

Family farm teams

ASEM/2014/095

- This has been a busy month working with our Island Hub partners (Bougainville Women's Federation and New Ireland Department of Primary Industries) to train our village community educators in *Module 4: Communication and Decision-making as a Family Farm Team*. We also worked with our advanced VCEs to collect stories of early change that they have seen in their community.
- A Halia male leader story:

This is a personal testimony of my own change. I have become the Family Farm Team leader in Halia... Leadership is a lot of work but the training gives us encouragement. ...in challenges and hardships we know we can succeed. From the Family Farm Team training people now understand the importance of leading their family. This came from the Family Circle. They know to work for goals, common goals...It is about cooperation and oneness...In the past people did not know how special they were, but they have come to know that we are all related, from the family to the village to the province and the nation.
- We have been collecting Tok Piksa that relates to our work and were very impressed with this one from New Ireland on how men and women can work best in families:

If a man and woman are paddling a canoe and sit face-to-face the canoe will go in circles. It is better if the man paddles at the head of the canoe and the woman steers the canoe from the back.
- Another valuable activity was a workshop on how local farmers learn best. We gained many valuable insights, and some excellent Tok Piksa. For example from New Ireland, we learnt:
 - Some things are taught, some things are caught.
 - Teach, don't preach.
- Barbara Pamphilon attended the Pacific Women Shaping Pacific Development annual learning workshop in Port Moresby in early May. It was very rewarding to hear of the number of PNG agencies that are now using the Family Farm Teams modules as part of their work. <https://pacificwomen.org/map/>

Staff changes

- We farewell our Research for Development Fellow, Dr Pauline Gwatorisa, who has resigned to take up a position in her home country of Zimbabwe. We wish her the very best in her work to which focuses on families and health.
- We welcome Lucy Siki Aiya and Robert Taula who join our New Ireland team. Both Lucy and Robert are very experienced trainers who will supervise and support our VCEs in Tikana LLG. They will also be contributing to VCE evaluation which begins in June.

Galip Nut

FST/2014/099

Product Launches

- Product launches for the new galip consumer products have been planned and partially complete.
- The pilot factory at Kerevat is currently ensuring sufficient product is available to support these product launches as well as all the planning required to ensure these product launches are successful and receive maximum exposure.
- Representatives from government, NARI, financial institutions, media, farming, retail, tourism and other organisations have been invited.
- Three consumer products (dried natural galip, dried galip without the tests and roasted galip) will be launched.
- These events will highlight the research by NARI and ACIAR into development of consumer products by successive ACIAR Canarium projects.
- The launch of these products will create new cash earning opportunities for rural communities attract new business investment and generate revenue for the country while promoting healthy food consumption amongst consumers.



Figure 1: Final packaging formats for 100g, 60g and 1kg.
Image credit: Theo Simos

Figure 2: Training of packaging procedure ahead of the launch.
Image credit: Theo Simos

- The product launch was held in East New Britain on Friday 4 May at the Rapopo Resort from 10:00am to 12:00pm. The launch was opened with a blessing, followed by speeches by NARI staff, scientists and marketing specialists involved in the development of these products, with the official launch led by Hon Governor Nakikus Konga. Information displays and product tasting preceded a traditional dance.
- The second product launch will be held in Port Moresby mid-July. Helen Wallace, Shahla Hosseini-Bai and Brett Hodges (USC), Theo Simos (Adelaide University) and Kim Jones (Cropwatch laboratories) will attend. Updates and photographs of the events will be supplied in a further report following the launches.
- Helen Wallace and Shahla Hosseini-Bai presented some achievements of the Canarium project at the International Agroforestry conference in Kathamandu, Nepal, 27-30 April
- Theo Simos travelled to Kokopo for two days in early April to finalise the packaging and organise product launch.

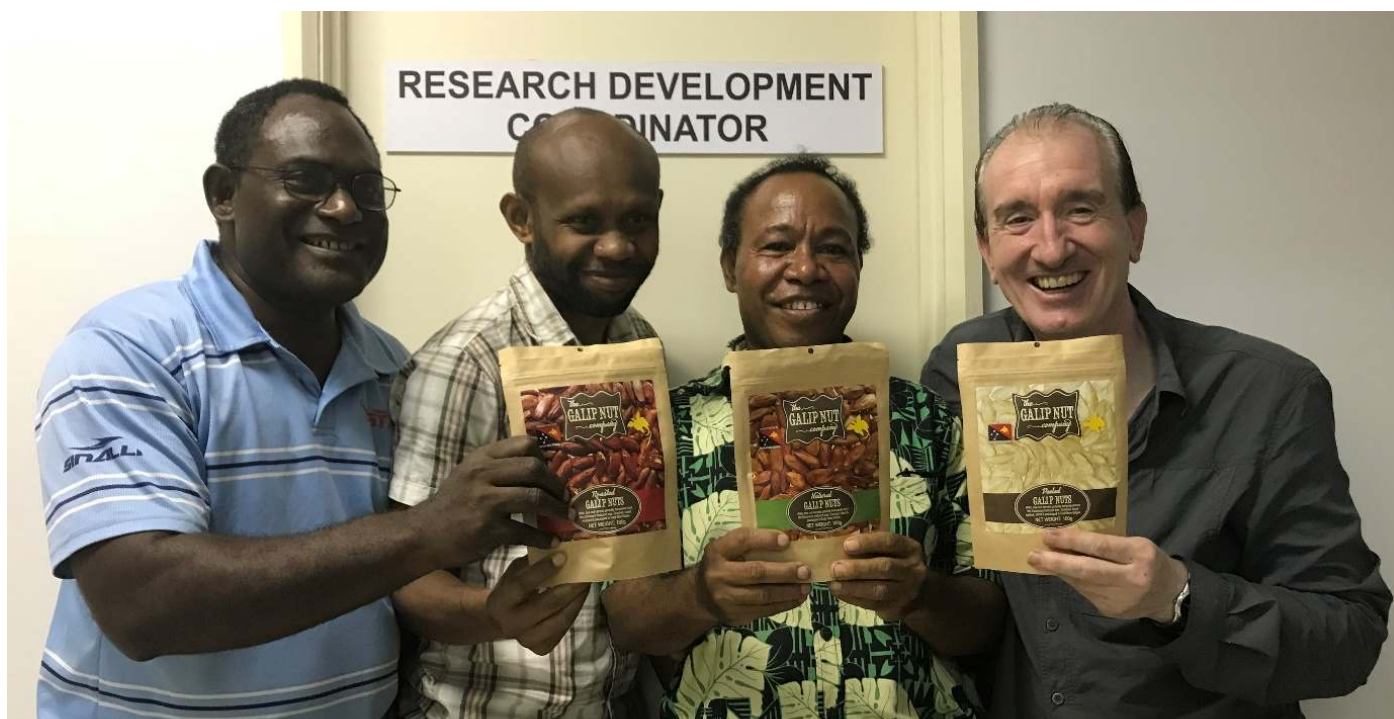


Figure 3 (L>R): Final product celebrations with Godfrey Hanneth, Carson Waai, Ofara Petilani and Theo Simos.
Image credit: Mathew Poienou.

- Grant Vinning attended the 2018 Cocoa Festival Organising Committee meeting in Buka on 25 April. The main points to emerge are that the Festival will be held in Buka on 21-22 September with the Saturday being a Festival date in order to encourage school children to attend; the Festival will be in the form of a giant cocoa field day rather than what is loosely termed a *singsing*; major hot spots will be providing sensory evaluation and the science of fermentation training; and, demonstration plots of vegetables as part of the project's diversification and nutrition objectives.
- While we have attracted interest from a number of prestige international cocoa buyers for Bougainville beans, we are unable to supply these buyers because nobody in Bougainville has a Cocoa Board Export Licence. Unless this can be resolved we may end up with plenty of high quality cocoa and no way of accessing premium markets. Already the project is facing a degree of grower push back in that they are complaining about investing effort and dollars in upgrading their cocoa quality but with no commensurate improvement in the price they get.
- Grant Vinning provided two more Cocoa Marketing Newsletters. Copies now go to around 100 recipients involved with the production, marketing, and administration of cocoa from Bougainville.
- We are cleaning the data from the Bougainville cocoa farmer surveys conducted over 2017-18. Once completed the data will be analysed and formally published. We have similar data on farmer livelihoods, nutrition and health from Sulawesi (Australia-Indonesia Centre data) and Côte d'Ivoire (ICRAF) to compare. In addition, we see the moral obligation to eventually communicate back the survey results to the people of Bougainville in each region. South is completed already, while central and north are planned for June and September 2018 respectively.
- We initiated discussion with chiefs, central Bougainville DPIMR staff, Wakunai district Executive Manager (EM) and staff on the reopening of former Duncan research centre which will become the main research centre for Bougainville as well as house the central regional Hub. Initial funding of K200,000 is being made available by the Autonomous Bougainville government for initial negotiations and cleaning up. After three awareness meetings conducted by the officers, there seems to be strong support and a ground breaking ceremony to start work is expected any time soon. We anticipate a lot more involvement into conducting adaptive trials, demo plots, germplasm collections and seed multiplication plots when work starts.
- A series of vegetable seeds, soil testing equipment and associated scientific equipment has been purchased by the project as part of the diversification and nutrition objectives. Trials are underway in the three Hub areas to evaluate preferred varieties for the different regions. Initial observation on seed germination trial in North suggested excellent germination rate for bean varieties (Broad long and Dwarfs), tomatoes and sweet corn while cabbage varieties performed poorly after thinning and transplanting. Other local fruits/vegetables (papaya, citrus, tomatoes) are also tested with the exotic seeds. More work is in progress, including preparation of recipes to introduce and encourage vegetable consumption.
- Bud wood garden (BWG) establishment is 80%, 70% and 0% complete for north, central and south Bougainville respectively. However the BWG establishment is on target to be fully established by end of June 2018.
- We have initiated the focus group discussions (meetings) in North and South to collect topics for research priority setting. Not only research topics will be identified but also cocoa development needs and requirements such as nursery and planting material supply and training needs.
- We continued to identify and assist disadvantaged farmer groups who requested our advice and support through nursery establishment and trainings apart from original 25 famers per each village extension worker (VEW). Examples are those of Ratsua ward in the North and Orava village in Buin, South Bougainville.
- We continuously work harmoniously and support DPIMR logistically, financially and through advice in areas such as website designing, drafting of the Bougainville Agricultural Commodity authority bill, capacity building and sharing resources.
- A small side-project dealing with the history of cocoa on Bougainville has commenced. The aim is two-fold. One is to capture the change over from a plantation oriented to a small-holder oriented industry. Many of those pioneers are quite aged. It is vital that we try to capture the lessons learned from their experience whilst we can. The second objective is to see if we can access some of the very early pioneering stock that may still be useful in breeding programs today. James Butubu has found some trees that appear to be around 60 years old. He has planted out some of these. We await their development.

East New Britain

- Trevor continued fruitful discussions with David Yinil about the continuation of the ACIAR cocoa projects under the new structure following subsuming of the PNG Cocoa Coconut Institute activities by the PNG Cocoa Board. David is the CEO of the Research and Development section under the Cocoa Board and continues to strongly support our projects.
- Trevor has been promoting pigeon pea as a shade crop for cocoa, in addition to its value for improving soil fertility and as a human food and foodstock. However, he has not been able to locate a source of seed within PNG. Therefore he has been corresponding through Kanika Singh (ACIAR Soil Fertility Project) with Ram Kumawat in India on importation of a sample of pigeon pea into PNG for field testing. Hybrid seed produced by a reputable firm can be imported without quarantine concerns, but the preferred open pollinated seed of traditional Indian varieties would require a lengthy and costly import and quarantine procedure. Trevor and the agronomy section at the Cocoa Board will conduct field studies of plots established from imported seed, and hopefully be able to select over time some variants that do well under PNG conditions.

East Sepik

- From 25 to 28 March, Josephine visited East Sepik Province for discussions with staff from Unitech, Lae, DAL, and CMFTs about the use of eaglewood as a shade tree for cocoa. Eaglewood infected with a canker fungus (so far unidentified) produces a very valuable incense wood known as gaharu, which could be a useful source of additional income for cocoa farmers. She joined Dr William Kerua from Unitech and others who were having a meeting about promoting eaglewood planting with DAL East Sepik. She also met with Jimmy Risimeri and Chris Toli, our coordinators in East Sepik, and attended an interview with Chris Toli by Roel Helmes, a senior expert on environmental matters and experienced in Life Cycle Analysis (LCA) in developing countries. Dr Tom Okpul, Breeder with the Agriculture Dept of Unitech has 4 to 5 fungus cultures that are mildly infectious on eaglewood trees and Unitech staff are keen to collaborate with other projects to inoculate trees on farms. Josie later travelled to Angoram to meet cocoa farmers at Angoram Station, Gavian Junction and Gavian.
- Trevor visited East Sepik from 15 to 21 April with David Yinil to manage the transfer of the project coordinator's responsibilities and project vehicles and equipment from Jimmy Risimeri, who has taken up an appointment with the Kokonas Industri Korporation, to John Meth, the appointed Cocoa Board Head of Extension in East Sepik.
- On 16 April he made a courtesy visit to Provincial Government DAL staff, Kevin Hawan and John Worowan. John is a livestock specialist working with Trevor to develop goat husbandry centres in East Sepik and Madang. He also visited Agmark to discuss solar dried cocoa, and met with Michael Somare Junior to discuss establishing a CMFT site to serve a farmers' group in the Gavien fringe area.
- On 17 April he advised CMFTs Nola and Chris Sasingian at Yekimbole on further development of their solar drier, that has been extended another 24 metres, and discussed ploughing and aerating soil before planting *Gliricidia* and cocoa in grassland. The group has arranged access to a tractor and plough and are going to try ploughing before planting in grassland. This will be a useful test of soil preparation needed for successful establishment of cocoa on the Sepik grasslands. Trevor also met Isaac of Outspan who has been buying cocoa from the Yekimbole group and supporting solar drying in the Yangoru area. He visited Winge 2 group, where the fertiliser trial is being conducted in collaboration with the ACIAR Soil Fertility project and observed trenches being dug for addition of cocoa pod mulch under the supervision of CMFT Toby Gaundu, Eric Narapal, on whose farm the trial is being conducted, and Chris Fidelis, agronomist at CCI. He also visited CMFT sites at Niumindogum, where goats will be established, and Paliama Passam, where the budwood garden is well maintained and progress has been made on nursery construction.
- On 18 April Trevor visited Gavo site at Angoram and met CMFT Kelep Waganda to inspect the group's budwood garden (needs some rebudding) and nursery. He visited the Saramandi DAL station (3.5 hr drive from Wewak) and saw the neglected, overgrown budwood and hybrid seed garden (supposed to be 3ha budwood garden and 3ha hybrid seed garden with K82, KA2106, and KEE Amazonian clones). He is proposing drawing a map of the layout to identify clones so that the station can become a useful source of planting material. It has a training centre and offices, being overseen by Markus and Abraham Simn from DAL.
- On 19 April Trevor travelled by speed boat to Kairuru Island, just off Wewak, with Brother Herman from the CMFT group at Kurangur village. A new fermentry has been established and they are buying wet beans from farmers at several buying points as a service. However, the small quantities of beans, and cost of labour and

travel make the service non-viable. Trevor advised them to set up solar driers at buying points so they don't have to visit so often and can buy dry beans. He also visited Brandi Secondary School and met the agriculture teachers including Utika Jahuripa, Deputy Principal Administration, and offered assistance with a nursery and budwood garden, and a presentation to students at a later date.

- On 20 April at the Seaview Guest House in Wewak, coordination of the ACIAR Project was officially handed over from Jimmy Risimeri to John Meth. The handover was witnessed by Trevor, David Yinil, Provincial Government representative Alphonse Kama, and Governor's representative Richard Mangio. Chris Toli and John Worowan attended, with staff from the Cocoa Board and representatives of CMFTs including Sperian Kapia, Jonathan Poema and Brother Herman. Chris Toli will continue in his role as Assistant Coordinator supported by ACIAR and be responsible to John Meth for implementation of the project. A dinner was held to thank Jimmy for his good services to the ACIAR Project and initiate the new structure.

New Ireland

- Discussions were held by phone and email with Gideon Bogosia, Head of DAL New Ireland Provincial Government, and Kula Daslogo regarding the handover of the Project Coordinators duties from Kula to John Joseph, the newly appointed head of extension for the Cocoa Board, following Kula's appointment to a senior position in the Kokonas Industri Korporation. In the meantime, through into early April, Kula continued his activities with the CMFT groups he established.

Simbu and Highlands

- Final preparation of the proposal to the Minister for National Planning and Development for expanded cocoa activities in Karimui and the highlands based on the ACIAR/CCI strategy, and further consultation with DAL Simbu Province, have continued.

Madang

- Through March and April, Aitul Weoh and Bofeng Mebali, along with involved DAL officers, continued their visits to CMFT groups, including Erima, Tamane, Balama, Gohe, Rempi, Bunu, Karkum, Kaviak, Klumlang, Korona, the 4 CMFT sites in Usino/Bundi district, and the 4 sites in Bogia district (average one visit per site per month = 18 field visits). All 22 nurseries at CMFT sites are operating, on average maintaining 3,000 seedling capacity (total nursery capacity = 66,000 seedlings including both rootstocks and budded plants).
- The main budding activities supervised were: Korona (2000 plus budded out of 3000 rootstocks, 2 budders engaged for 5 days and 65 farmers attended), Tamane (2000 plus budded out of 3,000 rootstocks, 4 budders engaged for 3 days and 15 farmers attending, 10 males and 5 females), Balama (1000 budded out of 2000 rootstocks, 4 budders engaged and 12 male farmers attended), Gohe (1,016 budded out of 3,000 rootstocks, 3 budders engaged and 16 males and 4 females attended). Over 30,000 seedlings are ready for budding at 13 CMFTs. Overall 3 project and 3 other budders were used to train a total of 100 farmers (both male and female).
- Problems encountered included lack of full commitment by farmers, high fuel costs linked to increasing fuel prices and long distances travelled to visit CMFT sites, insufficient funds for nursery and budding activities which has required use of other activity funds, collapsed of Banap bridge along the North Coast road, hindering project activities in Sumkar and Bogia districts, poor road conditions in remote (and not so remote) areas, increased law and order problems throughout the province, the take-over of Murnass station by the Koconas Industri Korporation following the splitting of coconut and cocoa activities of the PNG Cocoa Coconut Institute, which has affected cocoa activities and housing of cocoa staff.

Sweetpotato

HORT/2014/097

- We have filled 12 screenhouses with clean seeds and two yet to be filled in Western Highlands Province awaiting cuttings from NARI Aiyura.
- We have aphids entering all houses in Asaro and Jiwaka, a problem which will need to be addressed. Aphid management training in collaboration with NARI is being planned.
- The first commercial harvests of clean vines by all greenhouse growers in Asaro, Jiwaka and one grower in Hagen Central, has been completed. This is an important milestone in the project as the scale of production of clean seed can now match commercial crop production needs.
- Field assessments of the following treatments have been commenced with commercial growers;

- Clean (new) vs conventional planting material
- Single (new) vs double vine (normal practice) planting per mound
- Flat bed vs mound planting
- Trial harvests and field days at Asaro TEAM sites for the soil fertility and pest management projects aligned to this project have commenced.
- Community Development Plans being developed from workshops with grower communities which were conducted in the last 6 – 8 weeks. Three Community Profiles have already been completed and are now with the respective community representatives. The ‘technical training needs’ identified by the three communities are being used to prepare training notes for the management of clean seed technology.
- Matt Kanua has drafted a review paper titled *Performance of Pathogen tested sweetpotato in PNG: a review and re-analysis of experimental data*. The paper is undergoing review by project team members.
- Matt Kanua and the ANUE training team are visiting and interviewing some of the clean seed kaukau producers in the Asaro, Minj and Hagen Central areas to gather further on crop performance.
- Mike Hughes will be visiting project trial sites and meeting with the PNG team members in mid-May.