



AGRICULTURE GLOBAL PRACTICE

THE FRUIT OF HER LABOR

PROMOTING GENDER-EQUITABLE
AGRIBUSINESS IN PAPUA NEW GUINEA

COCOA SECTOR

December 2014

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I. BACKGROUND AND CONTEXT

The World Bank Group recently completed a study of gender issues in three agribusiness supply chains in Papua New Guinea (PNG), including cocoa. It found women to be key to ensuring quality in agriculture. Therefore, it recommends that if PNG wants to export better quality cocoa it needs to focus on the contribution of women; improving their skills and capacities, and giving women a greater share of the benefits.

Agriculture accounts for approximately one-third of GDP in PNG, and the sector is dominated by smallholder farming systems.

This document summarizes the main findings and recommendations relating to the cocoa sector from the joint World Bank-IFC report *The Fruit of Her Labor: Promoting Gender-Equitable Agribusiness in Papua New Guinea*.

Cocoa is one of the major agricultural export crops for PNG with an estimated 151,000 households and about one million people involved in the industry. This accounts for approximately 20 percent of the labor force.

The cocoa sector has been devastated by the emergence of cocoa pod borer (CPB), now affecting nine cocoa growing provinces. In East New Britain, once the leading cocoa producing region, production is estimated to have declined by 80 percent.

Smallholder productivity is low, estimated at 0.3 tonne/hectare, compared with plantation yields under high management of 1.0-2.5 tonnes/hectare, and research trials which have recorded yields of up to 2.5 tonnes/ hectare using hybrid clone varieties.

Poor infrastructure is costly to the industry. The Cocoa Board estimates, conservatively, that about 10,000 to 15,000 tonnes of cocoa do not reach the markets due to absent or inadequate transportation.

The report and sector summaries were prepared by consultants C. Mark Blackden (mblackden@comcast.net) and Maxie Makambo Dominic (makambo020368@gmail.com), under the overall guidance of Anuja Utz (autz@worldbank.org) and Amy Luinstra (aluinstra@ifc.org).

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II. SUMMARY OF PRINCIPAL FINDINGS

The main findings of the analysis are:

- » **Women are key to quality.** Women play an important role in time-critical and quality-relevant tasks in cocoa production, harvesting and processing.
- » **Labor dynamics affect outcomes in the sector.** Much labor is allocated for “social” purposes and labor shortages exist. This has been exacerbated by the advent of CPB, especially at critical production and processing times. Labor constraints are especially apparent when the gender division of labor is explicitly taken into account.
- » **Critical services are lacking.** Provision of services including inputs, extension, training/capacity-building and finance is limited and poorly targeted. Gender-specific tasks and needs are insufficiently integrated into the design and delivery of extension and training services.

When CPB attacked cocoa, the men got disoriented, but the women stayed focused. If [the women] don't do anything, there won't be any food on the table.

*– Mrs. Laniete Aus, President,
Women in Agriculture, East New Britain Province.*

III. KEY ISSUES IN THE COCOA SECTOR

A) Quality

Women provide substantial labor in cocoa cultivation as well as undertaking time-critical and quality related tasks. More important than the amount of labor women provide, analysis of the cocoa supply chain indicates that the specific tasks women undertake have a substantial bearing on the quality of the final product. This includes harvesting, breaking the pods, sorting of beans, transport of wet beans for fermenting, putting wet beans in the fermentary, and managing the drying.

TABLE: KEY CHARACTERISTICS OF WET AND DRY BEAN COCOA PRODUCTION STRATEGIES

Item	Wet bean	Dry Bean
Duration of harvest round (days)	0.36	2.3
Laborers per harvest group (avg #)	1.78	4.4
Labor days spent on harvest (avg #)	0.68	10.46
Labor allocation	More women	More men
Income earned per harvest round (PG Kina avg)	17.00	374.22
Control of income	Harvester	Male HH head
Transport costs	Nil/Low	High
Share of cocoa in HH income (percent)	10	77

HH = household

Source: Curry et al. 2007:59

These are time-critical tasks: they must be undertaken promptly in relation to harvesting, and for a specific amount of time. These tasks substantially determine the quality of the cocoa delivered to the exporter. The labor and time requirements for cocoa harvesting differ in significant ways, as are the earnings that can be obtained (Table).

“Typically, families use their Stage 3 [older] cocoa blocks like bank ATMs: the cocoa block is visited only when cash is required for immediate consumption. Very little or no time is allocated to block maintenance. This type of production practice is known as ‘forage harvesting’ Male farmers have lost almost all interest in their cocoa block as it enters the Stage 3 senile phase.”

– (Curry et al. 2007:97).

The different stages of cocoa cultivation, reflecting the age and potential of the trees, are what gives rise to the distinction between “farming” and “foraging”.

The failure to adopt good cocoa farming practices leads to a mutually reinforcing set of negative outcomes: low productivity, low quality, greater vulnerability to pests and disease, little investment in replanting or rehabilitating existing gardens, low income-earning and labor absorption, a missed opportunity to reduce poverty, and inefficient use of land and waste of resources (Agrifood Consulting International 2009:63-65).

Three inter-related issues affect women’s ability to contribute to improving the quality of PNG cocoa. These are:

- » **Incentives:** The economic incentives for women to allocate sufficient labor to these quality-defining tasks, or, equally importantly, to do them well, are low. There is a substantial gap between the work done by women in the cocoa sector and the benefit they obtain. Differences in incentives are not only relevant for women’s labor allocation and choices. Younger males (sons of household heads) also resist allocating their labor to cocoa cultivation if they feel that they are not being sufficiently compensated for the work undertaken.

- » **Knowledge and Information:** Women's access to the knowledge and skills required to carry out these tasks is extremely limited as gaps in education, literacy, skills, and participation in extension and training activities persist.
- » **Socio-Cultural Dynamics:** There are important gender-specific dynamics at work in PNG society that differentially affect men's and women's capacity to exercise economic agency. PNG society is largely patriarchal, and, even in matrilineal regions, men are seen as household heads and primary decision-makers.

B) Labor

Labor constraints are especially apparent when the gender division of labor is explicitly taken into account. Labor issues have far-reaching implications for the performance of the sector. Of particular importance are gender differences in labor allocation and rewards, and the ways in which social and economic factors intersect in determining labor use.

- » **Much labor is allocated for social purposes.** Social factors and obligations, including church and community work, are at least as important as economic ones in determining labor use, whether for cocoa cultivation or other economic activities. Consequently, relationships along the supply chain can be seen to have at least as much to do with clan and culture as with product characteristics and market dynamics.
- » **Labor shortages persist.** Households experience labor shortages and do not have enough labor to do all the things they need to do, or to do the things at the right time and in the right way. Even before the advent of CPB, labor shortages were identified as a critical issue in the cocoa sector. CPB exacerbates the labor constraint by requiring an even more labor-intensive approach to cocoa block management and cultivation, while simultaneously reducing the output from these

blocks. It is estimated that it takes 2-3 times as much labor to manage cocoa blocks effectively since the advent of CPB (Curry et al. 2007). However, this is a temporary situation and once CPB is under control labor allocation to cocoa cultivation can return to normal, pre-CPB, levels.

- » **Smallholders need to adopt a more labor-intensive and “business-like” approach to cocoa cultivation.** If the industry is to survive, smallholders must adopt a much more labor-intensive production strategy. This is why labor availability is the binding constraint. With adequate labor more work could be put into block maintenance and, as needed, into replanting old cocoa stock, which would have a positive impact on yields and returns to labor. It is the gender-specific dynamic of labor allocation and the disconnect with benefits obtained that is perhaps the most important single driver of labor constraint in the cocoa production and processing cycles. In a “farming” approach to cocoa cultivation, substantial labor (male and female) is mobilized, whereas under a “foraging” approach, minimum labor is deployed (mostly female), with attendant negative consequences for yields and the returns obtained in the sector.

C) Services

Provision of services – including inputs, extension, training/capacity-building, and finance – is limited and poorly targeted, and gender-specific tasks and needs are insufficiently integrated into the design and delivery of extension and training services. In addition to the limited reach and focus of extension services, other key services are often not available to smallholders. Input supply is weak and inconsistent. New varieties are not readily available to farmers and need to be developed to take account of PNG’s specific climate and agricultural requirements. There is limited access to financial

services, and important gender-specific barriers persist, as women tend not to own the land, fixed assets, or other resources that are needed to meet collateral requirements.

Beyond these sector issues, broader, systemic issues persist in PNG and affect sector performance. In addition to the well-documented issues of poor or non-existent infrastructure, especially transport and communications, PNG suffers from pervasive insecurity and violence, including domestic violence, which disproportionately affect women and their ability to operate as economic agents in the sector. Lack of information, knowledge, communications and services (including education and health), more generally, is a further systemic barrier to gender-equitable agribusiness.

IV. PRINCIPAL RECOMMENDATIONS FOR STAKEHOLDERS IN THE SECTOR

All stakeholders have a role to play in improving outcomes for women in the sector. Key actions identified include:

- » **Incentives:** Improve the capacity of women to benefit directly from the income earned in the cocoa sector by facilitating direct payment systems, by aggregating production through cooperatives, and by supporting training and sensitization efforts (including through personal viability–PV–training) aimed at shifting cultural norms relating to women’s economic contribution.
- » **Inputs:** Raise yields by improving the functioning and economic viability of nurseries and bud gardens, while focusing on developing CPB-resistant strains and improving the overall quality of plant material—focus specifically on developing women’s technical skills and capacities in these areas.

- » **Knowledge:** Improve quality through better training in production and processing techniques. Re-focus extension and training messages toward the quality-enhancing tasks for which women are responsible. Adopt a specific target (30-40 percent) for female participation. Consider establishing quality protocols at each step of the supply chain, outlining the critical steps (and who does them) involved in maximizing quality. Ensure that these protocols are integrated into extension and training packages. Analyze labor dynamics in the sector, through commissioning time use surveys and research on the gender division of labor for key tasks, including domestic work and returns to labor.
- » **Certification:** It is widely believed that by 2020 all cocoa bean products will be marketable only if they are certified under any of the certification labels currently known, and this is an important entry point in the sector. It is critical to examine the extent to which certification schemes in the cocoa sector (Rainforest Alliance, 4C, UTZ, Fair Trade, Organic) include gender equality provisions in capturing “social” co-benefits, how these provisions are being implemented, and how compliance is monitored.

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