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# **Key program activities**

## The home stretch

With 2020 almost done and dusted, the TADEP team has been progressing discussions for the final year of the program in 2021. We recognise that it has been a particularly challenging year for each of the TADEP project teams, both in PNG and Australia, with many pivots to online - well, online everything!

The Steering Committee has met this past week to discuss a number of key elements for the final year including the Family Farm Teams Masterclass and end of program event, which is still earmarked for September 2021 in PNG but the format (either face-to-face or online) will be contingent on travel restrictions.

On behalf of the TADEP team, I would like to thank you all for your continuing support of TADEP this year and we look forward to working with you next year. Festive felicitations to you and your loved ones. Hepi Krismas na hepi niu yia!

# Evaluating ACIAR's programmatic approaches

ACIAR has been conducting a series of project level outcome evaluations on projects that were part of one of the three intentionally designed regional programs (TADEP, SDIP, Aik Saath) currently managed by ACIAR. These individual evaluations are currently being undertaken and will be compiled into a broader report on the achievement of the program as whole, that will include some investigation of the different programmatic models and lessons learned through their implementation.

Three of the five TADEP projects have contributed to the evaluation thus far, with two of those being involved in feedback session to discuss the preliminary findings to date. The balance will continue in the new year, with the

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# Impacts of COVID-19 on Partner Country working arrangements

All members of the Country Office network completed partnership brokering training in 2020 during lockdown, in preparation for re-engagement with key in-country partners post COVID-19. ACIAR is increasing the role of the Country Office network in all stages of project design and implementation, commencing in 2021 with participation in the in-house review process. Options are also being explored to support project implementation in-country through the Country offices during the period when international travel is not possible.

The following is an (as at 12 December) of working arrangements and challenges with our PNG Country Office: There is evidence of community transmission in PNG however business operations are normal. The ACIAR team can travel to provinces to assist with project implementation. This includes Bougainville, noting that travellers going to Bougainville must seek approval under the ABG State of Emergency (SOE) before travelling, present a medical clearance on arrival and quarantine for seven days in Buka. All international flights are banned except to and from Cairns and Brisbane and incoming travellers to PNG must have (i) SOE approval (ii) proof of 14 days quarantine in Port Moresby and (iii) a medical certificate with a COVID-19 test result conducted within 7 days prior to travel.

## Crawford Fund Fellowship nominations now open

The Crawford Fund fellowship has been running since 2002 and provides training in Australia for an agricultural scientist below the age of 35yrs from a selected group of developing countries whose work in the fields of agriculture, fisheries, forestry or environmental protection for development has shown significant potential.

Follow the link to the Crawford Fund website to apply: www.crawfordfund.org/awards/crawford-fund-fellowship

Self-nominations are not accepted and one nominator must be an Australian. No travel will commence until DFAT approval has been provided for overseas travel. Nominators are encouraged to contact the Fund's Director of Capacity Building, Prof Shaun Coffey, before commencing the nomination process, on shaun.coffey@crawfordfund.org

# **Key project activities**



# Bougainville Cocoa

10 UNRE students are on Industrial training with the DPI. The students are engaged with the project for six weeks and will be exposed to various activities such as cocoa extension and R&D work.

Monitoring of the VEW's activities on cocoa bud wood gardens, nurseries and vegetable cultivation continued in November/December. Most bud wood gardens have matured and **Past Issues** 

The chocolate mini lab continues to assist farmers to assess their bean quality from all regions. Among the farmers is Micheal Dmax from Bana, South Bougainville who is sending bean samples to a USA buyer.

Click here for the full Bougainville Cocoa project update

## PNG Cocoa

Restrictions on international travel prevented project leader Phil Keane from visiting the project sites in PNG in the second half of the year, but Trevor Clarke, who was confined to PNG by the travel restrictions, carried on the project work with the Cocoa Board REDS extension officers in each lowlands province, John Konam in the highlands and REDS research and administration officers at Tavilo, ENBP. There have also been multiple site visits by Trevor to West New Britain and New Ireland.



Cocoa farming resources and materials have continued to be disseminated, along with training, including a propagation workshop for the EU-FAO STREIT Program at Saure Village, Wewak District.

The former model CMFT site at Niumindogum in East Sepik that was neglected for a time has now been rehabilitated by Norman supported by our coordinator, Timothy Sam. The site has a nursery and complete and mature budwood garden that includes vanilla growing on the Gliricidia shade trees.

Click here for the full PNG Cocoa project update



# Sweetpotato

FPDA are completing a Commcare survey of commercial kaukau growers in EHP, Jiwaka and WHP to document some of the changes in kaukau production that have occurred during the project.

The guidelines for the klin kaukau scheme are in the final stages of writing and on track for release in early 2021.

The project team are taking a well earned break over the Christmas period and will be back at work in January.

**Click here** for the full Sweetpotato project update

initially had five component projects, of which two have concluded. The program now comprises of the following:

- Bougainville Cocoa HORT/2014/094 Developing the Cocoa value chain in Bougainville
- PNG Cocoa HORT/2014/096 Enterprise-driven transformation of family Cocoa production in East Sepik,
   Madang, New Ireland and Chimbu Provinces of Papua New Guinea
- **Sweetpotato** HORT/2014/097 Supporting commercial Sweetpotato production and marketing in the Papua New Guinea highlands

TADEP is co-funded by the Australian Centre for International Agricultural Research (ACIAR) and the Department of Foreign Affairs and Trade (DFAT).





Whilst two of the initial five TADEP projects have concluded, they have evolved into three new ACIAR projects and both have keenly agreed to continue to contribute to TADEP. The following updates demonstrate this continued collaboration across research disciplines, sharing useful and relevant insights.

# Family Farm Teams

With COVID-19 travel restrictions still in force, new online delivery models are being trialled for the Family Farm Teams (FFT) training with the Live and Learn staff in Solomon Islands. The FFT training has historically required qualified FFT trainers to deliver intensive, face-to-face multi-day workshops but the wider utilisation of online platforms since COVID-19 lockdowns have opened up online opportunities. It is anticipated that a trial will also be undertaken in PNG soon.

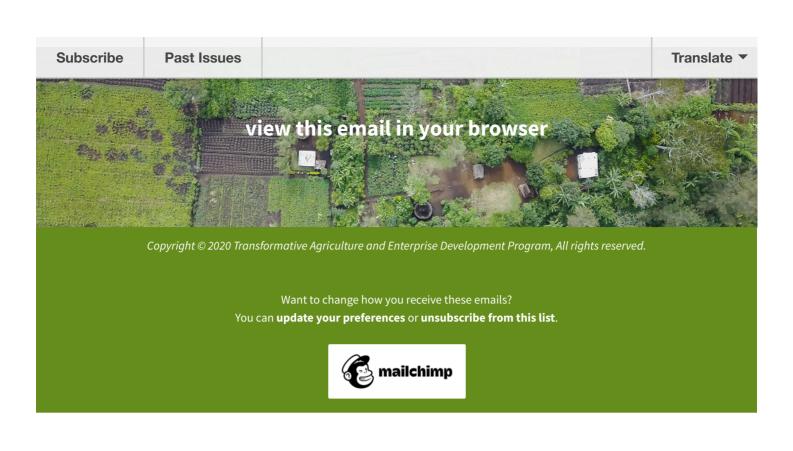




# Galip Nut

The Galip Nut Company has shipped the first order to CPL and Galip nut company products will be on the shelves just in time for Christmas.

Galip Nut Company website: www.galipnuts.net



Bougainville Cocoa HORT/2014/094

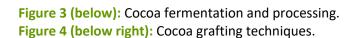
### **Upcoming or recent activities**

We continue to develop and demonstrate the concept of cocoa diversification and cocoa based farming systems with half canopy pruning rehabilitation technique in Kubu. Over a year ago the first half canopy was removed, and 2-3 cycle of crops planted. During November 2020 the remaining second half canopy was removed and planted with Taro varieties while the first removed canopy had rejuvenated and pod production.



Figure 1 (above): Initial cocoa pruning.
Figure 2 (right): Second cocoa pruning.

• 10 UNRE students are on Industrial training with the DPI. The students are engaged with the project for six weeks and will be exposed to various activities such as cocoa extension and R&D work. They are also given different topics or projects to work on as seen below in the Figures below.









- Monitoring of the VEW's activities on cocoa bud wood gardens, nurseries and vegetable cultivation continued in November/December. Most bud wood gardens have matured and some VEWs are now harvesting for clone seedlings production.
- The chocolate mini lab continues to assist farmers to assess their bean quality from all regions. Among the farmers is Micheal Dmax from Bana, South Bougainville who is sending bean samples to a USA buyer. He has requested results of the quality assessment as well as cocoa variety information quickly to be able to include them with the shipment of his samples.

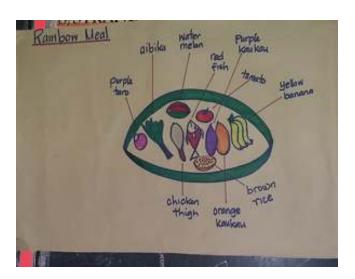
#### **Equipment**

The project adopted a two-tiered quality testing regime for the three regional hubs so that they could assess local moisture and bean count, two vital criteria in the selling of cocoa beans. Roasters and grinders will be provided to the hubs as training equipment to reinforce the impact of poor fermenting and drying practices. The plan is for the central laboratory at Buka to have butter fat testing equipment and the means for calibrating moisture readings of the regional equipment. Long probe temperature probes were sourced because of their role in researching and training in fermentation. The use of near infrared (NIR) technology was explored for its role in moisture and butterfat content detection. It was considered too expensive to be employed locally. The provision of egg incubators was also researched. It became clear that this is not viable until electricity can be guaranteed. Over-hanging all of the above work is the need for someone from Bougainville to take on the role of exploring, purchasing and shipping such equipment.

## **Progress summary of relevant Collaborative Research Grant**

- Capacity building in family farm training occurred with staff from the DPI.
- Family Farm Teams (FFT) training has now been conducted in all 9 villages of the CRG. Regional training and roll-out of the FFT is planned for all 33 VAs in 2021 as part of the main project.





Figures 5 and 6 (left and above): Family Farm Teams training in Kikimogu.

Photographer: Josephine Saul-Maora





Figures 7 and 8 (both above): Family Farm Teams training in Kasawaro and Barani Villages.

Photographer: Josephine Saul-Maora

- Data entry for the food diaries is underway. The project coordinator's computer has had problems, so a replacement computer on loan from the DPI is being organised to facilitate this activity.
- Monthly village coaching and monitoring has been delayed with each region facing their own challenges. In addition to the COVID-19 and election related delays, the South faced heavy rainfall making it impossible to reach certain villages, Central also faced some problems with team engagement. In total 4 visits have been made to Northern villages, 2 visit to central villages and between 1-3 visits to southern villages.
- Distribution of vegetable seeds has been a major set-back. A small number of seeds were distributed during
  the initial information sessions with the intention to provide more during the monthly visits however the
  team has found it difficult to source the seeds locally. Additional seeds have been purchased for distribution.
- Timeline of the CRG project has been affected due to a series of delays caused by the 2019 Referendum for Independence, heavy rainfall and flooding causing villages to be inaccessible and COVID-19 where Bougainville was in a State of Emergency for 3 months and no travel was possible during that time. The 2020 election period also impacted activities. Following the referendum, a 6-month extension was granted for the project to finish in December 2020. Unfortunately, the delays in 2020 have meant the project has not been able to complete all activities within this timeframe. Project activities are ongoing. No further funding is required but the project is keeping faith with the villages and will complete the activities in 2021.
- The changes being adopted by the communities demonstrate their interest and engagement in this pilot project and the larger project (HORT/2014/094). In keeping with the contract, a final report is being prepared however we propose to provide a further final report when project activities have been completed as well as undertake a proper evaluation of the targeted education and training on vegetable production and diets.

#### Research tools, articles, resources

- Presentations:
  - Prof Merrilyn Walton and Prof David guest presented at *the Marie Bashir Institute 8th Annual Colloquium 2020* on 7-8 October 2020
  - Jessica Hall presented at the *Marie Bashir Institute Early Career Researcher One Health One-Day Conference* on 2 December 2020
  - Jessica Hall presented at the *Sydney Global Child Health Network (SGCHN) Virtual Research Fora* on 26 November 2020
  - Jessica Hall presented at the Global Health and Nutrition Research Collaboration meeting on 15
     December 2020
- Cocoa Market Newsletter distributed by Grant Vinning.
- Prof Walton is managing the development of The Bougainville Reader which will be an electronic book of essays associated with the projects. The Reader will be on a site where the writings will be located. The essays cover notes and extended comments that have been compiled as part of the usual project's activities that would be lost when the project closes. The Reader also provides a platform for project officers to test their research and writing skills. Officers have been encouraged to provide notes on subjects as diverse as grinding experiments in the Laboratory, pruning research, and rainfall patterns. Grant Vinning has provided an extended note on the origins of plantations on Bougainville, observations on a market development

- mission to Europe, and some broad observations on the handling of fresh produce from Kokopau to the Buka market. The latter raises the point if better quality and thus better nutritious fresh produce could be achieved by opening the market in Buka at least an hour earlier. This is in addition to the published articles in peer reviewed scientific journals.
- During the two months a number of assessments of the impact of COVID-19 were sent for comment. In some of these assessment cocoa was mentioned specifically whilst in others cocoa was seen as part of an overall assessment. The papers included the CSIRO-ANU assessment commissioned by ACIAR, a separate ACIAR assessment, papers by the World Bank and IFPRI, and the regular assessment by Pacific Trade and Invest in Sydney. Grant Vinning also helped promote the FCCI Pacific assessment.

#### **Lessons learnt**

Vegetables play two roles in the overall cocoa project. One is their importance in income diversification, the other is their role in suppling nutrition to farming families. Two streams of activities are involved. One is the production element. The other relates to ensuring the delivery to the market of a wholesome product. The notion is that the more benign the handling procedures involved with moving the product from the farm to the household in the cities then the product will stay fresher longer and thus provide a more nutritious product.

PNG Cocoa HORT/2014/096

#### East New Britain Headquarters and West New Britain

- Restrictions on international travel prevented Phil Keane from visiting the project sites in PNG in the second half of the year, but Trevor Clarke, who was confined to PNG by the travel restrictions, carried on the project work with the Cocoa Board REDS extension officers in each lowlands province, John Konam in the highlands, and REDS research and administration officers at Tavilo, ENBP.
- Trevor worked with Kenny Francis and the REDS cocoa quality staff at Tavilo to prepare an information booklet on solar drying for presentation to the Cocoa Board, with the aim of gaining approval by the Board for recommendation and roll-out of the affordable and labour-saving Solomon driers. This paper summarised the work on solar driers conducted by the REDS extension staff in East Sepik, Madang, New Ireland Provinces and ACIAR/Provincial Government staff in Simbu Province, and included assessment of quality of cocoa beans produced in a sample of solar driers.
- He also oversaw monitoring of the 18 latest-release cocoa clones planted in the many budwood gardens by Cocoa Model Farmer-Trainers, coordinated the survey of CMFTs by provincial coordinators, developed plans for focus groups as a final assessment of the development, effectiveness and sustainability of the CMFT groups, and worked with Australian-based academics and John Konam, Peter Epaina and David Yinil on the preparation of a preliminary project proposal for a follow-up project.
- From 22 to 28 November, Trevor visited West New Britain Province to discuss its possible inclusion in a follow-up ACIAR project. He flew into Kimbe Airport from Rabaul and was met by Jerry Tarutia, the Provincial DPI Crops Officer. The group met with the Acting Provincial Administrator, Philip Tabuso, the District Administrator for Talasea and other senior staff who all expressed great interest in having project activities in the province. Trevor and Jerry visited the mature budwood garden and nursery at Dagi Village and the Kapore station with a central budwood garden and nursery funded by DFAT but now somewhat neglected. They drove along the North Coast highway to the Saleilubu Central Nakanai headquarters. Central Nakanai LLG has 20 registered Cocoa Cooperative groups desperately in need of advice and assistance. They then drove to Malasi Village and met Eddie Gatu, the leader of the Shatuga Cocoa Resource Group, which has 26 members with 126 hectares of village oil palm. They want to try alley cropping by removing some rows of oil palm to plant food crops and eventually cocoa. Trevor gave advice on a trial design, removing 3 rows of oil palm to plant food crops including taro, tapioca, bananas, peanuts, corn, aibika as soil-improvers and temporary cocoa shade, and measuring production of oil palm and food crops. The groups already have a cocoa budwood garden and nursery, but needs advice and encouragement. Trevor distributed copies of his Pacific Islands Cocoa Book. They drove on to Salei Cocoa Cooperative Society and met chairman, John Kuavei. The Society has 150 members and is expecting another 150 when operations begin. They have plans for a budwood garden and nursery and have root stocks awaiting budding, but need help to train members on budding. Back in Kimbe they visited the vanilla plot of Patrick Saua Makati – he has 300 bearing vanilla vines and leads a group of about 50 farmers each with 100 to 200 vines. However, the market for vanilla is

very poor in WNBP, farmers being offered only PGK100/kg compared with PGK500-700/kg in the Sepik. The group desperately needs training and advice on vanilla management and curing. Trevor had a meeting with Mark Lebrong, the Provincial Agricultural and Livestock Manager, who advised that trials on oil palm intercropping will have to be done on village oil palm as LSS settlers had an agreement with New Britain Palm Oil Ltd to grow only oil palm. Mark pointed out the need for more focused farmer training. Overall, Trevor found many farmer groups with an interest in growing cocoa but desperately in need of advice and training. These would be ideal for studies of the establishment and sustainability of such groups.

#### **East Sepik**

- The former model CMFT site at Niumindogum that was neglected for a time has now been rehabilitated by Norman supported by our coordinator, Timothy Sam. The site has a nursery and complete and mature budwood garden that includes vanilla growing on the Gliricidia shade trees. Norman has been assisting other farmers with construction of solar driers, advised by Chris Sasingian from Yekimbole Village. The CMFT Xavier Saria at Nongori Village, Yangoru-Saussia District, had previously concentrated on block rehabilitation by chupon budding but now is establishing a nursery to propagate clones, using his mature budwood garden. The project has assisted Norman and Xavier with supply of polybags. A wheelbarrow and role of shade cloth were delivered to the CMFT Kenny Nako at Blamda Village in Wosera-Gawi District. The site has a mature budwood garden but has been cut off by a badly deteriorated road. On 22 November Kenny, two of his group members, a REDS budder and a member of the Bararat CMFT group took bundles of budsticks up the Sepik River from the nearby Pagwi port to Beglam, our most isolated CMFT site where 2,000 seedlings were budded by the team over two days, including training of local farmers.
- Timothy, Douglas Kawasi and FAO staff carried out a one-day budding training on 7 November for 49 farmers, including many women, in the EU-FAO STREIT Program at Kauk Village, Dagua LLG, Wewak District. From 16 to 20 November, Timothy attended the meeting of the Angoram-Middle Sepik LLG, Angoram District, where he and the project's first coordinator in East Sepik, Jimmy Risimeri, established the first project budwood garden in 2017 with bare-rooted clones brought from Tavilo. Unfortunately, the clones

were not well tagged, and a breeder is now needed to identify them. At the close of the meeting, all 35 ward councillors were given a cocoa manual. On 24 November the project site at Kuragur Village on Kairiru Island, just adjacent to Wewak town, was visited and assisted with polybags for the nursery they have established. The village has a mature budwood garden with all 18 CCI clones, established by field budding when John Meth was project coordinator. From 26 to 27 November propagation training was conducted for the EU-FAO STREIT Program at Saure Village, Wewak District; there were 82 participants, including many women (Figure 9). It is clear that the STREIT Program is working seamlessly with and extending the ACIAR/REDS program.



Figure 9 (above right): Propagation training for the EU-FAO STREIT Program at Saure Village, Wewak District.

On 1-2 December a Cocoa Board meeting attended by the CEO was held in Lae to review nursery projects. Our ACIAR/REDS coordinators presented summaries of their activities, for which all operational funds were provided by ACIAR. It was decided that beginning in 2021, all extension work will be conducted under the REDS section of the Board.



Timothy organised and manned a Cocoa Board REDS stand at the Sepik Agricultural and Cultural Show on 11 – 13 Dec. A cocoa budding competition was held between teams from ten nurseries, including the Paliama CMFT site at Passam (Figure 10).

Figure 10 (left): Cocoa budding competition at the Sepik Agricultural and Cultural Show.

### **New Ireland**

- Coordinator John Joseph distributed polybags to Timothy Norman, a farmer who has continued the project work on Djaul Island. He distributed budwood garden monitoring sheets to eight CMFTs George Tabukua (Marinsoan Village), Nick Misi (Bo Village), Subul Hus (Burau Village), Chris Tapit (Dampet), David Waulas (Laraibina), Lumaris Mandaso (Panamecho), Gideon Kulepmu (Umbukul Village on New Hanover), and Robin Ulawai (Noipuas Village on New Hanover). Over 2000 SG2 hybrid seeds were distributed by George Tabukua from the Marinsoan CMFT site and rolls of UV-resistant plastic and cocoa mesh were distributed to Robin Tabukua in Marinsoan, Namatanai District, and Charles Aturoro in Tarairai Village on Mussau Island, 6 hours by speedboat north of Kavieng.
- Trevor visited New Ireland from 10 to 14 November. He and John met with the Provincial Administrator, Lamilla Pawut, and the Deputy Governor and Provincial Minister for the Economic Sector, Sammy Missen, who indicated their strong support for the project and wish to see its strategy continued and CMFT nurseries and budwood gardens supported under the NIP Government's cocoa development program. Minister Missen is keen to support village economic development beyond reliance on sale of betel nut and garden foods, and he sees cocoa as having an important role. They visited Babra Makapa, DPI Agricultural Division Manager in charge of the NIPG Cocoa Program, which has established many VEW sites based on the ACIAR model, including 5 on Tabar Island in collaboration with the Simberi Gold Mining company, supported by the NGO, Business for Development. They also visited Nason Laki, Field Services manager of the Cocoa Board, who has always worked closely with John. John and Nason now share an office with DPI staff at the Kopkop Station to which the project contributed building materials for renovation. Nason loaned his tougher vehicle for the long drive south to Namatanai and southern New Ireland. They were accompanied on the trip south by a Cocoa Board officer who inspected fermentries at Morkon, Rei and Kapsipau Villages. South of Kavieng they visited the ideal CMFT site of David and Christine Waulis at Laraibina, where they saw the nursery, budwood garden, one-ha block and the healthy goat colony which has now increased to four with the recent birth of a female kid. Members of this group are helping other communities with budding. There is a strong local interest in the goats, with many farmers wanting to buy them. Establishing the colony as a viable breeding unit is a priority. After a 9-hour drive passed Namatanai to Marinsoan, they overnighted with CMFT George Tabukua, who has distributed more than 40,000 seedlings to farmers and is now distributing clones. On the following day they visited the NIPG VEW site of Douglas Toarsai and his wife Francisca at Morokon Village, Konoagil LLG, a further 2 hours' drive south through several rivers. The group has 25 members, and a budwood garden established with clones supplied by the Marinsoan CMFT. A farmer meeting attended by 10 males, 3 females and 4 youth, was held at Kapsipau Village (VEW Paul Donining). The village leader (maimai), John Saniel, wants to launch a cocoa rehabilitation project with the NIPG. The cluster group at Yasu Village led by CMFT John Tomio was developed under the ACIAR project with guidance from George Tabukua at

Marinsoan. John claims to have a cocoa tree with resistance to CPB, which should be investigated. Altogether 55 Pacific Cocoa Books were distributed. The area in southern New Ireland was an important cocoa producer before CPB and is badly in need of help to rehabilitate the cocoa and apply IPDM. The team visited Rei Village, possibly named after the ill-fated colonial development of the Marquis de Ray in the 1880s. On the return trip to Namatanai, the completed solar drier of CMFT Robin Marty at Sena was visited (photo below).



Figure 11 (above): Trevor and Robin Marty with the new Solomons-style solar drier at Sena, south of Namatanai. Note the river stones being placed under the drying beds. These heat up during the day and release heat at night to extend the drying time. Note the vent with a wide overhang in the roof to allow flow of moist air out of the drier while excluding rain.



**Figure 12 (above):** Farmers group with Trevor at Kapsipau with their Pacific Islands Cocoa Books after a farmers' meeting.

Figure 13 (next page): CMFT Christine Waulis feeding goats in the goat house at Laraibina site. The goats have a large, enclosed paddock in which to roam and feed as well as a large, raised, airy shelter.



Figure 14 (below): Large nursery in Karimui under betel nut shade.



## Highlands Simbu Province

From October to early December John Konam has been working with Dominic Wani, one of our cocoa model farmers based in ward 4 in Karimui to establish a large nursery and raise over 50,000 seedlings under betel nut and cocoa trees as shade. The seedlings will be budded using bud sticks from the 18 latest release CCI clones now in mature budwood gardens in Karimui. The grafted clonal seedlings will be planted in the 20 other wards in Karimui District plus 10 wards each in suitable sites in the 5 other districts in SImbu. In late November-early December suitable sites throughout Simbu Province have been mapped and farmer groups formed and supplied with cocoa seed to be grown as rootstocks. Sites include Chuave (Chuave Station and Kepai), Sinesine Yongomugi (Wards 1-3), Kerowaghi (Gena, Kup District), Kundiawa Gembogl (Wandi, Waie LLG; Murane, Urban LLG) and Gumine (7 tribal cocoa groups already established by Mrs Bomaigi Wei). Bomagai is the wife of the former member for Karimui, Megorema Wei, who first supported John's work. She is funding this work in her home area of Bomai. Each tribe has over 300 farming families who have been supplied with F2 seed from Karimui by Bomagai. She paid farmers in Karimui to graft seedlings with the 18 CCI clones and carry them across the Waghi River to establish budwood gardens in the Bomai area.

Figure 15 (below): Tony Siperai (ACIAR casual staff, far right) with pods harvested from the ACIAR clonal cocoa plots in Karimui at 1100 masl. Yields are being recorded from mid-November. Note the large pods, typical of highland cocoa.



Figure 16 (right): A released clone at Karimui.

### **Eastern Highlands Province**

John Thomas has been providing technical support to the EHP provincial government to establish a 50,000 capacity cocoa nursery and also working with the Vano family in Asaro Valley to establish a similar nursery.

#### Madang

- Bofeng Mebali has prepared a detailed report, 'Solar Cocoa Dryers for Smoke Free Cocoa Processing in Madang Province', on the various designs of solar driers developed by farmers in Madang, including costings for construction materials. Photos in the report show the various designs and structures. Bofeng and Aitul Weoh, our project coordinator in Madang, offer training modules for farmers in construction and operation of the driers. Bofeng considers that the solar drier innovation for improving cocoa quality will be one of the milestone achievements for the ACIAR Project.
- On 9 November Cocoa Board Field Services officers from Madang, Wesley Kilang (MOMASE & Highlands Regional Manager), Simon Mole and Alex Williams, inspected the various designs of solar driers with a view to getting them approved and recommended by the Cocoa Board. Bofeng's report of the inspection visits includes structural drawings of the various solar driers.
- On 11 November, Bofeng, Delma Miriung, Ronny Sibert and the casual staff) visited the Karkum Village site on Karkar Island, Sumkar District, to assess the budwood garden and preparation for budding of seedlings. On 17-18 November, the Madang casual staff (Steven Singa, Chris Anton, Wilfred Albert, Francis Kawig) budded over 2000 rootstocks at the village. The farmers themselves paid for the allowances of the budders at K80 per day.
- In December, Bofeng prepared a detailed proposal for a cocoa model project in Wasu, one of the Sub District centers within Tewae Siassi District, Morobe Province, adjoining Madang Province. The Wasu area has great potential for cocoa production. A lot of Wasu cocoa bean production goes through Madang due to transport difficulties to Lae. Bofeng sees the main purpose of the program to make Wasu a launching pad for cocoa development to allow farmers of Tewae Siassi District to embrace cocoa as a cash crop that will transform their lives like the cocoa farmers in East New Britain and Bougainville. Wasu would be an ideal area for establishing and assessing the effectiveness and sustainability of farmer associations.



High quality cocoa beans prepared on the Hobe Solar Drier designed by Stion and Seki Gogowi (Figure 17, left foreground), Hobe Village, Ambenob LLG, Madang District – bush materials structure, bamboo slat drying bed, and plastic film roof (supplied by the project). Note the wide overhang around the drying bed to prevent rain falling on the bed. The design was developed from the design of a coffee drier seen by Seki in her home village.

Figure 17 (left): Hobe Solar Drier designed by Stion and Seki Gogow, Madang.



Sweetpotato HORT/2014/097

• FPDA are completing a Commcare survey of commercial kaukau growers in EHP, Jiwaka and WHP to document some of the changes in kaukau production that have occurred during the project.

- The guidelines for the klin kaukau scheme are in the final stages of writing and on track for release in early 2021.
- The project team are taking a well earnt break over the Christmas period and will be back at work in January. Wishing everyone a happy and safe Christmas, and a new year that is a bit less challenging than 2020 has been!