

# PHAMA Technical Report 101

Gender Analysis of the Cocoa Value Chain in Samoa

## Technical Report

Gender Analysis of the Cocoa Value Chain in Samoa

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Prepared by

**AECOM Services Pty Ltd**

Level 28, 91 King William Street, Adelaide SA 5000, Australia

T +61 8 7223 5400 F +61 8 7223 5499 [www.aecom.com](http://www.aecom.com)

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## Quality Information



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Prepared by Penelope Schoeffel & Emele Meleisea-Ainuu

Reviewed by Sarah Rippin, Communications Adviser and Bronwyn Wiseman, PHAMA Deputy Team Leader

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## Acronyms

Abbreviation	Description
AUA	Apia Urban Area
EIF	Enhanced Integrated Framework
GDP	Gross Domestic Product
MAF	Ministry of Agriculture and Fisheries
MCIL	Ministry of Commerce, Industry and Labour
MWSCD	Ministry of Women Social and Community Development
NWU	North West Upolu
PHAMA	Pacific Horticultural and Agricultural Market Access Program
PUMA	Planning and Urban Management Agency
ROU	Rest of Upolu
SACEP	Samoa Agriculture Competitiveness Project
SAT\$	Samoa Tala
SBS	Samoa Bureau of Statistics
SUNGO	Samoa Umbrella Organisation for NGOs
STEC	Samoa Trust Estates Corporation
SEFOKI	Samoa Export Farmers Organic Koko (Association of cocoa growers in Afega, Malie and Tuanai villages)
SROS	Scientific Research Organisation of Samoa
USP	University of the South Pacific
WIBDI	Women in Business Development Incorporated
WTO	World Trade Organization

## Executive Summary

This report describes the findings of a study that aimed to identify and document the respective roles, responsibilities, expectations and challenges of women and men across the cocoa value chain in Samoa. The report recommends specific aspects or approaches that could be taken to better address gender issues and, in particular, women's economic empowerment. The study involved a review of documents as well as interviews with 36 women and men who grow and process cocoa on village smallholdings, mainly on customary land, and with government and private sector stakeholders in the cocoa value chain in Samoa.

### Gender and Samoan cultural norms

In the traditional Samoan village context, cultural gendered norms include the idea that heavy outdoor activities, including cultivating food and cash crops such as cocoa, is men's work while women's work is considered to be home-based processing. For this reason, only a small proportion of women are employed as paid labour in the cocoa value chain, and mainly for processing tasks. However, significant numbers of Samoan women supervise and/or contribute to various other types of work on smallholder cocoa plantations, from planting to harvesting. Furthermore, gendered roles in the cocoa value chain may overlap; for example women may assist with weeding, harvesting and fermenting tasks, which are considered men's work, and men may help with sorting, roasting, winnowing and pounding tasks, which are considered women's work. Still, however, women in cocoa-growing households play a greater role than men do in the roles of processing the crop and in selling processed beans. Women add value to cocoa grown by the household, and the product provides hundreds of women with weekly incomes.

### *Koko Samoa*

*Koko Samoa*, a solid paste of fermented or unfermented roasted and pounded cocoa beans is a product mainly associated with women. It is regularly purchased and consumed by people in Samoa and by Samoans living overseas and is preferred to processed and branded imported cocoa powder. *Koko Samoa* is sold in markets and roadside stalls, and in shops and supermarkets. It is also exported in significant quantities for sale to Samoan consumers in American Samoa, New Zealand, Australia and the USA, mainly through informal family networks.

In the course of this study we found there were many female cocoa-producing micro-entrepreneurs, particularly those who were both growing cocoa and processing cocoa beans and *koko Samoa* as a family business. Significant numbers of women rely on sales of *koko Samoa* as their only source of cash income, and feel that it is the best agricultural product because it is not perishable and there is year-round demand.

Because of the regular income stream from making *koko Samoa* or selling cocoa beans to *koko Samoa* producers and the rising prices when cocoa is scarce, smallholders prefer to stockpile their harvest rather than sell the whole harvest to a commercial buyer. This mode of production does little to boost formal cocoa exports or supply local processing firms, but from the smallholder household perspective, it maximises the value of the crop. Direct smallholder sales of fermented dried cocoa beans to exporters largely cuts women out of the supply chain (except for those women who contribute unpaid family labour to growing and harvesting, fermenting, drying and roasting). However 'formalising' *koko Samoa* production for export (with the objective of economically empowering women) is constrained by the way it is produced. *Koko Samoa* is mainly processed in the backyard kitchens of smallholder households and is unlikely to meet food standard requirements of export markets. In contrast cocoa mass produced by *Nora Plantation Foods* for export is processed in hygienic conditions to meet such requirements.

### Perceptions of women's role in farming

There is a tendency, consistent with Samoa values, to assume 'farmers' are male, and to identify women's roles in cocoa production as 'helping' rather than as playing an integral and, in some cases, leading role in both production and in processing and selling that adds value to the crop. However, although women are seldom regarded as 'farmers' in terms of cultural perceptions, in many cocoa-growing households women work with their kinsmen or husbands and children on planting (when cocoa is being replanted) and on weeding and harvesting.

Because of Samoa's predominantly male *matai* (chief) system of local government there is an attitude that men should take the lead in terms of representing any agricultural industry. Therefore, so far there is only one cocoa growers association, for a group of villages on Upolu, and it has no women members.

### Women's rights to land

Women in Samoa have the same rights to customary land as men do, but the majority of women reside on their husband's land, not the land of their own family. When they do reside on land belonging to their own family they

have an advantage in retaining rights to assets they have developed through their own efforts or those of other family members. A significant minority of women are registered with the Ministry of Agriculture and Fisheries (MAF) as ‘farmers’ in a replanting project. Most of these women are those whose households cultivate customary land that belongs to the woman’s own family, or who are the owners of leaseholds or freehold plantation land. However, thousands of other women living on family land belonging to their husbands are not regarded as ‘farmers’ although they are active in smallholder households assisting with cocoa growing, processing cocoa, and selling *koko Samoa* and cocoa beans from roadside stalls, outside shops in town or at markets, or to middlemen.

### Development aspirations

Nearly all the women and men interviewed said they would like to expand their family cocoa plantations. However, it was evident that most cocoa-growing households do not specialise in cocoa, but grow a variety of other crops for home consumption and for sale, often have wages from casual or full time employment, and have relatives overseas who assist with major financial needs.

The study found that women and men express the same interests in relation to cocoa production. Most adult men and women in cocoa-producing households are interested in learning how to increase efficiency of production in both growing and processing cocoa. Many made suggestions about how the government could assist and these were consistent with the recommendations of the Ministry of Agriculture and Fisheries (MAF) cocoa sector review (MAF, 2004).

### Recommendations

It is recommended that the economic empowerment of women will be best achieved by the following measures:

#### (i) Koko Samoa processing technology trials

Scientific Research Organisation of Samoa (SROS), in close consultation with Women in Business Development Incorporated (WIBDI), should conduct research in areas such as cocoa-grinding equipment and various types of mortars and pestles, to see whether the use of labour-saving technology: (a) affects the flavour and texture of *koko Samoa* preferred by Samoan consumers; and (b) is economically viable.

Associated research on smallholder *koko Samoa* production methods and food standards for export markets should also be undertaken. This would allow standards to be made known to smallholder producers who wish to ‘formalise’ production for export markets.

#### (ii) Information for women in rural households

MAF, in consultation with Ministry of Women Social and Community Development (MWSCD), should ensure that its programmes of assistance are made known to women through the village women’s representative (*Sui Tama’ita’i*). Even if women are not involved in the actual tasks of plantation maintenance, they have a direct interest in improving production, and may participate in or supervise tasks of plantation maintenance. Women and men need access to technology and technical information to help with cultivation, including: affordable pruning tools; knowledge about how to prevent and reduce the pests and diseases that affect cocoa; and advice on ways of fertilising trees without compromising their organic certification.

- MAF should increase more proactive extension services, possibly with support from development partners, targeting both men and women;
- MAF should establish roadside cocoa demonstration plots in selected districts to demonstrate best practice, and as sites for training;
- Ministry of Commerce, Industry and Labour (MCIL) working with MAF and Samoa Umbrella Organisation for NGOs (SUNGO) should be supported to provide rural women and men with training on basic business principles, including financial literacy, financial management, saving, banking, and record-keeping in relation to their plantations;
- MAF should be supported to provide weekly TV and radio programmes on the topic of agricultural development. These could be linked to current agricultural development programmes, including those for cocoa, and emphasising women’s contributions. Development partners may wish to consider providing funding to get this started;
- MAF should consider employing more women as extension agents and, if necessary, provide scholarships to train women in agriculture with a specialisation in crops; and

- MAF should establish the planned organic unit as soon as possible and promote the economics of organics production, and how to manage an organic cocoa plantation in terms of fertilisers, weed control, pest control and disease control.

**(iii) Cocoa growers associations**

MAF, MCIL and working with SUNGO, should encourage and assist the formation of non-governmental district-based cocoa growers associations, with both women and men among their membership. The associations could be:- a means of sharing and disseminating information on cocoa growing and processing, as well as on market opportunities, and organise training activities. There are opportunities to fund such organisations and training through the Australian Direct Aid Programme (DAP), a small grants programme, and the Civil Society Support Programme funded by Australian Aid and the European Union.



## 1. Introduction

This study was conducted in February and March 2016. The objective was to identify and document the respective roles, responsibilities, expectations and challenges of women and men across the cocoa value chain in Samoa. The study recommends specific actions or approaches that could be taken by the Pacific Horticultural and Agricultural Market Access Program (PHAMA) or other programmes, commercial parties, or the Government of Samoa, to better address gender issues and, in particular, women's economic empowerment.

The study covers cocoa production targeting domestic (home) consumption, sale in local markets (including roadside sales) and sale to export markets (directly or through other people). It includes the production and sale of all forms of cocoa, including wet beans, processed beans, *koko Samoa* and any other processed forms.

The study collected information on the current inputs and income (or other returns) derived across the cocoa value chain by location, gender, product type and destination market (local versus export). This includes the differences in the roles, returns and challenges between the production and sale of different forms and intended markets for cocoa products in Samoa.

The study includes an overview of the gender context in Samoa and relevant community, donor or Government of Samoa led programmes or activities aimed at addressing gender issues. Consideration is given to the existing interest and ability for women to participate in organised farmer or producer-type groups and whether this presents any particular challenges, opportunities or any generic issues potentially impacting women's opportunities for economic empowerment.

The methods used for this study were a review of relevant research reports and structured interviews with representatives of government agencies (the Ministry of Women, Social and Community Development [MWCD], the Ministry of Commerce Industry and Labour [MCIL] and the Ministry of Agriculture and Fisheries [MAF]), with two larger-scale growers, with three cocoa-processing enterprises and with 36 women and men who are smaller-scale cocoa growers, processors and vendors. Cocoa growers were identified among registered growers in the MAF Stimulus Package programme for replanting cocoa, coconuts and coffee, and from those registered with Women in Business Development Inc. (WIBDI). We thank all the stakeholders for assisting this study.

## 1.0 Social Characteristics of Farming Households

### 1.1 Population and Geography

The population of Samoans living in Samoa is now approximately 200,000. Historically, the population of Samoa grew from 32,612 in 1903 to 187,820 in 2011. Today there are as many, if not more, Samoans living overseas than in Samoa, mainly in New Zealand, Australia and the USA. The influence of the Samoan diaspora on Samoa is very significant, and remittances comprise a substantial proportion of Samoa's gross domestic product (GDP).

Samoa comprises two main islands and five very small ones, of which only two are inhabited. The islands are not distant from one another and a regular ferry service links the two main islands. Each island has good road networks. Samoa does not have the development problems associated with remote and isolated island communities, as is the case in most other Pacific Island states.



Figure 1: Samoa's main islands. Source: Google maps

Statistical information about Samoa is mainly presented by region, with four main regions: the 'Apia urban area' (AUA), the relatively densely-populated area of 'north-west Upolu' (NWU), the rural areas of the 'rest of Upolu' (ROU), and Savaii. Figure 1 illustrates the distribution of the population by region.

Most Samoans (80%) live in rural areas, and overall the rural population of Samoa has not grown much, with the exception of densely-populated and increasingly urbanized NWU. The populations of villages and districts in some rural areas have declined in the last decade or so. People have either moved to peri-urban villages or to the town of Apia or have migrated overseas. The AUA is located on Upolu. On Savaii, there is a small township within the boundaries of the village of Salelologa, but it is not yet designated 'urban' despite providing many of the island's core services and facilities (SBS, 2011). The 2011 census of population and housing found that 69% of households live on customary land, 25% live on freehold land (mainly in the town) and the remainder lives on government or church-owned land (SBS, 2011:87).

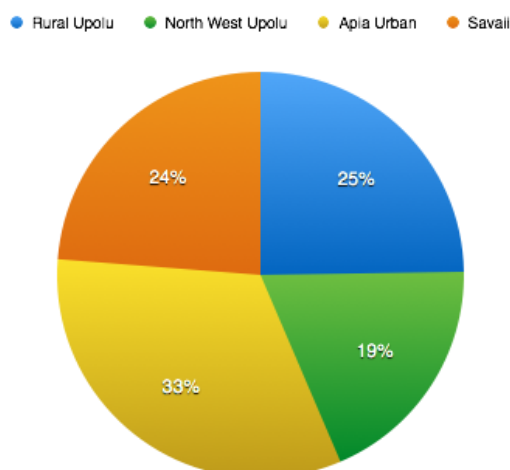


Figure 2: Distribution of population in Samoa, 2011. Source: Samoa Bureau of Statistics, 2011 Census of Population and Housing.

Table 1: Number of households by region

	1989	1999	2009	2009 (%)
Samoa	15,474	20,521	23,164	
AUA	2,964	4,449	4,555	19.7%
NWU	3,883	6,189	7,447	32.1%
ROU	4,124	4,761	5,509	23.8%
Savaii	4,503	5,122	6,653	24.1%

Source: Samoa Bureau of Statistics, Agriculture Census 2009

## 1.2 Village Organisation

The Constitution of Samoa recognizes traditional local government under Article 100. The Internal Affairs Act 1995 provides for the Internal Affairs Division of the Ministry of Women Social and Community Development (MWSCD) to oversee the wellbeing of villages, village authority, and to provide for 'other matters relating to the culture and traditions of Samoa'.

Samoa has over 275 local government areas, of which 192 are traditional villages, 48 are sub-villages of traditional villages, and 35 are non-traditional villages (Meleisea et. al., 2015). Non-traditional villages include new settlements, large residential compounds and suburban areas.

A traditional village (*nu'u*) comprises a number of extended families within a shared territory. Village populations range in size from a few hundred people to several thousand people. Villages with large populations are usually divided into sub-villages. Local government is by village councils composed of mainly – or more often exclusively – male *matai* (chiefs, heads of families and lineages) of various ranks in the traditional village hierarchy, who represent the families of the village. *Matai* make decisions for the village in council, based on consensus and following discussions in which all *matai*, irrespective of their rank, have the right to express opinions.

Each village council elects a representative (*Sui o le Nu'u*) who liaises with the central government through the Internal Affairs Division of the MWSCD. Local government also includes village women's committees (*Komiti*) who elect a representative (*Sui Tama'ita'i*) who liaises with government through the Women's Division in the MWSCD. Villages also have associations of untitled men (*Aumaga*) and one, or sometimes several, churches with resident pastors, the main denominations being Congregational, Catholic, Mormon and Methodist.

Within the town boundaries of Apia there are traditional villages, a central business district and suburbs comprised of freehold sections of land. Apia town has no municipal council, instead the Planning and Urban Management Agency (PUMA), under the Act of 2004 (amended in 2005), administers the urban area.

Local government services are village-based. The national government treats all settlements (traditional villages, suburbs, major government and church compounds) as though they were 'villages' in terms of the provision of government services, including those that do not have a traditional governance structure. Most villages have access to electricity, piped water supplies, village /district schools, and accessible district health centres.

### **1.3 Economy, Employment and Gender**

Samoa's agricultural censuses of 1989, 1999 and 2009 present a picture of increasing agriculture for subsistence or semi-subsistence purposes (Table 2). There has been an apparent decline in commercial agriculture, for example cocoa comprised 9.8% of cultivated landholdings in 1989, 7.5% in 1999 and 6.7% in 2009.

**Table 2: Agricultural activity in households**

	1989(%)	1999 (%)	2009 (%)
Non-agriculture	28.0	20.0	16.0
Minor agriculture	2.0	8.0	15.0
Subsistence	19.0	30.0	34.0
Mainly for home consumption	49.0	39.0	31.0
Mainly for sale	5.0	5.0	3.0

Source: SBS Agriculture Census 2009

Samoa households typically have several economic strategies to achieve the most commonly-desired outcome of a regular, even if small, cash income (as was evident from our interviews). Most households grow some of their food as well as crops for sale; receive remittances from family overseas to meet special needs such as ceremonies, church donations, travel and education; and many sell home-made goods (for example, mats, fans, printed *lavalavas*, *koko Samoa*, husked drinking coconuts, firewood and cooked food).

Most households also have regular or periodic income from paid employment. According to a study by Women's World Banking (2013), income earned by members of households is pooled for household needs and for major expenditure such as annual church contributions and funeral ceremonies. Adult men and women usually control the income they earn directly, although this income is mainly used for household and family needs. Some families expect younger members of the household to hand over all or most of their earning to their parents, however, and the control of money can be a source of intra-family conflict. Personal spending by men is more likely to be on beer, and women are more likely to spend money on playing Bingo (usually for church fundraising).

Most agriculture (86%) is on customary land, 3% on leased government land and 9% on freehold land. Only 1% of agriculture is on leased customary land and leased freehold land (SBS 2009). Households typically hold two parcels of land, with a total area of about three acres (SBS 2009).

Most agricultural activity is to feed the family, with surpluses being sold in front of the house or at a market to meet needs for cash. Households that practice subsistence agriculture still need cash for additional needs like sugar and salt and other foods, and expenses for electricity, water, and school fees. Those without access to land for planting are dependent on cash to buy food.

Although Samoa has considerable underutilised land for agriculture, most urban households have only quarter-acre house sites, and in northwest Upolu increasing population density means that many households have increasingly limited access to customary land for cultivation.

In 2009 the Agriculture Census recorded 94% of paid workers in agricultural activities as being male, of whom 26.6% were paid wages only and 73.4% were paid in cash, food and other benefits. Census data from 2011 indicates gender gaps in employment (Table 3), with a much smaller proportion of women (compared to men) of working age counted as economically active (27%) or engaged in remunerated employment (22%), according to definitions in the Census of Population and Housing (SBS 2012). This inequity reflects not only the number of women who stay at home with a family but also the very low female share of unskilled labour, and it disguises women's 23% share of skilled and professional employment compared to the 10% share of men (MWCSD, 2015). Census data also shows that women in Samoa are as well educated, if not better educated overall, than men; 47% of women have secondary education compared to 44.1% of men, and 11.5% of women have tertiary qualifications compared to 10.5% of men.

Table 3: Employment status by sex, 2011

Employment status	Male	Female
Employer	72.6	27.4
Employee	65.1	34.9
Self-employed	65.0	39.0
Make/manufacture goods for sale	47.2	52.8
Street vendors	61.7	38.3
Produce subsistence for use or sale	94.2	5.8
Not economically active	36.5	63.5

Source: Samoa Bureau of Statistics, Population and Housing Census 2011

Samoa traditional cultural gendered norms for work in the village context are as follows:

- Heavy outdoor work should usually be done by men and older boys, including plantation work, cutting firewood, carrying loads from the plantation, fishing, care of livestock, grating coconuts and cooking staple foods, the *umu* (food cooked in a ground oven) and the *saka* (staple food such as taro and green bananas boiled in a large pot over an open fire).
- Lighter work in the household compound is usually done by women and older girls and may include growing herbs and vegetables, processing *koko Samoa* and scented coconut oil (for home use and sale), preparing pandanus for making mats, and hibiscus fibre for making coconut strainers, weaving mats and other handicrafts, reef cleaning for seafood, cooking food, washing clothes and other housework.
- Children of both sexes help with housework. In families with a shortage of older boys, girls will do many tasks normally done by boys and vice versa.

As discussed in Section 2.5 below, the gendered division of labour is often more of an ideal than a reality; many women do agricultural work, particularly relating to cocoa, including planting, weeding and harvesting even though these tasks are considered masculine.

## 1.4 Gender and Land Tenure

The Samoan kinship system allows people to trace their ancestry and claim rights to use customary land through their father or their mother, depending on who they live with. Traditionally, women go to live with their husband's family after marriage, and women are socially subordinate to their husband's family, including his mother and sisters. However, nowadays significant numbers of men live in their wives' villages and cultivate land belonging to their wives' families. This arrangement is much more advantageous to women, because if their husband dies or if they divorce, the land and other fixed assets stay with the wife and her children. Married women also have a higher status in their own family and village than they do in their husband's family and village.

When women stay in their villages after marriage, they are considered to be the landowners. When farmers register for assistance from the Ministry of Agriculture and Fisheries (MAF), as described in the following section, the landowner is the one registered as a farmer. Thus, if the landowner is a woman, she is the one registered, even if her husband does most of the plantation work.

If the couple lives with the husband's family and the husband dies or the marriage ends, the wife may not retain any rights to his family land according to Samoan custom. Traditionally, widows return to their own families. But this is rarely the case today. For example, one of the women we interviewed for this report is a widow and was taken to the Land and Titles Court by relatives of her late husband, claiming that now he had passed away her house and small plantation was theirs according to Samoan custom. This woman lives alone, as all her children live overseas. The heavy work on her small cocoa plantation is done by a man she employs. She is determined to keep the property developed by her late husband and herself for her children, in case they come back to Samoa.

The Court found in her favour, but if she had gone overseas to live with her children they may have allowed the husband's relatives to take the property.

The term “female/woman headed household” is not really applicable in the Samoan village context as according to Samoan conventions, a household is headed by a *matai* (only about 5% of village based *matai* are women, according to the findings by Meleisea et. al. 2015). Even if there is no *matai* living in a household, the head of that household is the family's *matai*, who may live elsewhere in the village. Therefore a widow or single women living on her own family land may, de-facto, be head of her household, a kinsman holding the title of her family will be regarded as the formal head of the household.

Samoan customs have been evolving over time in response to changing circumstances. Today it is not unusual for people to disagree about what is Samoan custom. There has been a slow economic revolution toward dependence on money, which has accelerated rapidly since the 1970s as a result of mass emigration and subsequent remittances. As a result, the traditional system of land tenure, which evolved historically to maximize the efficiency of a subsistence economy, is being adapted to a money-based economy, with a lot of associated conflict.

## 1.5 Gender and Roles in Smallholder Cocoa

A good overview of the history and current situation of cocoa production is provided in a MAF sector review titled *The Feasibility of Reviving Cocoa as a Major Industry: Strategic Overview* (McGregor et al. 2004). This review notes that most cocoa growers and processors in Samoa are smallholders. According to Samoan cultural norms, as described in the previous section, women seldom do heavy outdoor work in cocoa cultivation or in other manual labouring work. Men are responsible for other tasks involved in taking care of trees (planting, weeding and pruning) and harvesting, cutting cocoa pods and carrying harvested cocoa and fermented cocoa beans). Although women often help men in the family with planting, weeding and harvesting, these tasks are not generally seen as women's work. One prominent business women and owner of a small cocoa plantation declined our request for an interview, insisting that “cocoa is men's work and men's business”.

Both women and men do cocoa-processing tasks for small-scale production of *koko Samoa* (lumps of cocoa paste in cup moulds), but women usually do more of this work than men. There are two types of *koko Samoa*: *kokofa'apala* is cocoa that is fermented, dried, roasted, and pounded, while *kokomata* is made from unfermented roasted and pounded beans. Local tastes have adapted to the product made with unfermented beans; the wet beans are roasted and pounded to a paste, or dried and stored for later roasting and pounding. Both kinds of *koko Samoa* are made for home consumption as a hot beverage prepared with boiling water and sugar, or as *kokolaisa*, which is cocoa that is boiled with rice and coconut cream. Samoans tastes are for drinking *koko Samoa* with small chewy particles of the bean in it, rather than mechanically ground cocoa powder.

*Koko Samoa* and food made with it are sold at local markets and on the street. It is also exported via informal arrangements, mainly through family connections, to New Zealand, Australia and the USA. Local demand is high and the 2004 MAF cocoa sector report (cited above) estimated that: ‘Approximately 12,300 households in Samoa consume three cups of cocoa per week, on average. Hence, when cocoa is readily available, around 43,000 cups of cocoa are consumed in Samoa per week (approximately 500 tonnes of dry bean equivalent annually)’.

It is not unusual for women to own cocoa plantations and to supervise cocoa growing and production. Many women cocoa farmers are single or widowed, having taken over management of a plantation on their own family land from their husband, or sometimes from a brother, while others manage the plantation because their husband has a full-time paid job. Women growers typically organise the work of cultivation with young men of their family or with paid male workers at peak times. They usually process *koko Samoa* themselves, sometimes hiring other women to help.

It was evident from the responses to our interviews that most smallholders and, indeed the larger growers as well, are risk averse (case studies from the interviews are detailed in the Appendix). None specialised in cocoa, even when cocoa was their main source of cash. Typically, they grew staple food crops such as taro, banana and coconuts as well as cocoa, and many were assisted by the government agricultural ‘stimulus package’ for replanting cocoa, coffee and coconuts (see 2.6 below), which is being implemented by the crops division of MAF.

As described in 2.2 above, households usually have several sources of income. Most cocoa growers treat their cocoa as a kind of ‘bank’, stockpiling their dried beans to sell in small amounts, or to make into *koko Samoa* for sale, thus ensuring steady cash income, even if the income is small. This enables price maintenance for months

after harvesting, with prices rising as high as 10.00 to 12.00 Samoan Tala (SAT\$) per cup as supplies dwindle. People who do not have cocoa plantations often buy cocoa (or, regrettably, steal cocoa pods) from others in the village, or from people in other villages, to process for home consumption or for sale.

The general price expectation among small growers was for at least SAT\$8.00 per kilogram (kg) for dry beans, although a few said they have sold larger amounts (after harvesting and processing) for a lower price. According to the MAF cocoa report cited above, in 2004 the local price of cocoa beans was around SAT\$13.00/kg (SAT\$6.00/pound), which is significantly higher than the world price, which was US\$1.50/kg (SAT\$4.10/kg) at that time.

The report says that *koko Samoa* was selling for around SAT\$7.00-10.00/200 grams in local markets, but when cocoa was in ready supply, *koko Samoa* was sold for around SAT\$2.50-\$3.00/200 grams. According to respondents from our interviews, prices in times of ample supply were higher than those documented in the MAF report, at SAT\$5.00-7.00 per plastic bag full of processed beans or per unit of *koko Samoa*.

It was observed that some, possibly many, small cocoa plantations appeared to be poorly managed, without pruning and with evident black pod infection (which reduces productivity), and these plantations can therefore be assumed to have low productivity. There is also currently a major resurgence of rhinoceros beetle infestation of coconut palms, and these are often inter-planted with cocoa. Many farmers insist that black pod infection is caused by lightning, not by a fungal disease, and some believe the problem increases with pruning (as pruning makes it easier for the lightning to strike the trees). This confusion is because the disease spreads quickly during prolonged periods of heavy rain.

Many farmers, both men and women, are confident that they know about cocoa growing, yet appear to have a limited understanding of how to make their trees more productive. Many farmers also don't know how to produce cocoa in larger quantities as a commercial enterprise, which suggests a need for business training and more effective extension services. Several farmers suggested that declining size of pods might be an effect of climate change, suggesting that farmers need more information about fertilisers, particularly those compatible with organic certification. Some were sceptical about the advantage of organic certification and the president of the Farmers' Federation and Cocoa Grower Association (see 2.7 below) said he actively opposes it. The most common reason for opposition is that weeding is too labour intensive without herbicides. This indicates that the farmers are unaware of organic methods of weed prevention, such as mulching (using pruned branches and other locally-available organic materials to suppress weed growth).

## 1.6 Assistance Programmes for Smallholders

The Crops Division of the MAF is responsible for crop research, project management, training and extension, and the production and supply of planning materials to farmers. It employs 144 males (96 permanent, 48 on daily wages) and 40 females (33 permanent, seven on daily wages). Male employees mainly do technical, extension and field work, and women work in laboratories, the plant propagation nursery and administration.

Among its programmes is the government-funded 'Stimulus Package', a programme which began in 2010 and aims to work with at least 500 farmers to replant cocoa, coconuts and coffee. The farm model being promoted under the programme is based on a two-acre plantation with 50 coconut palms inter-planted with 750 cocoa trees (Trinitario) and 250 coffee trees. Farmers who have suitable land pay SAT\$100 to enrol in the programme and are monitored by the Crops Division, which supplies planting material and extension support. Cocoa and coconuts are the base crops for the Stimulus Package program. The optional third crop is coffee or fruit trees grown as a border crop. Most farmers do not want to plant coffee so were offered fruit trees as an option instead of coffee. The Crops Division also sells cocoa seedlings to growers who are not part of the programme. The programme pays farmers who have re-established their plantations according to the plan a SAT\$1000.00 bonus for two years as an incentive before their trees become productive.

Currently, most cocoa growers supply the local market for fermented and unfermented cocoa paste and organise production to maintain the price by producing less at harvesting time to conserve a steady supply in local markets and shops.

The programme encourages registered farmers to get their farms organically certified, but this is not a requirement. This is because some small farmers do not have enough family labour to do hand weeding, so use herbicides, and possibly also because many farmers have yet to fully understand that organic produce attracts higher prices, so are not motivated to adopt organic methods. The Division is planning to establish an organic



programme, which will undertake research and training. At present, only the WIBDI works (exclusively) with farmer members who have organically-certified farms; 20 of its member farmers are registered in the programme.

Most of the farmers cultivate land under customary tenure. At present 450 male farmers and 60 female farmers (see 1.4 above) are registered in the Stimulus Package programme. In smallholder cocoa production, according to the CEO and Project Manager, cocoa cultivation tasks are normally done by men. Women participate in harvesting and processing activities and in selling *koko Samoa*.

Some of the male and female cocoa growers interviewed for this study mentioned issues with MAF services under the project. These include the need for research and demonstration plots, and an inadequate supply of cocoa seedlings. One farmer said he wanted to learn how to propagate from cuttings. Others mentioned their need for good pruning tools. In Asau, a village that has a long history of producing cocoa in the drier conditions of Western Savaii, only two farmers are registered for the stimulus package because they do not want to plant coconuts. This suggests that farmers need more information on the economic advantages of the farm model that is being promoted.

Currently in Samoa, cocoa is mostly sun-dried, so the cocoa is at risk of getting damp and mouldy from unexpected rain. The Scientific Research Organisation of Samoa (SROS) has built a prototype cocoa drier with assistance from PHAMA, and the drier is fairly simple to construct, but it costs about SAT\$3000.00, which is beyond the means of most smallholders.

Smallholders use various methods for fermentation, the simplest being coconut-frond baskets. A few of those interviewed use shallow boxes, which appears to be a more effective technology. Some growers store cocoa in bins but others use sacks, which are more at risk from insects and rats.

## 1.7 Growers Associations

A cocoa growers association, Samoa Export Farmers Organic Koko (SEFOKI), was established in 2012 and is composed of members from the three neighbouring villages of Malie, Afega and Tuanai. It has no female members (Malie and Afega do not recognise *matai* titles that are held by women, which may or may not be a factor in this). Because of Samoa's predominantly male *matai* system, there is an attitude that men should take the lead in terms of representing the industry. One organiser of growers told us that "women talk too much". SEFOKI was established under the leadership of Mulitalo Saena Penaia, who is also the president of the Samoa Farmer's Federation, which broke away from the Samoa Farmers Association<sup>1</sup> in 2015 due to dissatisfaction with the transparency and accountability of the Association. The Samoa Farmers Federation has 80 female members registered, mainly growers of vegetables and flowers (for the local cut flower market).

## 1.8 Ministry of Women Social and Community Development

The Women's Division in the MWSCD is currently being restructured away from programmes addressing specific groups (women, youth, children, the disabled) to programmes based on major thematic areas; governance, economic empowerment and social development. The division will no longer implement programmes but will provide policy and guidance to various stakeholders. The programme for economic empowerment will have two sub-themes: employment and entrepreneurship, with further subthemes on skill development, enabling environment, credit, and access to employment services. Village women's representatives (*Sui Tama'ita'i*) report to and are guided by the Ministry of Women. They are elected by the village women's committees, and are responsible for liaison between the village women's committee and the programs of government department and agencies for women or of interest to women. Village mayors (Sui o le Nu'u) report to the Division of Internal Affairs and play a similar role of liaison between the central government and local government councils of chiefs.

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<sup>1</sup> Due to the controversy we did not interview the head of the Samoan Farmers Association.

## 2.0 Commercial Cocoa Production

### 2.1 Commercial Growers

Two large-scale commercial cocoa growers operate in Samoa: the Samoa Trust Estates Corporation (STEC) in Faleolo and the Va'ai family in Vaisala, Savaii. These growers employ mainly male labour on both casual and permanent rates of payment. A much smaller number of women are employed for roasting, sorting, winnowing and processing.

#### Samoa Trust Estates Corporation (STEC)

In the 1990s, large landholdings of the Western Samoa Trusts Estates Corporation (WSTEC) were divided between two statutory corporations: STEC (renamed when Western Samoa was renamed Samoa), the Samoa Land Corporation, and the Ministry of Natural Resources and Environment. This followed the financial collapse of former WSTEC and the government assuming responsibility for its multi-million SAT\$ debt. Approximately 70% of WSTEC land was transferred to the government under the legislative provisions of the *Samoa Trust Estates Corporation Reconstruction Act* 1990. STEC retained 650 acres at Faleolo (Upolu) along with other smaller holdings in Upolu, and 1,200 acres in Savaii. Most of this land has been planted with coconuts since the 1880s and with cocoa and coffee since the 1900s.

Currently, STEC is developing part of its landholdings in Faleolo (200 acres) replanting with coconuts, vanilla and cocoa. Of this area, 50 acres are being replanted with cocoa. The land is divided into three major crop development areas, each of which consists of a number of six-acre blocks. When fully planted, this will be the largest cocoa plantation in Samoa. This development project employs approximately 70 male labourers and is managed by a woman employed by STEC.

The nursery for replanting is located at STEC headquarters at Vaitele but there are plans to relocate it to Faleolo. The field planting and maintenance is mostly carried out by STEC male casual labourers. In addition, STEC gives contracts to community groups (mainly church congregations) to do land clearing and weeding. The contracts are usually for 6 months. Currently, 14 groups are working under contracts to raise money for their churches or village projects. The workers include men, women and youth.

STEC usually sells mature cocoa pods to *Nora Plantation Foods* in Vaitele (a new company, described in 3.3 below), but STEC has put the sale of cocoa pods on hold at present due to insufficient supply from the plantation. *Nora Plantation Foods* buys cocoa pods for processing from STEC and from Mulitalo Saena Penaia and other selected smallholders.

Investment activity financed by the WTO-EIF<sup>2</sup> through MCIL is focused on replanting cocoa on 50 acres of land in Faleolo. According to several informants, STEC has a problem with the theft of cocoa pods, presumably by local villagers and people who live on or adjacent to STEC land. STEC plans to invest in cocoa processing in the future.

#### Va'ai Family

The Va'ai family has a large plantation of over 200 organically-certified acres established on customary land registered under legal provisions (*pule fa'amau*), which give the senior *matai* holding the land the right to pass it to his children instead of the extended family. The original plantation was established three generations ago with the high-quality Trinitario variety and using native leguminous tree species (*Gatae*) for shade. It is now divided between two male descendants of their Va'ai grandfather who are first cousins: Alo Kolone Va'ai and Tupai Saleimoa Va'ai. Both plantations have a mixture of recently-replanted cocoa and cocoa trees that were planted on 60 acres after the major cyclones in 1990/91 destroyed the established crops. The two plantations also raise cattle and grow taro, citrus and coffee commercially for the local market. The two proprietors also operate hotels at Vaisala. Alo is planning to process coconut oil with financing from the ADB Samoa Agribusiness Project and sells cocoa from his plantation to Tupai.

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<sup>2</sup> The Enhanced Integrated Framework (EIF) is a multi-donor programme, which helps least-developed countries (LDCs) play a more active role in the global trading system. The programme has a wider goal of promoting economic growth and sustainable development and helping to lift more people out of poverty.

Tupai processes cocoa from both plantations as well as cocoa bought from smallholders in the area. He negotiated an agreement with Whittakers (New Zealand chocolate manufacturers) and in 2015 he supplied the manufacturer with three containers of dry cocoa. He employs ten men full-time, additional male casual labour as required, as well as three women for processing (roasting, sorting, and winnowing). He is planning to produce cocoa products in the future but did not say what these will be. He noted that matching supply to demand is a problem. He buys from local smallholder growers but many will not accept the price he offers of SAT\$5.00 per kg.

## 2.2 Commercial Production of Cocoa Products

At present there are four commercial producers of cocoa products in Samoa: *Women in Business Development Incorporated* (WIBDI), Natural Foods International, WILEX and *Nora Plantation Foods*.

### Women in Business Development Incorporated (WIBDI)

WIBDI is a non-government organisation, operating as a non-profit business, which works with rural families, mainly smallholders, to improve their incomes. Its executive leadership is all female. Among their members, who are household leaders, 56 are male and 44 are female.

WIBDI has found that women's economic interests are not really separable from the interests of their households, which are typically cooperating economic units, therefore the organisation involves women, men and youth in various family-based income generating projects. Members of WIBDI who make fine mats (*ie sae*) are all women, and they make their mats (these are highly valued ceremonial items) on a contractual basis for sale through WIBDI. WIBDI assists members to become financially literate and encourages the heads of households to share income with younger members of the household.

WIBDI has offices in Apia and a production facility in peri-urban Nu'u. WIBDI supplies a number of organic products to international buyers, including coconut oil to The Body Shop, and also sells 'organic baskets' of fruit and vegetables in season to local consumers in Samoa. They produce organic coconut soaps using local fragrances, including a type of soap with added ground cocoa as a body scrub, and they are experimenting with various floral and herbal tea products.

The organisation has been successful in product innovation for niche markets. One such product is *koko Samoa* moulded in a block shape instead of the usual polystyrene cup moulds that are used when it is sold locally. The square block is more efficient for packing and transporting than the traditional product moulded in a cup. The blocks of *koko Samoa* are attractively packaged for sales to shops (Duty Free, Farmer Joe) and export opportunities are being considered. WIBDI works with eight growers who produce *koko Samoa*.

Cocoa products have been further refined in partnership with a New Zealand firm C1 Espresso. A new product is small blocks of sweetened cocoa paste that can be made into a drink with the addition of boiling water. Currently, WIBDI is establishing a facility to produce organic cocoa mass using technology approved for the chocolatier market.

Issues noted were that at times the supply of dry cocoa beans is inadequate for demand. Access roads to farms are also an issue for their regular monitoring visits. On the gender division of labour in the cocoa value chain, WIBDI noted that it varies by region. For example, women are more involved in villages in north-west Upolu (the most densely populated area of Samoa) because more men in the area are working for wages.

### Natural Foods International Ltd

Grant Percival, the proprietor of *Natural Foods International Ltd*, produces taro and breadfruit chips and, more recently, a herbal remedy. He also processes cocoa into a powder and buys cocoa from various producers for this purpose. He has replanted some land with cocoa under the MAF stimulus package programme. He employs 30 staff, of whom only five are men. His staff all multi-task, he said, except men do the heaviest tasks. He is planning to produce other products, such as breadfruit and banana flour, but said he was not considered eligible for finance under the Agribusiness project.

### Willex Ltd.

Tagaloa Eddie Wilson of *Willex Ltd* has been producing cocoa products since 1995, including cocoa liquor and cocoa butter and chocolate, but his premises were destroyed by fire in 2003, which disrupted his business. He used to deal with about 300 cocoa growers and is still in touch with about 60 of these, who are good producers. One of the main problems in the past was supply, which was too low to make his business as profitable as it could have been. In 2011 he restarted making chocolate to sell in the local tourist market and for export. He was not eligible for assistance under the Agribusiness Project as he requires a loan of more than WST1 million to re-

establish a processing plant. He plans to re-establish operations on a smaller scale than before, and is considering new products. He is interested in buying from STEC when their cocoa comes on stream.

He employs mainly men, who he considers more likely to have the physical strength for the work required. He mentioned that women were less reliable because they get pregnant. He looks for young men who have done trade training, even if the trade they are trained in does not match the job he gives them. He pays SAT\$2.60 per hour to trainees then raises this to SAT\$3.00 and later to higher rates, depending on performance. In terms of gender in the cocoa value chain, he thought the most successful growers were those who had women actively involved, especially on the processing side. He said he recognised the market opportunities for organic products, but was sceptical about whether farmers would adopt it because of the problem of labour demand for hand weeding compared to herbicide use.

#### **Nora Plantation Foods Ltd.**

*Nora Plantation Food Ltd*, a new husband and wife-owned enterprise, began two years ago. John Seedhouse is Australian and his wife Mona Lisa is Samoan. They have developed two cocoa products for export: small blocks of cocoa paste and cocoa nibs (fermented, dried, roasted and winnowed whole cocoa beans) which are attractively packaged and are aimed at the gourmet food market in Australia. Mona Lisa does the marketing in Australia and John runs the factory. They have leased and renovated a large production shed in Vaitele.

Their original objective was to produce taro chips for export, on a larger scale than that of any current producers in Samoa. They had undertaken research on local supply and overseas markets, packaging, branding, etc. To establish a factory to produce a product that meets international food and product standards would cost an estimated SAT\$ 9-10 million, however, and they have not been able to finance this planned operation yet. Their loan requirement is too high for finance under the Agribusiness project (which has a ceiling of SAT\$1million).

For their cocoa business, they employ about 20 workers, mostly for processing, on equal pay rates, with daily rates starting at SAT\$2.50 per hour for trainees. They previously had equal numbers of men and women but said they have found men are better at jobs requiring physical strength, like fermenting, drying and winnowing cocoa beans. The breakdown of employees is now about 40% women, 60% men. Women do the roasting and the packaging, as they were found to be more attentive and careful about details. A restricted, hygienic clean room is used for these final production steps. Among the male employees, three are employed for on-farm collection; the business makes a contract with selected and approved growers and their buyers select, harvest and pack the cocoa pods to be taken to the processing shed. They pay the growers 40 *sene* (SAT\$ cents) per pod or SAT\$8.00 per kg for dry beans. John was cautiously optimistic about improved supply from cocoa replanting. A farmer interviewed in Asau said he has an agreement with *Nora Plantation Foods* to supply dry beans at a price of SAT\$8.00 per kg plus the cost of transport from Asau to Vaitele.

#### **Koko Samoa Producers and Vendors**

Most of the 35 smaller growers, processor and vendors of cocoa that we interviewed (See Appendix) make *koko Samoa*, and some specialise in selling it. Vendors are mainly female. Those with substantial turnovers access cocoa from their family plantations and, having processed it, then sell it in various ways – to fulfil large orders, to shops, or in roadside or market stalls. Some also buy cocoa to process if their family plantation has insufficient supply. If they have no family cocoa plantation, they buy wet or dry cocoa beans and process them into *koko Samoa* for sale. Several of these women could likely benefit from marketing support, for example if they were given contracts to supply agreed amounts of the product to a marketing agency such as WIBDI. Some are already exporting *koko Samoa* via a network of visiting relatives who collect consignments and take it with them as personal luggage, apparently with no quarantine or customs issues. The vendors who have established good markets for their products may have family labour to help, or they may pay women to help with processing tasks. A third type of vendor (more often young men) buy *koko Samoa* and sell it by walking around looking for buyers. This is an increasing strategy in Apia where street vendors (some are children) sell *koko Samoa*, fans, printed *lavalavas*, pancakes and items bought wholesale such as cotton buds, air freshener tags, wash cloths and other small items.

## 3.0 Conclusions and Recommendations

### 3.1 Marketing *koko Samoa*

Many of the women we interviewed said “Cocoa is fast money”. In the course of this study we found there were many women among the small cocoa producing entrepreneurs, particularly those who were both growing cocoa and processing *koko Samoa* and cocoa beans as a family business.

We estimate that hundreds of women rely on making *koko Samoa* for their weekly cash requirements. A woman who made, for example, 50 units of *koko Samoa* per week using cocoa beans from her family plantation could make SAT\$250.00 per week if she sold each unit at the base price of SAT\$5.00 per unit. Even if the family plantation is poorly maintained, at harvesting time they, or their sons, brothers or husbands, harvest pods and stockpile dried cocoa beans – or use the wet beans - to make into *koko Samoa* for home consumption and for sale.

*Koko Samoa* is consumed regularly in most Samoan households in Samoa. Members of the Latter Day Saints (Mormon) church, which has the third largest membership of all churches in Samoa, only drink cocoa as a hot beverage, as coffee and tea are forbidden under their religion. Samoa’s diaspora communities also continue to prefer *koko Samoa*. There are at least 300,000 Samoans living overseas.<sup>3</sup> During Samoa’s taro export boom this market provided hundreds of Samoan families with a good livelihood and likely constitutes an undersupplied market for *koko Samoa*. According to a recommendation of the MAF sector study (McGregor et al. 2004): “the production and marketing of *koko Samoa* offers a suitable value-adding opportunity and is much easier to clearly differentiate as a ‘Samoa made’ product than dry cocoa beans”.

The MAF Sector Study also found that Samoa’s cocoa industry has declined since the 1960s due to the decline in large plantations and the impact of cyclones, from around 5,000 tonnes recorded in the early 1960’s to around 2,700 tonnes in the 1970. Cocoa production declined by a further 50 per cent following cyclones in 1980 and ceased in the 1990s. In 2003, only 3.6 tonnes of dry cocoa beans were exported from Samoa.

The study refers to a survey of Savaii-based cocoa producers conducted in 2003 which revealed that only 5 per cent of producers sell their cocoa to export markets. We suspect that this figure overlooks the quantity of *koko Samoa* that is sent overseas to American Samoa, USA, New Zealand and Australia through informal networks.

A strategy that could help the more entrepreneurial women who process and sell *koko Samoa* would be to establish a central marketing agency that would buy *koko Samoa* from the women and then sell it to local outlets and export it to Samoan consumers overseas. If these women had secure contracts for agreed quantities at agreed prices, it would likely provide them with an incentive to increase production. A number of women expressed interest in an arrangement like this, which would save them from having to sell on the street.

However ‘formalising’ *koko Samoa* production for export (with the objective of economically empowering women) is constrained by the way *koko Samoa* is produced. *Koko Samoa* is mainly processed in the backyard kitchens of smallholder households and is unlikely to meet food standard requirements of export markets. In contrast, cocoa mass produced by *Nora Plantation foods* for export is processed in hygienic conditions to meet such requirements.

In the current situation, the best intermediate market opportunity for women making *koko Samoa* is offered by WIBDI. However, WIBDI only works with planters/processors whose land is certified organic. WIBDI is able to do organic certification and monitoring and will buy and package organically-produced *koko Samoa* (from square moulds) for markets it is developing overseas and in Samoa. (*Nora Plantation Foods* and *Willex* only buy and process wet and dry cocoa beans, not *koko Samoa*).

WIBDI’s policy, based on long term experience, is that the best results for economic empowerment of women are achieved working with whole families, rather than individual women. It provides its members with extension services and financial literacy training (which includes advice on income sharing and markets). Responses to our interviews suggest that not enough Samoan smallholder cocoa growers and processors realise the opportunities and potential benefits of becoming organically certified and of working with WIBDI to market *koko Samoa*.

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<sup>3</sup> According to the 2013 New Zealand Census there were 144,138 people of Samoan ethnicity living there, and according to the 2006 Australian census 15,427 Australians were born in Samoa while 39,992 claimed Samoan ancestry, either alone or with another ancestry. In 2000–2010 U.S. Census recorded 133,281 Samoan residents, while American Samoa has a population of 57, 848.

The cocoa sector report (McGregor et al. 2004) refers to the possibility of contracting women’s committees (which are a part of local government in every traditional village in Samoa, as described in 2.1 above) to produce *koko Samoa* to be marketed by the government Agricultural Store. This has not happened, and is a proposal unlikely to succeed if implemented. Women’s committees are service groups and cooperate in production for fundraising, but not for family income. Over the years there have been attempts to encourage women’s committees to become business groups without success (Schoeffel 1979). Both women and men work in household groups with common economic interests, even though tasks and responsibilities may be divided according to gender. However, the proposal to offer contracts to produce *koko Samoa* and market it more systematically is a good idea. The report made the following recommendations on markets:

To initially expand the *koko Samoa* market, to provide a means of building capacity to supply the fine or flavour export market in the long term. In order to successfully carry out the recommended strategy for reviving Samoa’s cocoa industry, several issues must be addressed.

1. Improving profitability for farmers.
2. Expanding export markets for Samoan cocoa.
3. Supporting processors and exporters.
4. Increasing supply.

To overcome the above-mentioned issues and ensure success of the *koko Samoa* market, the following actions are recommended:

- Identify and establish a substantial and reliable distributor in New Zealand, Australia and the United States to import *koko Samoa* paste;
- Address productivity issues through the purchase of simple machinery available in the market such as electric grinder machines and winnowers (for de-shelling);
- Establish proper storage facilities to address mould and insect problems (i.e. an air conditioned room);
- Identify technical solutions to address the cocoa “blooming” problem;
- Conduct research into producing a more usable powder form of *koko Samoa*, to support entry into non-Samoan niche markets;
- Develop quality labelling and packaging to identify *koko Samoa* as being uniquely Samoan.
- Investigate patenting the name *koko Samoa*.

Source: McGregor et al. 2004

Respondents to the interviews identified that grinding cocoa (rather than pounding it) may not produce the preferred texture of *koko Samoa*. This suggests the need for research (using affordable grinding technology) on cocoa processing, trialling pounded vs ground cocoa, whilst at the same time considering the *koko Samoa* market preferences. WIBDI is well established to implement most of the above recommendations in partnership with SROS and with support from PHAMA.

### 3.2 Improving Cocoa Production

Men and women have different roles in the cocoa value chain, although these may overlap; for example women may assist with weeding, harvesting and fermenting, which are considered men’s work, and men may help with sorting roasting, winnowing and pounding, which are considered women’s work.

Most women who are registered with MAF as ‘farmers’ are those who cultivate customary land belonging to their own family, or who are the owners of leaseholds or freehold plantation land. However, thousands of other women living on family land belonging to their husbands are not regarded as ‘farmers’ although they are active in

smallholder households assisting with cocoa growing, processing, and sales at roadside stalls, outside shops, in town or at markets. Women who are seen as the 'lead farmer' are usually landowners, but it is likely that most women in cocoa-producing households are also farmers – even if they are not recognized as such because they are living on land belonging to their husband's family.

We do not see much option for organising women cocoa-growers on the basis of gender. Overall, responses to our interviews show that women and men have similar interests in relation to cocoa production; in increasing efficiency of production for growing and for processing and marketing cocoa. Many made suggestions about actions needed by government that are consistent with the following recommendations of the cocoa sector review (McGregor et al. 2004).

It is recommended that reviving Samoa's cocoa industry should be driven by the private sector. However, assistance will be required from Government agencies in the following areas.

- Provision of research and field-level extension services to farmers (i.e. crop husbandry, post-harvest processing, marketing).
- Provision of high quality Trinitario planting material, fertilisers etc.
- Provision of a suitable incentive package for farmers to rehabilitate existing cocoa plantations and replant aging trees.
- Provision of support to enable continuation of organic/fair trade certification of farms and processors.
- Technical assistance for processing/exporting operations (i.e. product development, machinery, packaging and labelling, food standards, marketing etc.).
- Development of strategies to improve incentives for processors and exporters (i.e. identifying/facilitating sources of funding to acquire capital at reasonable terms, tariff waiving, tax rebates, interest rebates, R & D for product development).

Source: McGregor et al. 2004

The question is how to increase cocoa production in a situation in which it seems that supply does not meet demand. STEC and the Samoa Land Corporation (which may be re-integrated in the future), have extensive under-utilised land that can be leased for larger-scale planting but there does not appear to be sufficient interest in agricultural investment. The ADB Samoa Agribusiness Project, if expanded in the future to allow for larger loans, may increase commercial planting.

Incentives for smallholder growers are provided through the MAF stimulus package described above, although we met several grower-processors who were unaware of the programme. In lower rainfall areas in Western Savai'i, which has the best conditions for cocoa, surprisingly few cocoa growers were registered in the programme. In Asau village, for example, there were only two growers registered. According to one grower we interviewed it was because people in this area did not like the stimulus package farm model of cocoa, coconuts and coffee. A number of growers, both men and women, also mentioned that there was a shortage of planting materials supplied by MAF.

Our study also found that most of the registered farmers, male and female, are in older age groups and there are relatively few young women or men taking the lead in household-based farming. Unfortunately, as has been remarked for many years, farming is regarded as a low-status occupation in Samoa. Young men appeared to be more interested in working for daily wages than in establishing their own plantations. While this may have to do with Samoan customary values that accord leadership roles to elders, or lack of access to land, it seemed to us that there an urgent need to interest young men and women in the livelihood and business opportunities offered by growing cocoa.

### 3.3 Recommendations

It is recommended that the economic empowerment of women will be best achieved by the following measures:

#### **Koko Samoa processing technology trials**

SROS, in close consultation with WIBDI, should conduct research in areas such as cocoa-grinding equipment and various types of mortars and pestles, to see whether the use of labour-saving technology (a) affects the flavour and texture of *koko Samoa* preferred by Samoan consumers and (b) is economically viable. Associated research on smallholder *koko Samoa* production methods and food standards for export markets should also be done. This would allow standards to be made known to smallholder producers who wish to 'formalise' production for export markets.

#### **Information for women in rural households**

MAF in consultation with MWSCD should ensure that its programmes of assistance are made known to women through the village women's representative (*Sui Tama'ita'i*). Even if women are not involved in the actual tasks of plantation maintenance, they have a direct interest in improving production, and may participate in, or supervise, tasks of plantation maintenance.

- MAF should increase more proactive extension services, possibly with support from development partners, targeting both men and women. Women and men need access to technology and technical information to help with cultivation, including affordable pruning tools, knowledge about how to prevent and reduce the pests and diseases that affect cocoa and advice on ways of fertilising trees without compromising their organic certification.
- MAF should establish roadside cocoa demonstration plots in selected districts to demonstrate best practices, and as sites for training.
- MCIL, working with MAF and SUNGO, should be supported to provide rural women and men with training on basic business principles, including financial literacy, financial management, saving, banking, and record-keeping in relation to their plantations.
- MAF should be supported to provide weekly TV and radio programmes on the topic of agricultural development and linked to current agricultural development programmes, including those for cocoa, and emphasising women's contributions. Development partners may wish to consider providing funding to get this started.
- MAF should consider employing more women as extension agents and, if necessary, provide scholarships to train women in agriculture with a specialisation in crops.
- MAF should establish the planned organic unit as soon as possible, promoting the economics of organics production and how to manage an organic cocoa plantation in terms of fertilisers, weed control, pest control and disease control.

#### **Cocoa growers associations**

MAF, MCIL and MWSCD working with SUNGO, should encourage and assist the formation of non-government district-based cocoa growers associations, with both women and men among their members. The associations could facilitate sharing and disseminating information on cocoa growing and processing, as well as on market opportunities, and for organising training activities. There are opportunities to fund such organisations and training through the Australian Direct Aid Programme (DAP), a small grants programme, and the Civil Society Support Programme funded by the Australian Government and the European Union.



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## Appendix A

# Summary of interviews with smallholder cocoa growers and processors

## Appendix A Summary of interviews with smallholder cocoa growers and processors

### Cocoa Planters and Processors on Upolu

#### Mulitalo Saena Penaia

Mulitalo is a retired accountant and has leased 10 acres of land for cocoa from Samoa Land Corporation. This is former WESTEC land and contains old trees that are still productive, as well as cocoa he has replanted with assistance from the MAF Stimulus Package (referred to in 2.6 above). He aims to lease a further 40 acres of land if he is able to get the finance for rehabilitation or replanting. He employs five full-time male workers and between eight to 15 casual workers. None of them are women. He noted that motivated workers are hard to come by because many young men prefer to join the seasonal worker scheme in New Zealand. He is of the opinion that a cocoa marketing board should be established to organise export marketing, and that more research is needed on cocoa, including the impacts on cocoa of climate change.

#### Olivia Fidow (Tufulele)

Olivia cocoa plantation started in 2010 with stimulus package for two acres (750 cocoa trees) and a further 5,000 seedlings to plant a ten-acre plot. She sells dried beans and *koko Samoa* she processes herself. She also hires a woman to sell beans and *koko Samoa* at a roadside stall, for SAT\$5.00 per plastic bag of beans and per unit of *koko Samoa*. When supply is low, she raises the price to SAT\$10.00. She hires two male workers for harvesting. She uses old methods of processing, fermenting in baskets, sundrying and roasting over an open fire. A married couple lives on her customary land and looks after the plantation. She lives with her adopted son and his friend (her husband is in New Zealand). The boys help with the cocoa. She says she makes good money but has problems with people stealing her cocoa pods, as well as problems with the high cost of labour, cocoa pests and diseases, and lack of knowledge on the best methods of cultivation management and marketing. She also lacks efficient tools for production and a water supply to her farm.

#### Ioane Paolo (Malie)

Ioane is a WIBDI member, certified organic, and adheres to the standards. His seven acres of customary land are worked by his two married daughters and their husbands. He produces mixed food crops and cocoa from about 750 cocoa trees; of these about one quarter survived the 1990 cyclone and are still bearing. Cocoa is his main income. He processes his own cocoa with family labour and sells *koko Samoa* – to WIBDI, village shops and to a relative who buys *koko Samoa* to sell in New Zealand. He aims to extend his cocoa plantations. The normal price he charges for *koko Samoa* is SAT\$5.00 per unit, but he raises the price when there is a shortage. He complained that WIBDI's price of SAT\$5.00 per kg of processed beans is too low. He believes that the government should boost production with a bonus scheme, like the 'stimulus package' project.

#### Temu Kisa Rimoni

Temu has a total of 10 acres leased from Samoa Land Corporation; two acres of cocoa and a banana plantation, and is registered with the MAF stimulus package programme. She said she is very keen on cocoa and wants to extend her acreage. She sells both dry and wet beans, mostly to people who make cocoa to sell in the street. In the off-season there is a big demand, but she cannot supply it. When cocoa is in short supply, she does not raise the price, so as to keep her clients. She has four permanent male workers to do plantation work and she pays them SAT\$120 per week.

#### Tavita Vaoga (Tuanai)

Tavita established his plantation on customary land four years ago, inherited from his parents. The land still has old trees growing on it. In total, he has 10 acres of cocoa at Tuanai and six at Leauva'a. He sells dried beans and *koko Samoa* at a roadside stall, and also sells to other people who want cocoa to process for selling. He sold to *Nora Plantation Foods* at 40 *sene* per pod (they come and harvest selectively). In 2015 he sold 3,800 pods and earned SAT\$3,520 from that, which he was happy with then. Now, Tavita thinks the this price might be too low. He used the pods rejected by *Nora Plantation Foods* pickers to make his own *koko Samoa* for sale. He also stockpiles cocoa beans for times when the price goes up. He uses modern methods of fermentation: seven nights in boxes. He hopes to get his own drier but he said the price is too high for him to afford it. He said he tried to make a device for grinding but found it did not save time. He hires men for clearing and youth groups for maintenance. The latter is the best arrangement as work is done quickly for SAT\$200 for the group. Other work he does by himself or with help from relatives. He mentioned that theft of cocoa pods from plantations is a

problem. He suggested that the government should be helping farmers to get better equipment, tools and water tanks, and should provide training on maintenance and improved technologies. The bonus schemes should continue, to encourage growers, and research is needed to see if pod size is affected by climate change.

#### **Senerita Lameko (Fasito'outa)**

Senerita is a single woman in her 30s, she has cocoa on about five acres of her customary land, both old and new trees. The old trees have been there for about 30 years, the new trees (750 trees) were planted in 2011 under the MAF stimulus package. She sells cocoa beans and *koko Samoa*, and her family grows other crops including taro, bananas and fruit trees, and sells produce through two shops, one at Fasito'outa and one at Aleisa. The family also has a bus business. She lives with her mother, two brothers and their wives and five children. She employs casual workers for planting and maintenance. She suggested that the government should provide more training on growing and maintaining cocoa, and advice on good and sustainable markets; she noted that in the past many crops have failed to find a market - like *nonu* and passion fruit.

#### **Nusi Moala (Saleimoa Uta)**

Nusi has a website to advertise his cocoa (*Kokomoni* label) grown on 12 acres of freehold land. He recently started replanting three two-acre blocks under the MAF stimulus package. He sells *koko Samoa* in shops and supermarkets, and to Devonport chocolate in NZ. He does his own fermentation and drying and employs two full-time workers at SAT\$200 per week, and three casual workers three days a week for SAT\$100. He pays three or four women SAT\$120 week to do weeding, harvesting and processing. He noted that stealing is a major problem (recently 500 pods were stolen when he was away). He suggested that government assistance for farmers should include technical assistance loans for irrigation and more research on fermentation. He still uses traditional methods of cocoa fermentation in baskets, but adds fruit to accelerate fermentation.

#### **Fesolai Ruta (Faleasiu)**

Fesolai has a plantation of about 1,500 trees on customary land, including trees replanted under the MAF stimulus package. She also has a vegetable garden, planted with assistance from the Samoa Agriculture Competitiveness Project (SACEP). She sells dried beans and *koko Samoa* to village stores, both dried and wet beans to local people to make *koko Samoa*, and also exports some *koko Samoa* to American Samoa through relatives. Her price is SAT\$8.00 per plastic bag, and she sells cups of paste for SAT\$5.00, but raises the prices in the off-season. She does her own processing and packaging and works with her husband and family. She hires relatives and other paid workers at SAT\$30.00 per day and pays women SAT\$25.00 for processing and packing. Issues she mentioned are that labour is expensive, and that her trees have a lot of black pod infection and other diseases. She had organic certification but now uses weed killers to save labour costs. She suggests that the government should do more training on cocoa and marketing and provide more funds for technology for drying and to identify sustainable markets.

#### **Mataniu Tavu'i (Nofolii)**

Mataniu has an old cocoa plantation, 30 to 40 years old and still bearing, and she has done no replanting and little maintenance. She does the farm work while her husband works for wages, and she also grows ornamental plants and vegetables. She sells wet and dry beans and *koko Samoa* to sell at village shops for quick cash, and mostly harvests and processes beans when she is short of money. She has a daughter working in New Zealand who sells *koko Samoa* to workmates, other people in New Zealand, and to restaurants for NZ\$4.00 to 5.00 per cup. She has one full-time worker for SAT\$150.00 per week. For harvesting and processing, she hires a young male relative to do the heavy work, at SAT\$20.00 per day and also hires a woman to help with processing. She is wondering if she might have an opportunity to sell cocoa seedlings as she understands plant propagation methods. She suggested that the government should look for consistent markets and new technologies for processing.

#### **Perosi Lafai (Lauli'i)**

Perosi became a registered grower under the MAF stimulus package in 2011 and has two acres with cocoa out of a total of four acres. She intends to expand the acreage - all on her customary land. She sells wet beans and *koko Samoa*, but does not sell dry beans because of the big demand for wet beans to make *kokomaka* (wet beans are roasted on an iron sheet, winnowed, re-roasted, and then pounded). She has an older son and his wife to help her and they have a food stall in the village selling cooked food. Two other sons are registered in the MAF stimulus package. She does not hire any labour; it is entirely a family business with her husband and children. People come to look for wet beans to buy and she sells them at SAT\$10.00 per bag or SAT\$5.00 to 10.00 per

cup. As she just started, she would like training from the government and market support. She also said she disapproved of children selling *koko Samoa* on the street.

#### **Solofua Losefo (Laulii)**

Solofua has a cocoa plantation of about 800 trees, 30 years old, and is doing some replanting. She had not heard of the MAF stimulus package. Her plantation is on customary family land, and she sells beans (SAT\$5.00 per bag) and *koko Samoa* (SAT\$7.00 per unit). She uses unpaid family labour for all tasks, working with her husband and five children, and her sister (who lives next door). Her problems are theft and also the heavy job of pounding the beans (her husband helps). She suggested that the government should provide training and more awareness about sources of assistance through the village council representative (*Su'i o le Nuu*).

#### **Suela Richard Cook (f. Saleimoa)**

Suela is married to a New Zealander who is unwell, so she manages their plantation. One daughter, who lives with them, is studying agriculture at University of the South Pacific (currently in her second year). Her two other children are in employment overseas. They have about 182 freehold acres of certified organic land. It is planted with some old cocoa and she is now starting to replant. They also have fruit trees and coconuts, and used to be connected to WIBDI. They also used to sell *koko Samoa* to American Samoa at US\$8.00 per cup through a friend who got the order. She makes *koko Samoa (kokomata)* to sell locally. A major problem is the theft of pods, which she has reported, but no action has been taken. She employs four men full-time and has two boys as temporary workers when needed, and she hires two women intermittently to do fermentation and roasting.

#### **Lio Loapo (Tuanai)**

Lio sells cocoa pods and dry cocoa beans only. He was selling to many markets at SAT\$5.00 per kg, including to New Zealand markets (through a businessman who visited him) and previously to WILEX until it burned down. He also sells to a buyer at Aleisa and to street vendors. He is now selling pods to *Nora Plantation Foods*, at 40 sene per pod. He has six acres of customary land planted with old and new cocoa. He has worked with cocoa since he was young when cocoa was a major source of income for his parents, and now it is a key source of income for his family. He is not registered with the MAF Stimulus Package, but does his own replanting using seeds from his own cocoa. He processes his beans using a fermentation process of seven nights, and then he sundries them. When supply is high, he stockpiles, then he sells beans when supply is low. He doesn't hire workers; he has a son who helps him with the plantation. The drying process is time-consuming; he wants to get a better means of drying.

### **Cocoa Planters and Processors on Savaii**

The western region of Savaii is regarded as having the best conditions for cocoa growing, having lower rainfall than most other areas; but periodic droughts are a problem.

#### **Saunoa Lopao'o**

For two years Saunoa, a cocoa producer at Asau, has been making *koko Samoa* in cup moulds, packaged and labelled and sealed in heavy plastic wrap (with equipment she bought in Apia) in a special processing room at the back of her store. She says she sells around 1,000 units per month in Australia, New Zealand and the USA through a network of family members in those countries. They sell the cocoa for about NZ/AUD/USD\$6.00 and take \$2.00 for themselves and bank \$4.00 for her. She has ten acres of customary land belonging to her own family, planted with around 4,000 cocoa trees. Some of the land planted was assisted by the MAF stimulus package. Along with a general store and petrol station, she manages this plantation with 10 workers, of whom six are men doing cultivation work and fermentation, and four are women doing sorting roasting and winnowing tasks. She also buys dry beans from other cocoa growers in the area and pays them SAT\$450 per 50 kg bag (SAT\$9.00 per kg). Her brother lives in Apia and has just become a member of parliament. She depends on rainwater for water supply to the house and farm. She has some water tanks from the Red Cross and MCIL, and bought two for water storage and water supply, she also buys water from the Samoa Water Authority at Salelologa every week.

#### **Matamea Faapio (Auala)**

Matamua is 63 years old and lives with his wife (57 years old) and five children on his family land. He has about 2.5 acres of customary land planted with cocoa, and is registered in the Stimulus Package. His old cocoa plantation was destroyed by fire, and was replanted with the stimulus package programme. When the supply is high, he stockpiles the beans for the off-season. He sells only dried beans, and to people who contact them only, such as a buyer in Vailele to whom he sold one bag (a 50 kg rice bag) for SAT\$450. His family does not go out to sell, but people will contact them and pick up their orders. He has been contacted by *Nora Plantation Foods* who

offered SAT\$8.00 per kg for beans. The market and street vendors have also bought beans from him. He hires no labour, but instead depends on his wife and family. He thinks the stimulus package should focus on cocoa only, not coconuts, as he thinks that would increase the number of farmers involved in cocoa growing. At present there are only two farmers registered for it in Auala. He sees potential opportunities for women to be involved and start businesses in bakery, cooking and making new products from cocoa.

#### **Lemoa Mose (Falealupo)**

Lemoa has a plantation of about five acres of customary land and is registered with the MAF Stimulus Package programme, with two acres replanted. Cocoa is his main source of income. He sells dry cocoa beans and *koko Samoa* at the Salelologa and Apia markets. He also sells to vendors in neighbouring villages (Vaisala, Asau, Auala and Sataua). When supply is good, he stockpiles the dry beans for the off-season and when supply is low he sells. He sold once to the Va'ai family, but ceased due to their low price. Lemoa is 63 years old, his wife is 56. They have two adult sons currently living with them at Falealupo. Lemoa also raises cattle, pigs and grows oranges. He has children overseas (three daughters in New Zealand, two are married, one is still in school, as well as one son in Australia, 29 years old and not married). He says that planting, maintenance, harvesting and pruning are both men's and women's jobs; his wife and two sons in his household all assist. The drying and roasting is mostly done by his wife with assistance from the two sons. He gained his knowledge and experience in growing and processing cocoa from his parents.

#### **Makereta Tufuga (f. Asau)**

Makereta is a retired teacher and has a shop and 10 acres of customary land belonging to her own family. She has old cocoa trees not bearing fruit, and began new planting in 2015. She currently buys cocoa beans locally to process and sell in her shop. She hires workers to do clearing and planting and pays them SAT\$40.00 per day. She has had problems with new planting regarding cattle eating the young trees. She intends to extend cocoa planting but has a shortage of planting materials. In her opinion, women can manage cocoa plantations and participate in harvesting and processing. Issues she faces are waiting for planting materials and a lack of technical knowledge for cultivation and pest control. She thinks women could do more regarding business and that cocoa is a good business. She would like to know how to manage an organic plantation (e.g. organic pest control).

#### **Tapu Sakaio (Auala)**

Tapu has been registered in the stimulus package since 2010, produces his own seedlings, and sells *koko Samoa* though family members in Australia for AUD \$10.00 per unit. He has sold cocoa beans to Va'ai, but did not like the price paid of SAT\$5.00. He has three acres and plans to extend, as he has 10 acres available to plant. He also grows taro and yams. He is not organically-certified but has never used chemicals. He is concerned about seasonal variations in production and that there are not enough market opportunities in Savaii (for the price he wants). His wife is disabled so does not help. Maintenance is hard because of the shortage of labour. He has four sons, one helps him, the other is married and goes out to work, another lives in Apia. He has no paid workers at present. He sells *koko Samoa* made by his daughter-in-law and her children. He anticipates selling his next harvest to *Nora Plantation Foods* in the form of dried beans at 8.00 per kg, with additional payment for transport.

#### **Momoemausu Salasa (Tufutafoe)**

Momoemausu has three or four acres of customary land that was planted with cocoa after the 1990/91 cyclones, and he is registered with the MAF stimulus package. Tufutafoe is a very rocky area. He sells cocoa beans at SAT\$5.00 per kg and cocoa at SAT\$5.00 per cup in the local area. He has no hired workers, just himself, his wife (she does the weeding, planting and processing), his two daughters and a married son. He suggests the need for training on plantation management and marketing. He has heard of *Nora* and that some people are selling to this new company. He does not use any chemicals and wants to expand planting and will grow his own seedlings. He says in cocoa production women do the processing and will take men's roles if there are not enough men. He commented that men start things and women keep them going. He noted that processing is time-consuming and it would be good to have labour-saving technology. He uses an aluminium bowl to pound cocoa (formerly used for kava pounding), which he says is better than the traditional wooden implement. He asked if black pod is caused by lightning as about 50% of his pods are infected.

#### **Lagi Taofinu'u Pio (Falealupo)**

Lagi has about 2,000 trees looked after by one labourer who is paid SAT\$200 per week for 5 days of work. She is a widow living alone, with seven children overseas. When harvesting, she hires two boys at SAT\$20.00 per day for three days. Planting and maintenance is done by the male workers but for processing she hires the wife of her

full-time labourer. She sells wet beans and dry beans at SAT\$7.00 per (plastic) bag, and *koko Samoa* at SAT\$7.00 per unit at her shop in front of the house; she also sells coconuts and vegetables. She has been approached commercially (but does not remember who they were) and she has sold to Va'ai at SAT\$5.00 per kg. She says women play a very important part in cocoa harvesting and processing. She suggested that the government could provide assistance in terms of tools, fertilisers and pesticides, if these are required for good management. The land was her late husband's customary land and his relatives tried to evict her after he died, but the Land and Titles Court upheld her claim.

#### **Peresia Seufata (Falealupo)**

Peresia has about 10 acres of cocoa, including old trees from 1989. Cyclone Ofa destroyed some and they have been replanting since then. Peresia is a widow and she has seven children (all overseas) who were adopted by her brothers, except for her youngest son who came back from Australia and is helping her to run the plantation. She sells *koko Samoa* in New Zealand and sells cocoa beans and *koko Samoa* locally at SAT\$5.00 per bag of beans or per unit of *koko Samoa*. She stockpiles beans and sells in the off-season at a higher price. She hires workers when needed and has two men helping her, her son and another adopted son. She does some of the processing and planting. She also has a citrus plantation and will soon harvest oranges (a big local demand in season) and has pigs and cattle as well. She suggested that assistance from the government is needed for farmers to buy tools and that the MAF should extend the bonus scheme. She has been visited by MAF staff to get original genetic planting materials.

#### **Unasa Ulu (Siufaga)**

Unasa has about 600 old cocoa trees and new plantings of 2,500 trees on five acres of his mother's customary land. He sells *koko Samoa* and dried beans to shops and markets at Salelologa and to a motel at Salailua at SAT\$10.00 per bag of cocoa beans and per unit of *koko Samoa*. There is a roadside stall (for the whole village) funded by the Adventist Development and Relief Agency (ADRA), with a high demand for *koko Samoa* and cocoa beans. The village has requested ADRA to fund extension of this stall. He has no paid workers, but he has two married daughters and their husbands, with two children, and he has an unmarried son with him and also has children overseas in New Zealand and in American Samoa who assist him when needed. He believes women are important in cocoa, citing his daughters as examples, as they do the processing and packaging. The main issues he has are people stealing pods, wet weather causing black pod, and a shortage of seedlings. He suggested that the government should help with obtaining fertiliser but he disagrees with the bonus scheme, and he says the government should boost replanting and look for markets.

### **Cocoa Processors and Vendors**

#### **Ana Epati (Faleasiu)**

Ana sells *koko Samoa* from a stall in front of Eveni (Carruthers) store on the main street of Apia, which is a location where a number of women sell *koko Samoa*. She sells at SAT\$5.00 per cup, and SAT\$10 per cup when supply is low, and also sells cocoa beans for people to make *koko Samoa* at home. She has many customers, including street vendors (who walk about looking for buyers), and people who buy for shops or for export. She sells *koko Samoa* to the MCIL markets, several times a year; supplying 400 to 500 units of *koko Samoa* for every order. She stockpiles beans for this market every year, and sells them at SAT\$5.00 to 10.00, depending on supply and demand. She shares 10 acres of customary land with her brother and sisters, each with a cocoa plantation of about 1.5 acres. They work together to supply orders, especially when orders are high. When the need arises, she hires relatives to assist with processing, at SAT\$20.00 per day. Her husband has a full-time paid job, and she has four young daughters. Her husband helps out with harvesting, fermentation, drying, roasting and pounding, when he has spare time. She mentioned that her problems are poor water supply, increased black pod incidence after high rainfall, and inconsistency of markets from time to time.

#### **Ela Lalofau (Laulii)**

Ela has been selling *koko Samoa* for a living for more than five years and owns 30 old cocoa trees that were not bearing at the time of the interview. She harvests these in the season and also buys dry cocoa beans from the market at \$5.00 per (plastic) bag (from Leauvaa, Tuanai, Afega villages). She buys 50 bags each time. For each bag, she can make two units of *koko Samoa*, and she sells each unit at \$5.00 each. When there is a low supply of cocoa, she buys dry beans at SAT\$10.00 and sells each unit at this price. She has a roadside stall, where she sells cocoa and other agricultural produce. If she is very short of cash and sales are slow, she sells from house to house within the village. Ela is 65 years old and lives with her husband and four daughters on her husband's customary land. The daughters assist their mother with roasting, winnowing, pounding and packaging. She

commented that selling cocoa is fast cash, and relies on her sales mainly for school fees, food, church obligations and other family commitments. Her main problem is the inconsistent supply of cocoa, and high prices to buy supplies from time to time. She would like her family to have a bigger cocoa plantation, provided that there are cocoa-planting materials available. The last plantation they had was before the cyclones, in 1990/91. She had never heard of the MAF Stimulus Package.

#### **Nu'ufou Isaia (Laulii)**

Nu'ufou doesn't have a cocoa plantation but she sells *koko Samoa*. She buys cocoa beans from the market, then roasts and pounds the beans to make *koko Samoa*, then packages and sells it. The prices vary according to supply. At time of interview, she was buying cocoa beans at \$10.00 per plastic bag as supply was low; she pays SAT\$5.00 when supply is high, from the market or from cocoa growers in Tuanai and Afega villages. She then processes *koko Samoa* and in the short supply period sells at SAT\$5.00 to 10.00 per cup depending on the supply. This is her main income for day to day expenses, family food, school fees, church obligations, and other commitments. Her family (husband and children) lives on her own family customary land (her husband is from Savaii). Nu'ufou is 63 years old with two daughters and five sons. She does not hire any labour for her business. The family also makes and sells buns in the village and nearby villages, when there is no cocoa supply. She wants her family to establish a cocoa plantation but land is a problem as there is a river that runs through their land.

#### **Malaeola Lole (Tuanai)**

Malaeola sells *koko Samoa* on the street in Tuanai village. She used to sell in front of the Eveni store in Apia, but due to shortage of supply in the off-season she is now selling from her village. When the supply is high she will return to town. When selling outside Eveni, she used to sell about 60 units of *koko Samoa* a day at SAT\$5.00 per unit. At Tuanai she was selling at SAT\$8.00-\$15.00 per unit depending on the size of the cup. Malaeola and her husband have a cocoa plantation with about 1,000 trees on her husband's customary land. Most of the cocoa trees are old, so they have begun replanting. WILEX has contacted them for supply of cocoa beans to their factory. She has been doing this business for more than 10 years and it gives good return and income for her family, and that is the reason she keeps doing it. It provides for her family's daily needs such as food, school fees and family commitments. Malaeola is 51 years old and her husband is 64. Malaeola and her husband have two daughters (30 years old and 25 years old) and one son (23 years old). One of her daughters is married and her husband works for Yasaki. Their son helps his father with the cocoa plantation: planting, maintenance and harvesting. The daughters help their mother with roasting, winnowing, pounding and selling. They do not hire any workers. They also grow taro, bananas and yams.

#### **Loine Tumanu Faleaupu (Tuanai)**

Loine sells *koko Samoa* on the street of Tuanai and also in front of the Eveni store in town. Her family has just planted a quarter acre (about 100 plants) of cocoa, which are not yet bearing. For her business, she collects mature cocoa pods from her husband's family, neighbouring families, and members of her church. She roasts, pounds and sells them. She relies on this income for all the households' needs and obligations. She sells in town when the supply of cocoa beans is good, and sells in the village when supply is low. When in town, she sells 40 to 50 units per day at SAT\$5.00 each. She also sells to American Samoa (at a price range of SAT\$3.00 to 5.00) through buyers living in Fagalii and Vailele, who place orders for *koko Samoa* from the various *koko Samoa* vendors selling in-front of Eveni. At the time of the interview in the village, she was selling at \$10.00 per cup on the road at her village, Tuanai. As this is the off-season, supply is low. She buys dry cocoa beans from Saena Kapeneta (high chief in the village) at \$10.00 per plastic bag of dry beans. She buys 6 to 8 plastic bags of dry cocoa beans, depending on how much cash she has, from time to time. From each bag, she can make two units of *koko Samoa*, and sells them at SAT\$10.00 cup, making SAT\$10 profit. She hires no labour for processing *koko Samoa*. Both she and husband share the chores on the plantation and processing. She suggested that the government could assist cocoa production by building capacity with training and providing information to the public about services and assistance. She had no knowledge about the on-going programme or the Stimulus Package programme. She is married with seven children; her husband attends to community and plantation activities. She is originally from Asau in Savaii, and is living with her husband and children on her husband's family land.



**Lusila Lilomaiava (Faleasiu)**

Lusila also sells *koko Samoa* in front of the Eveni Carruthers store in town. Her family has only a few old cocoa trees and at the time of the interview they were not bearing as it was the off-season. She sometimes makes *kokomata* from wet beans from her own cocoa trees. For her business, she buys dry cocoa beans from the villages of Tuanai and Satapuala and from Savaii. She contacts (telephones) people with cocoa beans. She buys 30 plastic bags (size 5" x 7") of cocoa beans or one large bag (30 kg rice bag). When the supply is good, she sells cocoa paste (*koko Samoa*) at SAT\$5.00 per unit, and when supply is low she sells at SAT\$8 to \$10 per unit. She also supplies *koko Samoa* to other vendors and to business people who are exporting cocoa to American Samoa. Orders from business people vary from 100 to 300 units of *koko Samoa*, and they bargain for lower prices of SAT\$3.00 to \$5.00 per unit, and this mostly takes place when supply is good. She has been in this business for about seven years, having retired from government service (formerly a librarian at Nelson's Public Library). She and her husband (from Savaii) are living on Lusila's family land. She is assisted by her daughter-in-law and children with the roasting, pounding and packaging. She does the selling herself in town. According to her, money from selling cocoa has earned her and her family enough to open a shop in the village. She banked her daily sales until there was enough to start up the shop. Although the shop is successful, she continues to sell *koko Samoa* because she believes that it is a fast and profitable source of income. A problem she is facing is that she and other women have been asked to move from their selling place outside the Eveni store. They do not, at present, pay any fee or rent for the use of the space. She does not want to move to the new market because she believes sales will be low there.

**Tipesa Pauli Iakopo (Salelologa Savaii)**

Tipesa sells cocoa paste at Salelologa market from her stall, which sells imported goods, handicrafts, linen and agricultural products. She started the business in 1993. She currently buys three bags of dry cocoa beans from a grower at Tufutafoe at SAT \$14.00 per bag. She resells them to people in Siufaga and or those looking for dry beans at \$18.00 per bag. The Siufaga people process these into *koko Samoa* and sell them back to her at SAT\$7.00 to \$8.00 per unit. She then sells them at \$10.00 per unit. She also buys *koko Samoa* made from wet beans (*kokomata*) from her family at Sataua at SAT\$6 per unit, and resells them at SAT\$8.00 to 10.00 per unit. She likes selling cocoa because the product lasts more than a week, unlike perishable vegetables. She is married and lives with her husband's family. She is 51 years old, and has a daughter (27 years old and married) and two sons (one works at the Fire Brigade in Apia and one stays at home). She has another shop on her husband's family land. Her husband also runs a stall similar to Tipesa's at the market, and sells the same goods.

**Mafa Faga (Siufaga)**

Mafa sells *koko Samoa* from a roadside stall owned by her family group (Vaituitui Family). Mafa's family has a cocoa plantation of about a half-acre (about 200 trees) with very old trees (20 to 25 years old) that were not bearing at the time of the interview. For her business, she buys dry cocoa beans from a grower at Tufutafoe. She said he is the only grower in Savaii who has cocoa beans stored for sale, and he was selling at SAT\$14.00 per plastic bag (size 5" x 9"). Mafa and other members of her group pay \$150.00 in transport costs to travel to Tufutafoe to buy cocoa beans. She normally buys 20 plastic bags of cocoa beans per week at that price. When the supply is good they buy from cocoa growers in nearby villages, Siufaga and Salelologa, and at Salelologa market at SAT\$5.00 per plastic bag. Mafa is the President of the Vaituitui Women's' group, which consists of her cousins and their husbands and wives (six families) who are doing the same business as Mafa. She and the group sell *koko Samoa* from their roadside stall, to the public, local business people, shops, restaurants, and to people at the Salelologa and Apia markets. She is 64 years old, her husband is 68 and they have two daughters with six children, all living with Mafa's family. She is assisted by her daughters and granddaughters with processing, roasting, pounding and packaging. She also gets assistance from her son-in-law with pounding. No one is employed for wages in the family so they rely on selling *koko Samoa* and other agricultural produce for income. Her daughters also make and sell *koko Samoa*. Mafa wants to have a family cocoa plantation, to supply enough beans for consistency of supply. She is looking at replanting and extending the plantation. She noted problems with roaming pigs, which feed on young cocoa trees, and competition between her group's roadside stall and the village roadside stall. She suggested the government could help by providing planting materials, providing fencing to protect the cocoa plantation from pigs, and also by helping to build a new roadside stall for the Vaituitui Women's Group.

**Palo Pauli (Sapini Faga Savaii)**

Palo sells *koko Samoa* at Vaituitui Women's Group roadside stall at Sapini Faga village. She and her husband do not have a cocoa plantation. She buys beans from growers in neighbouring villages, at SAT\$5.00 per plastic bag and processes them into *koko Samoa* and sells the units at SAT\$5.00 per unit when supply is good. At the time of

interview, the supply was low and she was selling koko Samoa at \$10.00 per unit. She was buying from a grower whom she said was the only grower with dry beans on the island; 60 bags of dry beans at \$14.00 per plastic bag. Cocoa is her only source of income, as her husband does not work for wages and they live with their three daughters on her family land. She can sell 50 to 60 units of *koko Samoa* per day at \$10.00 per unit. During the interview she was observed to have sold 30 in less than one hour. Palo does the selling and works with her husband on processing, roasting and packaging.

## Appendix B

# Note on weights, quantities, prices and time to make koko Samoa

## Appendix B Note on weights, quantities, prices and times to make koko Samoa

Smallholders measure quantities of *koko Samoa* in ways widely understood among Samoans (such as bagful or cupful). Research for this report did not involve much measurement, but recorded some information on unit quantities and weights from those interviewed. Our own measurements and estimates indicate that:

- The weight of dry beans per bag is 400gms. The assumption is that the weight of dried cocoa beans or one cocoa pod is 35 - 40gms, so 4 - 5 pods weigh about 200gms and one bag of about 400gms will make 2 units of *koko Samoa*
- To make one unit of *koko Samoa*, about 4-5 cocoa pods are used (the number depends on pod size and variety). Each cocoa pod bears about 30 -50 cocoa beans. The weight of wet beans per cocoa pod is about 200g. Therefore about 200-250 cocoa beans make one unit of *koko Samoa*.
- It takes less time to prepare *koko Samoa* from fermented dry beans (*koko mago*) than it does to prepare it from wet beans because the wet beans (*koko mata*) must be dried (by roasting them for a longer period) before pounding. *Koko Samoa* made from *koko mata* has a slightly different flavour which some consumers prefer.
- A unit of *koko Samoa* is usually about  $\frac{3}{4}$  of a small-size polystyrene cup (which is used as a mould).
- One unit of *koko Samoa* makes about 4 litres of the beverage or about 227g per cup.

The price of cocoa used for *koko Samoa* is determined by the sellers of beans or by cocoa growers themselves, with an eye to supply factors. Wet or dry beans for making *koko Samoa* usually sell for SAT\$5.00 per bag (5" x 9" plastic bag containing two cupfuls) which will make two units of *koko Samoa*, usually sold for SAT5.00 per unit, so a profit of SAT5.00 is made. The prices go up as supplies diminish before the next harvest.

*Note: Further economic analysis is required to investigate these quantitative aspects and determine the returns from selling dried beans and selling koko Samoa.*