



Merry Cuscus
olgeta!

TADEP Monthly Update

November + December 2017

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Family farm teams

ASEM/2014/095

Training of Trainers

- Jo Caffery and Deborah Hill (UC) conducted a Training of Trainers (ToT) follow-up training and evaluation in November for our FPDA and Oxfam trainers who were trained in the four Family Farm Teams (FFT) modules in early October. A total of 60 trainers (38 M, 22 F) reached 851 farmers in just one month.
- All trainers were asked to roll-out the modules (or selected parts) in October and early November. The numbers of farming families reached by these trainers in such a short time was impressive. Although most trainers were able to work in groups, there were two people who delivered the training by themselves and did so successfully with a large reach. Both of these were women: one had never undertaken training/extension work previously (FPDA staff member) and the other had only conducted one other training session (Oxfam partner). Again, very impressive.
- Trainers who completed the week's training, rolled out the training and provided a written report were awarded a University of Canberra Certificate of Completion.

	Male	Female	Total
Trainers	38	22	60
Scale out to farmers (41 villages)	496	355	851

- The data generated by the evaluation is currently being analysed for the responses to the FFT content, the process of training and farmer learning, and the gender issues for both participants and trainers.
- Lalen Simeon and Barbara Pamphilon were contracted by Pacific Women Shaping Pacific Development to conduct a **1 week FFT training** in Port Moresby. Of the 30 trainees, half were from NGOs and half were women from the ward development projects run by the Pacific Governance Facility. This very insightful group has provided further gender and cultural focused evaluation data which will complement the data collected from FPDA and Oxfam.
- Given the number of people in PNG now trained as Family Farm Team Training Facilitators, we will be providing a list of qualified trainers on our website.

Family Farm and Galip Nut teams Expo - Buka

- The aim of this event was to share the value-add processes to fruit and nuts developed by the Galip team in East New Britain. A total of 53 participants (21 F and 32 M) attended the event. Presentations and demonstrations were conducted by Brett Hodges, Emma Kill, Tio Nevenimo, Caroline Misiel and Simaima

Kapi, supported by Pauline Gwatorisa (UC), Doreen Tunama (NARI), and Ian Viore and Sherdrick Nana (BWF). Topics covered were: the NARI Galip nut factory; health and hygiene, market development, and small business ideas for the Pacific. Demonstrations included food preservation and dehydration, solar drying, baking breads, cakes and biscuits, jam making and cordial making.

- Feedback was overwhelmingly positive, with participants taking up and adapting many of the ideas immediately – watch out for the use of old fridge motors to make backyard solar dryers!

Staff updates

- We would like to congratulate Dr Norah Omot (formerly from NARI) on her new position at APAARI (Bangkok) <https://www.apaari.org/> – we will greatly miss Norah’s support, guidance and wisdom, but look forward to keeping in contact. We welcome Dr Sim Sar as our NARI Project Leader.
- We would also like to congratulate Dr William Kerua (UniTech) on his recent PhD graduation. Dr Kerua will be conducting evaluative research with us in the Baiyer Valley, Western Highlands in 2018.
- We welcome back Ian Viore as our Bougainville Women’s Federation Project Leader in Buka. Ian has returned from the East-West Centre Asia Pacific Leadership program and is already bringing many insights to our project from this three month program <https://www.eastwestcenter.org/scholarships-fellowships/asia-pacific-leadership-program-fellowship>
- We would also like to wish the very best to Barbara Tanne (BWF Director) and Milton Temeni (Project Officer, New Ireland DPI) who have moved on to new career opportunities. We thank them for their support and contributions to our project.

We wish everyone a happy Christmas and a productive and rewarding 2018.

Galip Nut

FST/2014/099

Progress towards objectives

2. Develop and undertake research-based interventions that address the needs of the private sector including smallholders, small scale entrepreneurs (especially women) SMEs, and large-scale processors.

- The project has developed three main products to be used in project launches in both Kerevat and Port Moresby, early next year. The three new products (natural, kalami and roasted) are currently undergoing shelf life and quality testing.



Figure 1. Real shelf life experiment established at NARI

- Bougainville galip value adding workshop
 - Galip project staff recently travelled to Buka Town, Bougainville and delivered a day of workshops sharing some of the technologies that have been researched in the galip nut pilot factory. The workshop was jointly run with the women’s business acumen project, under the TADEP umbrella, and delivered to nearly fifty registered participants over the day.
 - Sessions included:
 - Food dehydration and preservation of fruits and galip using both electric driers and solar drying, with a solar drier constructed using local materials for the event (Figure 2).
 - A presentation on the Galip pilot factory, its progress to date and the evolution of the galip industry in PNG so far.
 - Baking skills and incorporating galip nuts and meal into baked goods. Each group was able to produce three loaves of galip bread and two trays of galip biscuits using a wood fired oven that was able to be borrowed for the day. A big thankyou to Carolyne Misiel who has been selling these baked goods as a part of her co-operatives economic activities in East New Britain and was able to attend and deliver this session.

- Preserving surplus fruits and vegetables into jams, cordials and pickles. This allowed participants to produce their own preserved products utilising locally grown products, including pineapples, chokos, paw paw, and ginger. This resulted in a wide range of products that were eagerly tested and taken home as a new addition to the diets of participants (Figure 3).
 - All who attended were positive about the chance to learn about what was happening with the galip industry and to participate in some of the new technologies that have proven to be useful at the village level in food preservation.



Figure 3. Participant with a hand-made jar of chutney >>>

<<< Figure 2. Tio demonstrating the solar drier to workshop participants



4. Create a model for public-private partnerships in the canarium industry in PNG

- Private enterprise development planning meetings for the Galip Nut Company launch were held in Port Moresby, with the CEO Joint Ventures/GM merchandising who has agreed to support our POM distribution plan to June 2018 and with the Category Manager of Fresh Produce to finalise labelling, range, pricing and account roll out. The launch has been planned for February/March 2018.

Good news/impact stories

- A review team from MDF and ACIAR visited project and farmers in November. The team had an opportunity to go back and visit farmers around the region to understand the impact of the project and its importance to the smallholders of the region (Figure 4). Farmers were reporting that selling nuts to the galip factory was increasing their income by around PGK500 per year. Farmers were very happy about the extra income and keen to sell again next year and planning to collect and sell more nuts.

Figure 4. Rebecca Bogosia and project team members Helen Wallace and Simaima Ling Kapi with galip farmers Rose and her family during the project review visit >>>



New Depulping machine success

- One of the biggest impediments in galip nut processing is the depulping of galip fruits to produce galip nut in shell (NIS) so that it can be dried for storage and use over a long period of time. The primary process for this is a time intensive, laborious job when now up to 5 tonnes of nut in pulp (NIP) requires depulping each day. The project team have developed a modified fruit juicing machine for depulping (Figure 5). They've found it is capable of depulping 2-3 tonnes of NIP per hour with 3 people processing. Previously it would have taken one full day to do this amount with double the number of people. The NIP still needs to be dipped in hot water to soften the pulp but it has already reduced the labour and resource input into depulping by over 50%.



Figure 6. Visit of galip spacing trial with Ofara (left) and Mathew (right) >>>

<<< Figure 5. Modified fruit juicing machine now used to depulp galip



- In late November, Shahla met with Ofara to discuss the TADEP collaborative grant, there is interest in using biochar and compost in their new trial as soil fertility decline is an emerging issue in PNG. Shahla visited their new galip plantation where they are trialling different spacing regimes to identify the best ones for galip monoculture (Figure 6).
- A baking demonstration day was held at the Galip Pilot Factory working with local market sellers and co-operative members testing baking recipes that could be applied in their economic activities (Figure 7). This day proved to be a great success with all that participated expressing their appreciation for the chance to trial recipes that they can use in their own households and to produce unique products that they can sell. One participant has since gone on to sell the galip biscuits she produces for 50 toea per biscuit.



<<< Figure 7. Baking demonstration day at the pilot factory

- An article about the galip project has been published in PNG in Business advantage: <http://www.businessadvantagepng.com/galip-nut-an-opportunity/>
- A follow up meeting was held with CPL representative in Port Moresby, as the new commercial partner promoting the galip industry and products across its chain of retail outlets it was exciting to hear about the social responsibility that the company is eager to provide through this new partnership.
- A meeting was also had with a small-scale entrepreneur from East New Britain operating a business in Port Moresby selling a range of local beauty products she has created from local products, alongside this she is value adding to galip selling packaged nuts, cakes and biscuits through local markets. This is an exciting new avenue for the project to support someone whom is already engaged in the industry and share some of the findings of the project to date that may assist in her business. We supplied an electric dehydrator for her to trial the dehydration of local fruits that she can add to her Christmas cake range that already includes galip.

Forward plans

- Planning for retail launches of Galip Nut Company product in East New Britain and Port Moresby in 2018.

Project updates

- Training of VEWs in IPDM, nursery establishment, budwood gardens and propagation of clones continued. An audit of clones in a VEW nursery and Budwood garden in Hahon, North Bougainville revealed the presence of off types. These audits need to continue across Bougainville in 2018 to ensure growers are receiving authentic CCI clones.

- The livelihood surveys will be completed in December. The surveys show that poor health and nutrition reduce productivity, childhood stunting is a significant problem, both men and women suffer chronic conditions that are not diagnosed and treated, most people do not go onto high school, a significant percentage of women want family planning, domestic violence is high and accepted by both men and women, and that few people have electricity or refrigeration. Merrilyn Walton presented a summary of the results of these surveys to the annual Marie Bashir Institute colloquium in Sydney, and David Guest presented findings to a session addressing constraints to technology adoption at the International Symposium of Cocoa Research in Lima, Peru. Both presentations highlighted our interdisciplinary approach to cocoa farming, and our focus on farmer's livelihoods and health. Two new ICCO working groups (INCOSOCIO and INCOQUALITY) linking stakeholders focussed on the socioeconomics of cocoa farming and cocoa quality, respectively, were established at the symposium in Peru to address these issues.
- Construction of the Konga goat house will begin as soon as possible. Pastures are being established at Konga station.
- The Opiuk Co-operative near Tinputz has secured funding and is now constructing a new solar combination dryer under the guidance of CCI experts. Some interesting features issues included (left) the fermentary will be physically separated from the combo drier (it will behind the member in purple on the far right) and the use of stones to help retain heat, and (right) use of clear plastic roofing.



- Grant Vinning attended the *Salon du Chocolat* and the *Cocoa of Excellence* awards in Paris. He presented samples of cocoa from Bougainville to a number of buyers from France, United States, England, and Netherlands. Since then one buyer has engaged in considerable correspondence regarding one of the samples. A visit was made to the grower in November to garner answers to the potential buyer's enquiries. Recognition is given to James Butubu and Theo Kisu for helping with speedy answers to buyers' request for additional information. Another buyer has requested half a tonne of Bougainville beans to be airfreighted to him in England as soon as can be arranged. In Europe and London, Grant was able to take photos of 22 new dog breeds to add to his collection.
- An export company (Bougainville Cocoa Exports Ltd) was formed after several consultative meetings between DPI, farmer representatives from all regions, and project staff. James Rutana (founder and ex-Chair of the Cocoa Board) is the Chairman of the Board of directors. Registration is being sought from the Investment Promotion Authority, and an application for a cocoa export licence will be submitted in December. We are encouraged by comments received from many farmers supporting the idea of having one umbrella export company to be owned by the Bougainville farmers.
- The project supported Toroama's Amataa groups' Hot Cocoa Drink at the DPI's World Food Day in Tinputz. This move has been applauded by the Department of Health because a straight chocolate drink is vastly more healthier than the sugary fizzy lollywater currently favoured by children (and as evidenced by the highways paved with crushed lollywater cans).
- Four market newsletters were compiled and distributed by Grant Vinning. Discussions were held with a market information company for TADEP to purchase and distribute market data.
- Discussions were initiated with the DPI secretary to have a web site up and running for uploading marketing information, important cocoa news and activities and major achievements with other announcements. DPI IT specialist will be utilised to construct and maintain the web site.
- The project team met in Arawa to evaluate our contribution to the 2017 Chocolate festival in Arawa. We discussed the success of the big bean competition, the opportunity to taste chocolate made from their own

beans, visit to farmers' fields etc.; and what could be improved (Linking results of awards with growers actual fermenting and processing techniques). The meeting made a number of recommendations for the 2018 Festival, particularly strengthening the demonstrations of fermentation and drying, and more fully using social media to publicise the event locally and internationally.

Challenges for 2018

- Establish North (Kaskurus) and Central (Duncan) regional hubs.
- Engage and train more VEWs.
- Training on diversification into alternative crops and livestock should be a focus for VEW training in 2018.

East New Britain

- On 6 November, Trevor and Phil visited UNRE for discussions with the Vice-Chancellor, Professor John Warren, Hosea Turbarat, Peter Navus and Suri Taisa about the collaboration with UNRE. It was agreed that the payment for training of CMFTs provided by Kairak, UNRE, was sufficient, and that the future work of the university on the project will be related to the integration of goats with cocoa farming.
- On 7 November, Phil met Boto Gaupu, CEO of the Cocoa Board (CB), and Tony Vigil, Executive Manager Corporate Services, to highlight the high level of training and experience of the scientific staff of CCI, and to promote collaboration between the CB and the ACIAR/CCI project leading up to the subsuming of CCI within the CB. Discussions were held with some CCI staff to encourage them to continue working strongly in their respective disciplines despite some discouraging aspects of the subsuming of CCI by the CB. Trevor and Phil held discussions with John Moxon and the PPAP team, and with Graham McNally at Agmark.
- On 20 November, Trevor and Phil visited Otto Koimba at Tokiala for further discussion about the solar dryer and the need for another solar panel to drive a fan within the dryer.
- Michael David, a new graduate from UNRE, has been employed by Agmark to undertake fermentation and drying studies at Tokiala, and it was agreed that he should work with Trevor as well as Otto and Graham on these studies.
- Rodney Minana from the Entomology Section at CCI showed us the fire ants that have already become established at Tavilo and are considered a possible biocontrol for Cocoa Pod Borer.
- Trevor completed the translating and reviewing of the Tok Pisin version of the CCI Cocoa Farmer's Handbook.

New Ireland Province

- Kula Daslogo and his team conducted a Farmer's Field Day at Komalabuo, West Coast, Namatanai District on 8 November with Alfred, Eremas Tade (CEO of CCI), Phil, Trevor, and Josie participating. Hosts were Cocoa Model Farmer Trainers (CMFTs) Henry and Gorrity Aguam, whose established budwood garden (BWG), nursery, and 1ha cocoa were the main feature of the day as models of what has been achieved by project activities in New Ireland. Graham Lali, President of Central New Ireland District, presented a supporting speech on behalf of the Governor, Sir Julius Chan. Kunibert Tibil discussed the Provincial Government's Project Extension to all 109 Wards in New Ireland, and staff from the provincial government also gave supporting speeches. Staff from all sections at CCI and some from NARI Keravat attended stalls describing their research activities and sold instruction books and tools. Larry and Colleen Clarke from Rubio Plantation demonstrated chocolate and chocolate drink making and did a lively trade. The team met many CMFTs and their spouses who attended from many parts of New Ireland, along with many local farmers. Following the Field Day, the team visited the nursery and mature budwood garden (BWG) at Dampet Village (Chris and Macina), just north of Komalabuo where Stanis Akon, a former budder at LAES and Kopkop, is active and has been working in a program, Walter's Farmer's Association, started previously by the new local Member of Parliament, Walter Schnaubelt. On the trip back to Kavieng, the team visited Kalu and Angela Eliap and family, whose BWG is now mature and ready to provide budwood for their nursery, and also the new nursery of Cathy Miroi close to the road at Luapul.
- The following day the team led by Kula travelled for 2 hours by speedboat to Djaul Island west of Kavieng to visit the near-mature BWG, nursery and new 1ha block of Dr Robert Wat (a PNG surgeon, partly retired) and his CMFT wife Lodgie, along with their farmers group; a village meeting (35 men, 10 women) was held at Leon Village on the east coast to discuss the project, before the team returned to Kavieng after dark. Just

north of Djaul Island is Mait Island where there is said to be surviving old German cocoa, presumably pure Trinitario, which Kula intends to collect.

- On 12 November, Alfred, Kula and Phil travelled 6 hours by speedboat to Mussau Island (the most northern island in PNG), guided by Mussau islander Joseph Rivaso Rikis Lobarang and supported by islanders Moti Amos, Alex and Wat, with marine compass, GPS and long experience, to visit the CMFT sites of Charles and Joymalin Aturoro, who hosted our visit at Tarairai Village on the west coast after they had returned from the Field Day at Komalabuo. A farmers meeting was held for 2 hours in the evening, attended by 16 men and 3 women. The following day, using one of the four vehicles on the island (the ambulance), we travelled overland (1 hour) on one of the few roads to visit Tavol on the east coast, where the CMFT is Erobin Tamarike, supported by his active 83-yr-old father and Lee Jubilee, the community leader. An enthusiastic farmer meeting (10am to 3 pm) was held under trees on the beach, attended by 50 men, 20 women and 6 youth. A so-far-unused combination solar/kiln dryer, fermentary, and nursery built by the CB in 2016 at Malakat near Tarairai was observed. The facility may eventually be used by the farmer group at Tarairai when their plantings come into bearing. Mature cocoa blocks were observed at Tavol but production of cocoa is being limited by lack of a CB licensed fermentary and dryer. The site will be ideal for installation of a solar dryer to support a small, semi-abandoned kiln dryer which Kula will revive with new kiln and flue pipes. It was evident that cocoa production is being inhibited by regulations restricting the preparation and sale of small quantities of beans. The depth of soil above concreted coralline (koronus) will be a problem for cocoa production in some parts of Mussau and farmers were advised to establish their 1ha blocks further inland where soil depths are greater than 1 metre.
- On 14 November, the team left Mussau to travel back to New Hanover Island (3 hours by speedboat), visiting Nuipuas Village on the north-east coast where a mature BWG had been established prior to the project by Robin Kulawei (at the same time as the one established by Kariam Muve at Kanabu, on the Boluminski Highway south of Kavieng). Robin is no longer active due to health problems and the site will have to be led by someone else who can maintain the garden and establish an active nursery. This BWG should be able to supply budwood for the whole of New Hanover. The team then travelled around the north of the island to Umbukul on the west coast, arriving at 4pm and staying overnight with the CMFTs Gideon and Mina Kulepmu. In the morning, we visited the BWG and several of the 1ha blocks being established by farmers further inland, and then had a village meeting (10am – 1pm) to discuss the project. We left to travel back to Kavieng at about 3pm, arriving after dark. Back in Kavieng, Phil, Alfred and Kula held a final meeting to summarise the Field Day, visits to CMFT sites, and the commencement of the New Ireland Provincial Govt/CCI/Ward development Project. Kula and Phil visited the CMFT nursery and BWG at Panamecho and saw David Kapia's plants budded since the Field Day.
- For the Komalabuo Field Day, Kula summarised the ACIAR and NIPG Projects as follows:
 - **ACIAR/CCI:** A total of 20 CMFTs have been trained and have established 20 BWGs in their home villages, some nearing maturity; 6 commercial nurseries have been completed and 14 are still being built; all CMFTs have completed lining and shade establishment of 1ha blocks, with 3 having been planted with cocoa, while most of the 24 farmers linked to each CMFT have completed lining and shade establishment in their 1ha blocks; 40,000 SG2 hybrid seeds have been distributed to nurseries for budding; a new design solar dryer linked to a kiln dryer has been built and is operating successfully at one CMFT site (Panamecho), with more being planned.
 - **NIPG/CCI/Ward Project:** The first stakeholders' meeting was held in Kavieng on 25 August 2017, and from 31 August to 1 September second stakeholder meetings were held with all LLG DPI extension officers or coordinators in each of 9 selected cocoa growing LLGs (Murrat, Lavongai, Tikana, Central Niu Ailan, Namatanai, Matalai, Konoagil, Nimamar, Tanir). Kunibert Tibil is coordinating the project with Kula. From the 11 to 23 September, all LLG DPI coordinators carried out awareness meetings within their LLGs and facilitated the selection of Village Extension Workers (VEWs) in each of the selected Wards. From 25 September to 6 October, training of the VEWs, along with LLG DPI Coordinators and District Economic Coordinators within Kavieng and Namatanai Districts was conducted. Altogether, 84 VEWs, 12 LLG DPI Coordinators and 1 District Economic Coordinator have been trained. Four training modules were presented – establishment and maintenance of a commercial BWG, commercial nursery, and new cocoa block, and rejuvenation of unproductive trees on an existing cocoa block. These new VEWs and coordinators all attended the Komalabuo Field Day as part of their training.
- Professor George Curry and his staff at Curtin University have analysed and summarized the baseline survey data from New Ireland and are preparing to do the same for the East Sepik survey.

Highlands (Karamui and Eastern Highlands Province)

- John Konam, Phil and Peter Bapiwai met up with George Curry in Goroka and then flew by MAF Twin Otter to Karamui where they spent two days visiting CMFTs and holding a meeting with the three ACIAR/CCI/Simbu Provincial Government staff based in Karamui (John Thomas, John Komba and Matthew Joshua) and three students from the Hagen Agricultural College who were doing their work experience in Karamui with the cocoa project team. They, accompanied by John Konam, were the first outside staff to return to Karamui after the disturbance associated with the election, and the people have appreciated this, although the SPG has not been paying their salaries on time. The SPG, CB and some CCI staff are undertaking training activities in Karamui without coordinating with John Konam and his team, and there has been a lack of transparency about the spending of the money promised to the project by the previous Member for Karamui, Mr Mogerema Wei. The team visited the CMFT site of Wanpris and Agnes Alwai (Ward 6) and saw the establishment of his BWG using bare-rooted clones that had been brought directly from Kopkop, New Ireland, by Peter Bapiwai. The group has already sold 7 bags of dry beans to Agmark, Madang. Later a similar CMFT site led by Dominic and Joice Wani (Ward 4) was visited and the striking of cuttings from attached chupons was observed (method of John Thomas). A morning was spent at the 39ha model farm established by Norman and Jenny Mondo (one of the best cocoa farms Phil has ever seen), discussing their progress and plans, and observing the site cleared for solar dryers. Many trees have been bearing prolifically only 2 years after planting. Many goats were seen in Karamui, some evidently breeding and kept under shelter at night and tethered in the farms during the day. George Curry had discussions with Matthew Joshua about conducting a socio-economic survey of cocoa farmers in Karamui.
- The farmers in Karamui are planting cocoa at a great rate, but the current limitation is a road to transport the cocoa out of the valley. John and Phil met the new Member for Karamui, Mr Jeffrey Kamu, and the Minister for National Planning, Mr Richard Maru, in Port Moresby on 27 November. PGK20 million for construction of a road from Kilau to Karamui (28 km, 3 bridges including one on the Waghi River) has been allocated in the budget presented to Parliament on 28 November. The Minister asked John to prepare a proposal to expand the activities of the ACIAR/CCI Project to all Wards in Karamui, and John will present the proposal to the Minister in person on 14 Dec. The previous Member for Karamui (Mr Mogerema Wei) as well as the current Member, Mr Jeffrey Kamu, are strongly backing John's work.
- Peter Bapiwai and Phil spent the weekend of 25-26 November with John at his home in Gembol, near Kundiawa, and had a meeting to discuss Peter's Masters program on the adaptation of cocoa to the highlands, extending the work to the Jimi Valley in Jiwaka Province and Bena in Eastern Highlands Province, which is also covered by John's proposal to the Minister.

East Sepik

- Trevor and Josie travelled from Kavieng to East Sepik on 12 November to conduct field training at Separu-Kausimbi Village on the Yuat River for three days; this involved 150 farmers and families from the seven neighbouring villages, plus the three CMFTs from the area. Practical training sessions were conducted by Douglas Kawasi, Chris Toli, Timothy Sam, Josie Saul-Maora and Trevor Clarke in BWGs, the 24,000-capacity nursery, and old stands of cocoa. Then the team travelling down the Yuat and up the Sepik River for 8 hours to the Karawari River and associated lakes at the headwaters of the river to inspect the eaglewood plantings there and recruit a new CMFT site. An impromptu but well attended meeting was held in Emas Village. The village has planted about 300,000 eaglewood trees, and a cocoa garden interplanted with eaglewood, betel nut, food crops and vanilla was visited. Josie took a sample of eaglewood infected with the gaharu fungus and she has since been in contact with a group that claims to have methods of infecting the trees.
- Jimmy Risimeri attended the opening meeting of a EU/FAO delegation to initiate support for cocoa development and road improvement in East Sepik; Chris Toli has prepared a proposal to the ESPG to expand support for the ACIAR/CCI strategy for village cocoa development including a farmer credit scheme, linked to funds promised by the EU/FAO delegation. This proposal is being supported by several LLG presidents, led by Michael Kombo who opened and closed the CMFT training sessions in Niumindogum Village, in his LLG.
- George Curry, Jimmy, Phil and Josie attended a regional training session for 13 CMFT husband/wife teams and some local farmers at Niumindogum from 28 to 30 November, led by Timothy Sam, Douglas Kawasi and Chris Toli and hosted by the CMFTs at Niumindogum, Leah Kowi and Edmund Huiwali. Provincial DAL officers John Worowan and Dom Manuk gave presentations on integration of goats and vanilla with cocoa, well received by the CMFTs and farmers. Phil returned to Australia on 2 December, while George and Chris Toli visited the CMFT site in Maguer Village, Dagua, led by Linda Muguduo, and on 3 December George and Jimmy Risimeri visited Angela Gossiba and some of Georges old associates at North Wosera, where he lived

for two years for his Ph.D. studies in the 1990s. George and his associates at Curtin University are interested to link their on-going socio-economic studies in East Sepik and the Highlands to project activities.

Madang

- A second-hand Toyota Landcruiser was purchased from Agmark and delivered to the project in Madang to support the 10-seater Landcruiser already deployed on the project there. Along with the appointment of Mr Bofeng Mebali as Assistant Project Coordinator in Madang, this will enable much more frequent visits to CMFT sites and more rapid deployment of materials for BWGs, nurseries and solar dryers.
- From the 5 to 8 December, Trevor, Bofeng Mebali (Assistant Coordinator, Madang), John Worowan (DAL East Sepik) and Steven Tipoti (CMFT, Usino) traveled by road from Madang to visit the DAL Livestock Station at Erap in the Markham Valley and Mathias Columbus at Dumpu DPI in the Ramu Valley to inspect goats for stocking goat husbandry and breeding facilities in Madang and East Sepik. They placed orders for 10 milking goats from Erap and 10 meat goats from Dumpu. These will be transported by road and boat to Steven's model farm in Usino (Madang Province) and the training centre at Niumindogum (East Sepik), which will be used as training centres for the integration of goats with cocoa farms in the two provinces, under the supervision of Trevor, John and staff from UNRE. The project was discussed at a meeting of Trevor, Aitul Weoh, Bofeng and Godfried Savi, head of DAL Madang, and CMFT sites at Tamane, Balama, Erima and Korona were visited to arrange for a training session in January 2018.
- Budding of rootstocks has continued at Erima, Aiom (6 budders have budded more than 3,000 rootstocks), Iku (4,000 rootstocks budded), Kaviak (5,000 budded), and Rempri (budding completed in two nurseries), using budsticks from Murunas. The budwood gardens are yet to be completed at these sites.

Sweetpotato

HORT/2014/097

- The project team met in Goroka in November to review 2017 activities and 2018 plans.
- Sweetpotato Production and PT (pathogen tested) Technology workshop: DAF team, Sandra Dennien, Rachel Langenbaker and Mike Hughes have organised a 'Sweetpotato Production and PT technology' workshop from 4-14 December. The workshop consisted of a laboratory/virus testing component at Gatton Research Facility (GRF), followed by ground truthing of the technology with sweetpotato farmers in both the Lockyer Valley and Bundaberg regions. While in Bundaberg the team was able to meet with other project team members (Phil Brown, Kirt Hainzer, CQU and Craig Henderson, Henderson RDE). The group then travelled to Rockhampton to a visit to Aus Sweetpotato Seed; the only Pathogen Tested (PT) planting material producer in Australia. Workshop participants were Winnie Maso and Wilfred Wau (NARI), Johnny Wemin (FPDA), Debbie Kapal, Bennie Atigini and Matt Kanua (ANUE). In a spirit of international collaboration, two biosecurity officers from Timor L'este and an officer from the Northern Australian Quarantine Strategy team who were looking at doing similar training joined the workshop for the component at Gatton Research Facility. All participants commented that the course was a real learning experience and a great opportunity to follow the PT process from initiation in the research facility to providing increased yield and quality to farmers in the paddock.
- The work on supporting commercial sweetpotato farmers in the highlands of PNG is making great progress. As reported previously, the Fresh Produce Development Agency staff used Commcare to survey more than 90 commercial, and aspiring commercial farmers. This initial screening helped identify those farmers who will form the basis of our research into the functioning of commercial value chains. Led by Johnny Wemin, 12 screen houses have also been erected on the properties of those commercial farmers who were identified as being the most commercially aligned in their area. The screen houses will propagate and distribute clean planting material to farmers throughout their local area, while also acting as a small scale commercial venture.

- Successful meetings involving CQU, NARI and FPDA team members with both wholesalers and supermarkets in Port Moresby identified a number of opportunities for expanding kaukau sales to this sector. Pilot trials will be conducted in 2018, and will be complemented with consumer surveys and the further exploration of processing and institutional market opportunities.
- Community training continued with organisational planning conducted with two farmer groups. Organisational strengthening training (developed in partnership with CARE) was also delivered to CIC (Coffee Industry Corporation) and this work was picked up by the PNG media (see below). CIC plans to incorporate the 4-module training into their planned Farmer Training School. The 4-module training is now also being used by several resource sector players (through ANUE).
- Rachael Langenbaker and Craig Henderson continue to assess the CSIRO Chameleon sensors as monitoring tools for soil moisture and temperature measurement in Australian sweetpotato plant beds. The moisture/temperature probes have proven pretty accurate and reliable. The team is using them for making irrigation decisions, as well as understanding the conditions the bedding roots and emerging sweetpotato sprouts are experiencing. As this technology is also being deployed in other ACIAR projects throughout Africa and Southern/South-East Asia, the Australian experience has wider implications than the TADEP sweetpotato project.
- Craig Henderson spent time with world-renowned sweetpotato plant physiologist Professor Arthur Villordon, from Louisiana State University, at their Chase Sweet Potato Research Station, in early November 2017. Although funded by a Hort Innovation sweetpotato project, nevertheless Craig was excited about their use of commercial aeroponic systems. For the PT program, the advantage of the aeroponic system is maximising use of space within a heated glasshouse, achieving quick multiplication of foundation material coming out of their cold winter. Mike Hughes has been working with aeroponic systems for potato (*Solanum tuberosum*) multiplication for many years, so certainly has the expertise to adapt this system for sweetpotato multiplication, should it prove economically and practically viable in Australia or PNG. The project team will review this opportunity in the coming months.



EHP-ALC members after the training last week with trainer Chris Gard and CIC coffee curriculum coordinator Leo Aroga.

Church leaders receive good farming practices, tips

FARMER groups and other community groups in the country need support to plan, budget, and follow good principles of good governance and involve women in decision making.

Manager of CARE PNG coffee industry support project, Charles Iha, said this following a week long governance training last week at the National Sports Institute in Goroka.

The training brought in workers of the Association of Local Churches-PNG from 12 different churches in Eastern Highlands, Chimbu and Jiwaka.

Most were pastors and elders of various churches, who spoke highly of a few important governance issues were to sustain groups for the benefit of its members in the long run.

The Coffee Industry Corporation (CIC) in partnership with CARE International in PNG has been supporting coffee projects with the help from Australian Centre for International Agricultural Research (ACIAR) and Australian National University Edge (ANUE).

A number of trainings have been developed by this partnership to build the capacity of community groups.

The trainings aimed to improve women's involvement in leadership and decision making roles within

farmer groups. CIC Coffee Curriculum & Training Coordinator, Leo Aroga said the training was a first of its kind for ALC-PNG and would greatly assist them to work as a group to promote and spread the Gospel and also to improve cash income. The group elected their executives in the course of the training last week, of which two were females.

Chairman of EHP-PNG Pastor Tuas Aisave acknowledged CIC and CARE International for providing the training. "When someone gives you knowledge, they give light to your path," he said.

ANUE trainer Chris Gard said such training was a real need in PNG to build capacity at the lower level to help participants understand better the bigger picture of how to run an organisation or group.

Most times groups are formed but members lose trust overtime when the interests of the group are not upheld.

"The training is designed at a level to assist groups plan and put their plans into action plans, develop budgets and help them implement it and exercise principles of good governance."

Betty Mala, representing her women folk, said the training was an eye-opener and hoped lessons learnt would improve EHP-PNG work.