



Enterprise-driven transformation of family cocoa production in East Sepik, Madang, New Ireland and Chimbu Provinces of Papua New Guinea

Overview

Cocoa production in PNG, always low due to poor management, was nearly destroyed by the incursion in 2006 of the Cocoa Pod Borer (CPB). The industry can be revived only by more intensive management of the crop using new clonal varieties and methods the PNG Cocoa Coconut Institute (CCI) developed that can increase yields to high levels.

The aim of the project is to have these new varieties and straightforward methods applied more widely on the smallholder farms that make up more than 90% of production.

This will be done by linking the existing extension services of CCI, Provincial and District Governments and private cocoa companies to develop village-based cocoa advisory (Cocoa Model Farmer-Trainers, CMFTs), budwood gardens and nurseries, and other services (e.g. fermentaries, farm supplies, cocoa buying) as self-sustaining micro-enterprises. CMFTs (usually a man and woman team) are being recruited from at least 20 wards in each Province; given a short, hands-on training in the new methods of cocoa propagation and management; and supported to return to their home villages to establish, with their farmer group, commercial budwood gardens and nurseries and to teach other farmers. CMFTs will introduce and evaluate the new methods and varieties on farms with farmer participation, as well as new cocoa farming systems integrating food crops, high value shade trees (e.g. galip nut, coconut, betel nut, bananas), and livestock such as goats.

Research

- An important research question is whether the project's proposed capacity building method (the recruitment of Cocoa Model Farmer Trainers from villages and their training and return to their homes as a source of advice and training for others) will be successful in providing a permanent, effective and self-sustaining source of training and advice in villages and wards. This depends to some extent on farmers' willingness to pay the CMFTs a small fee for advice. (We expect that a sharp jump in profits

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Start date and duration	Feb 2016 (5 years)
Location	Papua New Guinea
Budget	\$4,990,000
Project leader and Commissioned Organisation	Dr Philip Keane, LaTrobe University
Partner country project leaders and their institutions	Mr Alfred Nongkas, PNG Cocoa Coconut Institute Ltd. Dr Samson Laup, PNG University of Natural Resources and Environment
ACIAR Research Program Manager	Dr Richard Markham

from more intensive management of cocoa will encourage farmers to support the sources of advice in their midst.) So far it appears that the establishment of budwood gardens and nurseries will be commercially successful.

The project will facilitate scientists from CCI and project staff to conduct research into:

- maintaining soil fertility on farms in various locations;
- collecting new sources of Trinitario cocoa clones that have thrived for many years on farms;
- the possible build-up of biological control of Cocoa Pod Borer (as has occurred in Indonesia);
- the physiology and performance of cocoa clones at high altitude at Karamui and the selection of cocoa varieties adapted to this location;
- integrating food crops, high-value shade trees and livestock with intensive cocoa farming; and
- developing cheaper plastic-covered solar driers that farmers can construct.

- The possibility of establishing cocoa and Gliricidia shade on the kunai grasslands of the Sepik River Plains has developed as an important research question.

Achievements

- The Project Managers, Alfred Nongkas and Trevor Clarke, have initiated the project, initially working with Kula Daslogo in New Ireland, and later with Jimmy Risimeri in East Sepik and Aitul Weoh in Madang Provinces. They have conducted village awareness meetings and recruited and trained Cocoa Model Farmer-Trainers (CMFTs), leading to the establishment of many budwood gardens and nurseries able to propagate the new CCI cocoa clones for widespread distribution to farmers.
- Provincial and District Government officers have been involved enthusiastically in all aspects of project implementation, while NGIP-Agmark and the Productive Partnerships in Agriculture Project (PPAP) have provided on-going advice.
- A meeting of the Simbu Cocoa Development Steering Committee was led by John Konam and Damien Tokei in Karamui Settlement in 2016, with the enthusiastic participation of Provincial and District Administration staff and farmers. Selection of the best adapted types from the CCI trial planting at Karamui has begun.
- Project Managers have received support from authorities to test a relatively cheap, plastic-covered solar drier that will help reduce the problem of smoke tainting of cocoa beans caused by kiln driers. Several of these driers have been built for testing.
- Following the enthusiasm farmers and government agricultural officers expressed during the awareness meeting, the number of CMFTs to be supported in the project has been doubled to 66 (more than 20 in each coastal province).
- The CCI Extension Manual and a PNG Cocoa Farmer's Handbook have been edited and are being published; Trevor and Alfred have translated the Handbook into Tok Pisin. These books should be available to project participants in late 2017.



Farm nursery in West Sepik.
Pic Phil Keane

Impact story

Thompson Fafungian, a former police inspector, has been assisting his home village in East Yangoru, East Sepik Province, to expand cocoa production to improve the livelihoods of his people. His niece, Nola Sasingian, and her husband Chris have trained as CMFTs. They have developed a nursery and a budwood garden with the new cocoa clones, and constructed a group nursery, a fermentary, and a new design of solar cocoa drier.

Wilson Miroi, a civil engineer who runs a successful road-building and construction business in Aitape, set up his cocoa project using his own funds and mainly employing his company staff to give them a livelihood between construction projects. He attended Kula Daslogo's training session in Nov 2016 with his wife Cathy, a CMFT in New Ireland. He has since implemented the CCI/ACIAR Project strategy in his father's home area of Malol, near Aitape in West Sepik. He has established a budwood garden of the latest CCI clones, and an extremely active nursery with many capable budders. Altogether he has established over 40 CMFT groups servicing nearly 2,000 farmers throughout West Sepik. Wilson. He has already built a new style combination solar/kiln drier, successfully dried his first batches of cocoa, and is fielding interest from niche markets. One of his lead nursery staff, Grace Klembasa, who is also a lead cocoa farmer, won several awards in the Cocoa Warwagira Festival in Kokopo in May 2017; she will travel to Paris as part of her award. Grace is leading a group of 16 farmers, most of whom have cleared and marked blocks ready for planting. Many villages in the Malol, Poro and Arop areas, including Grace's, were severely affected by the disastrous tsunami there in July 1998.



Drying cocoa in a plastic solar drier.
Pic: Phil Keane