Create a new OP module for the farmer field school; Collation and dissemination of information on material; Share learnings on TV broadcast; Demonstration plot; Produce and sell more OP seed.

FIJI – Organising an OP seeds forum; Hands on training for rural farmers and nursery operations.

VANUATU – Commenced with OP maize – in process of bulking. Promote farmers to bulk and sell their own seed (Maize); FSA buy back all produce and collect as seeds.

PNG – Research into OP seed system; Take stock of previous work done on imported OP varieties from AVRDC (status of evaluation); Mobilize resources (funds/staff) to plan and conduct relevant R&D (scientist on seed technology and production); improve access/ availability.

SOLOMON IS – Consultation on national seed policy and research / development; Establish National Seed Productions Centre; Increase production of seeds – build capacity to produce bulk; Support current seed producers to produce more seeds of specific varieties.

TIMOR LESTE – Socialization (Basic awareness raising); Orientation (Follow on planning of activities); Open Pollinated Seeds (fruits and vegetables).

CLIMATE-READY CROP RESEARCH TO IMPROVE FOOD SECURITY IN FEDERATED STATES OF MICRONESIA

Access to sufficient water for agriculture and farming is a significant issue for many communities across the Pacific Islands, with some tackling this issue by growing climate change ready crops, supported by Pacific research and knowledge exchanges. The EU-APP is involved in various multi-partner, climate-ready crop projects in FSM including community based gardens, research to pilot test the resilience of varieties of cassava, and taro breeding against Taro Leaf Blight (TLB) which is present in FSM and Palau.

Ensuring information about such Community Supported Agriculture (CSA) and climate change initiatives is shared and replicated by agriculture extension officers, farmers and others in the sector was the focus of a workshop held in Pohnpei, FSM, from 17-21 October 2016. The workshop, Capacity Development Support for Agriculture Policy, Research and Extension Services through Applied Knowledge Management Tools and Approaches, was led by the FSM Department of Resources and Development's Agriculture Division, in partnership with SPC and the Technical Centre for Agricultural and Rural Cooperation (CTA).

"We take it for granted that Pohnpei has an abundance of water but now we have these water issues - generally we are not aware of climate change here until people start talking about it," Pohsoain Village Chief, Mr Herman Semes, told the 40 workshop participants from FSM, Palau and Marshall Islands who visited the village, in Wone Community.

While the village plans solutions to access more water, residents of Pohsoain and other communities are also growing climate-ready crops including cassava, taro, yam and breadfruit, as well as crop varieties bred to be more climate resilient, such as sweet potato and banana varieties.

To further support farmers dealing with the effects of climate change, research is being conducted in Pohnpei to test the resilience of cassava, and to cross-breed varieties of taro for Taro Leaf Blight (TLB) resistance. Nine varieties of cassava are being tested in a trial plot, alongside 11 taro varieties for TLB resistance.

“This is the first time FSM's varieties of cassava and taro have been collected and are to be documented and, in addition, we're also going to include introduced varieties from overseas to test and develop for climate readiness and identify crops varieties best suited to the North Pacific,” said Mr Poasa Nauluvula, SPC APP Participatory Extension Advisor. **“This is very important, for example in Samoa in the late 1990s the non-resistant varieties of taro were decimated by the TLB disease, and we don't want that to happen again in the Pacific,”**

Mr Nauluvula said.

According to Dr Nat Tuivavalagi, Agronomy Researcher at the College of Micronesia, these experiments could prove valuable in the future to assist farmer's better deal with the negative impacts of climate change.

We may find that there is a local cassava or taro variety that can better tolerate drought or saline soil conditions, Dr Tuivavalagi said.

The two-year cassava research project will enable researchers to gain a better understanding of cassava varieties that exist in Pohnpei and they will also be exploring whether there are pruning methods that could increase cassava productivity for the benefit of local farmers.



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The taro project aims to identify and breed varieties of taro that are resistant to Taro Leaf Blight (TLB), a major food security threat in the Pacific Islands and Asia. The method is to initially work on trial plots then expand to promote on-farm taro breeding and selection for TLB resistance in the North Pacific, in particular Pohnpei and the other three States of FSM.

The taro project has two key components, to characterize and document local taro varieties and breeding work to determine TLB resistant or tolerant cultivars via the formation of a breeders' group involving members from various agriculture workplaces including farmers.

“ **Another very important benefit of the project is that it has provided a training ground for various groups of people including high school students, college students, COM-FSM college staff, Agriculture Department staff, and farmers** ”

Dr Tuivavalagi said.

What is Taro Leaf Blight?

Taro Leaf Blight (TLB) is a highly infectious fungal disease. It causes the leaves of the taro plant to wither, reducing its ability to photosynthesise and therefore to grow.

In some cases it can also cause the taro root to rot. It is an extremely destructive disease, reducing yields by 30-50 per cent.

In some cases – such as in Samoa in 1993 – the national crop was almost entirely destroyed.

Taro is an important staple food crop across the Pacific Islands. TLB represents a major threat to food security in the region. With most local taro varieties not resistant to TLB, research to identify and breed resistant varieties is crucial to the region's food security into the future.

Source: Taro cultivation in Asia and the Pacific, produced by the FAO Regional Office for Asia and the Pacific. Downloaded from the FAO Corporate Document Repository 8/11/16: <http://www.fao.org/docrep/005/ac450e/ac450e06.htm>

LAUNCH OF SAMOA'S FIRST AGRICULTURE POLICY BANK

The first Samoa Agriculture Policy Bank at <http://pafpnet.spc.int/policy-bank/countries/samoa> that houses Samoa's new Agriculture Sector Plan (ASP) 2016-2020 and other sector policy documents was showcased during National Agriculture Week celebrations in October 2016.

In June 2016, Samoa launched its new ASP, which was developed with support by EU-SPC Agriculture Policy Program (APP), UN FAO and the World Bank SACEP project. Included in the Policy Bank are short summaries of the ASP in English and Samoan.

Agriculture is a prominent part of Samoa's development agenda – for improving rural livelihoods, ensuring food security and good nutrition, and its contribution to rural incomes. 24% of Samoa's household income is from agriculture and forestry activities (2014) and 25% of Samoa's labour force are engaged in the sector as their main source of income (2012).

In launching the Agriculture Policy Bank (APB), Samoa's Minister for Agriculture and Fisheries, Hon. Laaulialemalietoa Leuatea Polataivao Fossie Von Schmidt, noted the importance of having these documents in one place and accessible to the public.

"The Policy Bank is an important tool to assist us in raising awareness and promoting our agriculture policy, particularly to the farmers. Now farmers have access to mobile phones and internet so they can access this information, and use them as a pathway for change – raising the status of farmers within the community, and also changing the mindset from old methods to new," he said.

The APB was launched to an audience of 100 stakeholders including farmers, youths, entrepreneurs, development partners and government officials, where the Minister thanked SPC and the European Union for the support provided in introducing the Agriculture Policy Bank to Samoa.

The European Union (EU) Ambassador to Samoa and the Pacific, H.E. Andrew Jacobs said, "The EU is very

proud to support this important initiative for agricultural development in Samoa. The Policy Bank will provide easy access to key sector and sub-sector policies, plans and strategies, including summaries translated into English and Samoan, making these documents easily available for all stakeholders across Samoa and the world. It will above all make a big difference for farmers in Samoa, providing opportunities and improving livelihoods."

Key insights from a recent SPC-commissioned survey about the ease of public access facilitated through the APBs showed:

- Before APBs 40% of survey respondents were unaware of any existing agriculture policies or plans.
- 95% claim policies are now easier to access.
- 95% of survey respondents said they would recommend the Policy Bank to another person.

The APBs are also available for 14 other Pacific countries through support by the European Union Intra-ACP APP – see <http://pafpnet.spc.int>. As at December 2016, the Policy Banks contained over 80 policy documents from 15 Pacific countries – a significant change from just two years ago when less than 5 policies were easily accessible.

¹ Source: Samoa National Minimum Development Indicators (NMDI) info sheet, available on the policy bank.

The Samoa Agriculture Policy Bank can be accessed at <http://pafpnet.spc.int/policy-bank/countries/samoa>

SAMOA AGRICULTURE SECTOR PLAN 2016-2020

VISION - A sustainable agriculture and fisheries sector for food security, health, prosperity, job creation and resilience.

GOAL - To increase food, nutrition and income security.

THEME - Enhancing partnerships to develop and sustain agriculture and fisheries

CARIBBEAN-PACIFIC EXCHANGE TO STRENGTHEN CAPACITY FOR CROP RESEARCHERS AND EXTENSION OFFICERS

A two-week Pacific-Caribbean Research and Extension Exchange was hosted by the Caribbean Agriculture Research and Development Institute (CARDI) and supported by the Technical Centre for Agricultural and Rural Co-operation ACP-EU (CTA), and the Pacific Community (SPC) through the EU-APP in October 2016.

Eight Pacific Island researchers and extension officers (five male and three female) from Fiji, Papua New Guinea, Samoa, Vanuatu, and the Pacific Community (SPC) participated in the learning exchange to the Caribbean islands of Jamaica and Trinidad.

Significant outcomes from this exchange focused on agronomic practices for yams, sweet potatoes and other staple food crops. Partnerships were also explored with academic institutions (such as the University of the West Indies) to elevate the status of research in the Pacific Agriculture sector; and South-South learning across both regions promoting innovation and strengthened knowledge around Climate Smart Agriculture (CSA) and Disaster Relief

Management (DRM). The facilitation of knowledge capture was enhanced through the use of ICT platforms for knowledge and information sharing, including the establishment of a community of practice amongst Pacific researchers and extension officers who participated in the exchange and will lead to a number of regional learning events in 2017 as well as the publication of key learnings focused on scientific research (with a focus on resilient and tolerant crop research and youth in agriculture), production and value adding, and traditional knowledge and extension.

This model of South-South exchange is extremely valuable given the similarity in climatic conditions, the much needed focus on food staples, and the common goals for the agriculture sector in both regions. The exchange is the third of a series of 'South-South' initiatives for knowledge sharing and learning across the two regions.

It follows two previous attachments by Caribbean researchers and extension officers with SPC's Centre for Pacific Crops and Trees (CePaCT) in Suva, Fiji, in 2015 and 2016 respectively.

REVIEW OF PACIFIC ISLAND FARMERS ORGANISATION NETWORK (PIFON) WORK

On 23 November 2016, PIFON members, SPC representatives, and stakeholders from both the public and private sectors participated in a PIFON-SPC Impact Workshop in Fiji to reflect on the past two years of partnership between the two organisations. Impacts were demonstrated through the use of interactive 'impact stations', where representatives of farmer organisations directly involved in specific activities presented on key activities and outcomes to date. The Impact Workshop revealed that over the short two years of the partnership, over 24 distinct activities were completed with 12 national farmer organisations (FOs) directly involved in implementation. Approximately 30 national and local farmer organisations from 8

Pacific Island Countries are directly benefitting from the partnership. The impact workshop also highlighted that an estimated 500 farmers directly, and over 5,000 indirectly, benefitted from the program. Highlights included – engagement with the Papua New Guinea Women in Agriculture Development Foundation (PNGWiADF, who have over 10,000 members), supporting a Learning Exchange event which resulted in prioritisation and action plans being developed by their member FOs; and Breadfruit activities involving FOs in Tonga, including a learning exchange to Fiji and hosting the inaugural Pacific Breadfruit Roundtable, which has already led to planting of the first community breadfruit orchards in Tonga.



TECHNICAL E-DISCUSSIONS (PAFPNet)

In Quarter 3 2016, “The Conservation, Management and Sustainable Utilization of Forest Genetic Resources (FGR)” was facilitated through PAFPNet. This topic was chosen to also provide feedback to a review of the policy document *“The Priorities, Strategies and Action Plan (AP) 2007-2015 for the Conservation, Management and Sustainable Use of Forest and Tree Genetic Resources”*

Four questions were raised to participants:

- I. The operating landscape for forests and trees and the overall agriculture/food security sector in the region is constantly changing. What are the main issues that the Regional FGR Action Plan needs to address further to make it more effective to the PICTs?
- II. The Pacific Island Tree Seed Centre (PITSC^{*}) is now operational since mid-2012. Do you think the Centre's work has been useful? Do you have suggestions on how we could improve its operations?
- III. Why do you think that we should support the supply and exchange of germplasm in the region? Can you cite some of the benefits that can be derived from this?

The discussions highlighted the following common points

- (i) The Action Plan had been extremely useful at an international and regional levels, – contributing Pacific input and as an information document into the FAO's First State of the World Report on Forest Genetic Resources (FGR) in 2013; contributing to the development and priorities of the Centre for Pacific Crops and Trees (CePaCT), and helping to inform the

forestry research projects of the Australian Centre for International Agricultural Research (ACIAR) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), etc.

- (ii) Unsustainable practices in the management and use of forests and trees continue to threaten the long term conservation and management of important forest and tree genetic resources. In addition to this is the impact of climate change. While forest cover in most PICTs is relatively high at more than 50%, a major portion of this consists of secondary forests with a lower level of diversity and therefore resilience to adequately cope with climate change and other changes. This ultimately means that these forests cannot and will not provide the full range of products and services that are normally expected from native forests for the well-being of Pacific communities. There is an urgent need to improve this situation by either enriching or reforesting these areas to enhance forest diversity.

*PITSC is an important initiative for the region promoting safe and efficient sharing and exchange of forest and tree genetic resources.

Please visit the following link for all PAFPNet discussions: <http://pafpnet.spc.int/about-papp/pafpnet/discussion-summaries>

For more information on the above stories and more, visit our website: <http://pafpnet.spc.int>
To join our PAFPNet Discussion, send an email to: Irdhelpdesk@spc.int requesting to be subscribed to our mailing list.



WHAT'S COMING UP

DATE	EVENT	VENUE
January	APP Global Steering Committee Meeting	Brussels
February	(Ongoing) FSM Integrated Agriculture Census	Federated States of Micronesia (FSM)
	(Ongoing) Taro Leaf Blight resistance breeding	Pohnpei, FSM
	(Ongoing) Evaluation of Cassava Varieties	Pohnpei, FSM
	PAPP Planning Meeting	Nadi, Fiji
	Launch of Fiji Yaqona: • Standard; and • Manual	Fiji
March	Yaqona Standards Training of Trainers	Fiji
	Biosecurity/ Quarantine Training Workshop	Guam
(Dates TBC)	FSM Agriculture Yap & Pohnpei draft strategic action plan consultations	FSM – Yap and Pohnpei
	Fiji Launch: • Policy Bank; • Livestock Strategy; and • Ginger & Dalo Industry Plans	Fiji

PAPP operates in the 15 Pacific ACP countries (Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu), and Timor-Leste.

PAPP aims to improve the livelihoods of smallholder farmers by strengthening their linkages to markets, improving access to information, research, and knowledge, and by improving the policy and operating environment for farmers through evidence based policies.

Within the twelve months since the commencement of the project there have been a number of activities, as detailed in this newsletter, structured around PAPP's 3 Key Result Areas (KRA):



1. Strengthened regional agricultural development strategy



2. Improved dissemination and adoption of applied agricultural production research



3. Agricultural enterprise development through improved market linkages

For additional information on the PAPP project, visit our
website PAFPNet web portal:

<http://pafpnet.spc.int>

For feedback, comments and contributions please contact:

SPC – Land Resources Division helpdesk

lrhelpdesk@spc.int

or

SPC – The Pacific Community

3 Luke Street, Nabua

Private Mail Bag, Suva, Fiji

D I S C L A I M E R

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