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## Acronyms

<b>GDP</b>	Gross Domestic Product
<b>HH</b>	Household
<b>IPPM</b>	Integrated Production and Pest Management
<b>ISSER</b>	Institute of Statistical, Social and Economic Research
<b>MOFA</b>	Ministry of Food and Agriculture
<b>NGO</b>	Non-Governmental Organization
<b>SAP</b>	Structural Adjustment Programme
<b>SFC</b>	Small-Farm Commercialization



# 1. Introduction

As the transformation of farm enterprises proceeds to the stage of raising a cash crop, i.e. progressing from subsistence-based to income-based activities, both men and women play strategic but changing roles. It becomes necessary, therefore, to ascertain the gender impacts of transformation and commercialization activities. Small-farm commercialization (SFC) refers to the efforts of smallholders in moving from subsistence-based to more market-oriented production.

Gender analysis studies the different roles and responsibilities of women and men, the differences in women's and men's access to and control over resources, and their consequent constraints, needs and priorities. Incorporating gender analysis into the tools of participatory agricultural planning helps policy-makers and planners understand how the structure of policies and programmes needs to be modified if women are to be involved equally with men. According to Buckland and Haleegoah (1996), the focus of gender analysis should not be on the biological differences between men and women, but rather on their experiences as members of society. FAO has defined gender as the central organizing principle of societies that often governs the processes of production and reproduction, consumption and distribution. Gender roles, they said, are the 'social definition' of women and men, and vary among different societies and cultures, classes and ages, and during different periods in history (FAO, 1997). Though gender analysis represents a useful advance on previous attempts to conceptualize the social and economic lives of rural peoples in Africa, the complexity of the characteristics of different categories of women needs to be taken into consideration (Warner, Al-Hassan and Kydd, 1997). Government programmes that direct resources and employment to men heads of households assume implicitly that the associated benefits will be shared equitably with women and children (Agarwal, 1990).

Though women farmers are said to produce a substantial amount of the food consumed, they are faced with diverse forms of constraints, including: lack of land title and complex land-tenure arrangements, limited credit, limited agricultural information and services for effective farm decision-making, and high illiteracy rates. Nonetheless, in Ghana, these women continue to persevere to make ends meet for their family members.

Data on and documentation of men's and women's commercialization activities in Ghana are scarce, which hinders any meaningful, effective analysis. With such gender analysis of commercialization, there is a need to investigate the roles of women and men; gender division of labour; intra- and interhousehold relationships; and changes in household income, food security and nutrition as a result of commercialization.

This study identifies and examines SFC activities and pathways in the forest and transitional zones of Ghana, drawing on some experiences from the savannah zone as well. The effects of SFC on gender roles and relationships, as well as on intrahousehold incomes and other livelihood indicators, are examined. The constraints on adoption of commercialization activities were identified, and some lessons drawn on enhancing smallholder capability to take advantage of the opportunities and benefits of SFC in order to cope with a fast-globalizing world economy.

## **1.1 NATIONAL CONTEXT**

Ghana's national accounting system defines agriculture as comprising five subsectors with the following current contributions: cocoa (14 percent), other crops (61 percent), livestock (7 percent), fisheries (5 percent) and forestry and logging (11 percent). Sector shares of gross domestic product (GDP) varied substantially over the period 1980-2000. When the economy was experiencing negative growth rates in early 1980, agriculture's share of GDP was estimated at 36 percent. It rose to 54 percent in 1984 and declined to 43.5 percent in 1990, which could be due to an increase in the contribution of the service sector. The agricultural sector currently contributes approximately 36 percent of GDP. About 54 percent of the workforce between the ages of 15 and 64 are employed in agriculture, with about 70 percent of this number in rural areas (Institute of Statistical, Social and Economic Research – ISSER, Ministry of Food and Agriculture – MOFA).

Subsistence production is more prevalent in the food-crop sector with low productivity levels. Smallholder farmers on family-operated farms, using traditional technology, produce about 80 percent of total agricultural production. In 1996, out of about 2 million smallholders, about 60 percent cultivated less than 1.2 hectares (ha), while only 15 percent had holdings of over 2.0 ha. About 30 percent of farmers were 50 years or older. The smallholder farms are dispersed, and this makes provision of support services expensive. Production is largely rainfed and traditional production techniques tend to dominate. Less than 1 percent of the arable land is irrigated. Fertilizer and insecticide use is limited among smallholders.

The late 1970s and early 1980s were characterized by severe economic crises in a number of sub-Saharan African countries, including Ghana. This resulted in the launching of structural adjustment programmes (SAPs) involving market liberalization, currency devaluation, removal of subsidies and the promotion of export-oriented production systems. The Ghana structural adjustment programme led to the removal of subsidies on agricultural inputs such as fertilizer and other agrochemicals. According to Dodonoo and Dogbey (2000), the Government of Ghana was heavily involved in economic activity with state controls prior to the structural adjustments in 1983, but the reforms resulted in a liberalized economy, deregulation of price controls, privatization of many public enterprises through divestiture, and other institutional renewal mechanisms.

Discussions of price stabilization and market intervention are only relevant when carried out within a given economic framework. Today Ghana is pursuing a poverty-reduction programme as part of the Debt Initiative for Heavily Indebted Poor Countries. Currently, the New Partnership for Africa's Development (NEPAD) has been fostering food security, early warning systems, networks and storage mechanisms as one of its proposed actions to improve the agricultural sector.

Agricultural policy in Ghana is often linked to major government programmes, such as the poverty-reduction strategy being pursued in relation to the Debt Initiative. Agricultural policy continued to provide guaranteed minimum prices for maize and rice from 1987 to 1991. In this period, input subsidies were phased out and their sale was privatized. Subsidized credit and obligatory credit allocation to agriculture were discontinued. This was the period of structural and institutional reforms, and of drastic reduction in state intervention in production, distribution and marketing of agricultural outputs and inputs. Thus most farmers are now unable to access credit for intensified production of traditional crops or diversification into the production of new, higher-value crops.

Ghana's primary cash crops include cocoa bean, oil palm, pineapple, cotton and tomato. Cocoa is the most important export crop for Ghana and a major foreign-exchange earner. The production of cocoa is becoming more attractive due to the price assurance and the increased proportion of the world price being paid to farmers. However, the contribution of cocoa to merchandise exports has been declining since the late 1990s, from 32 percent in 1997 to 21 percent in 2001. Cocoa remains a good source of bulk income for farmers that have access to land or have long-term land-tenure arrangements.

The rapid pace of globalization is accelerating the monetization of subsistence producers. Farmers are faced with increasing demands for cash and with declining earnings from conventional products, resulting in commercialization of agriculture. Commercialization has been a 'male world', and the entry of women has often required contesting male bias in many communities.

Studies show that subsistence households have fewer total livelihood enterprises than those involved in commercial production. Women that maintain their subsistence production and add commercial production were found to have a greater number of farming activities (Spring, 2003). Subsistence farmers usually intercrop, while commercial producers need larger production sites, may store produce and may have different commodities available throughout the year.

The price of traditional commodities has been declining over the years. The challenge is for farmers to be able to meet their financial requirements in the face of low prices and seasonal variability. The options available to them are to intensify the production of traditional commodities, undertake the production of new commodities – such as export and high-value crops – incorporate off-farm and non-farm activities or exit agriculture altogether. Each of these options has its challenges and implications for resource requirements.



## **1.2 PURPOSE AND OBJECTIVES OF THE STUDIES**

The purpose of the studies was to provide information in order to understand how intra- and interhousehold gender relationships are affected by small-farm commercialization. They studied the diversity of activities relating to SFC by gender, as well as their effect on resource management, income flows, expenditure patterns, food security, food and nutrition security, and gender relationships in the selected communities. The specific objectives of the studies were to:

1. describe the diversity of small-farmer commercialization within the selected communities;
2. characterize the gender-differentiated impacts of SFC on rural livelihoods and intrahousehold dynamics in diverse socio-cultural and economic contexts;
3. identify and describe how women and men from the community perceive the impacts (costs and benefits) of commercialization on intrahousehold and community gender relationships;
4. identify and describe how women and men cope and adapt to the impacts of commercialization in terms of division of labour and access to and control of resources;
5. identify any barriers to participation in commercialization activities as perceived by women and men; and
6. identify ways in which change agents could better support the process of commercialization to ensure more equitable benefits for both women and men.

## 2. Method

Participatory appraisal methods were used for case studies in selected communities in the forest and transitional zones. These communities represent a cross-section of SFC experiences across the country. Information requirements and the methods and tools used are shown in Table 1. Secondary data were collected on the SAP and globalization in the Ghanaian context.

The research methodology is qualitative, drawing on rapid-appraisal methods, gender analysis, livelihoods analysis, income and expenditure matrices, benefit-analysis flow charts, interviews of key informants and opinion leaders, participant observation and a review of secondary data.

No prior selection of enterprises was done. All livelihood activities were characterized to identify areas and pathways of commercialization. Enterprises cutting across the main agro-ecological zones and cultures were observed. To ascertain the characteristics of adopters of SFC in the communities, household stratification was carried out in order to group households into those participating and those not participating.

**Table 1: Methods and tools for data collection**

Data needed	Methods and tools	Remarks
Location, climate, agro-ecology; natural resource condition and utilization, and socio-economic characteristics of community (profile)	Key informants Opinion leaders MOFA staff Focus-group discussion Information from secondary data sources	
SFC activities in community	Focus-group discussion Opinion leaders MOFA	
Household typology and profiles and prevalence of each type	Household classification Focus-group discussion	Group could be subdivided into men and women
Inter- and intrahousehold gender relationships	Wealth ranking by gender Expenditure patterns by gender	
Gender impacts of commercialization	Focus-group discussion Benefits-analysis flow chart Income and expenditure analysis	

### 2.1 SELECTION OF STUDY SITES

Three study sites were selected in three important farming-system zones. Farmers in these areas produce a market surplus, and the areas have significant trade links with the rest of the economy. Exchanges of labour and resources such as land are prevalent in these localities.

The presence of or potential for SFC activities, the availability of background information about the study area, earlier research undertaken in community and contacts within the community were factors taken into consideration in the selection process.

The farming systems selected were as follows:

1. forest zone, with tree (cocoa and oil palm) and root crops, cereals and livestock;
2. transitional zone, with cereals, roots and tubers, cotton, fishing and livestock.

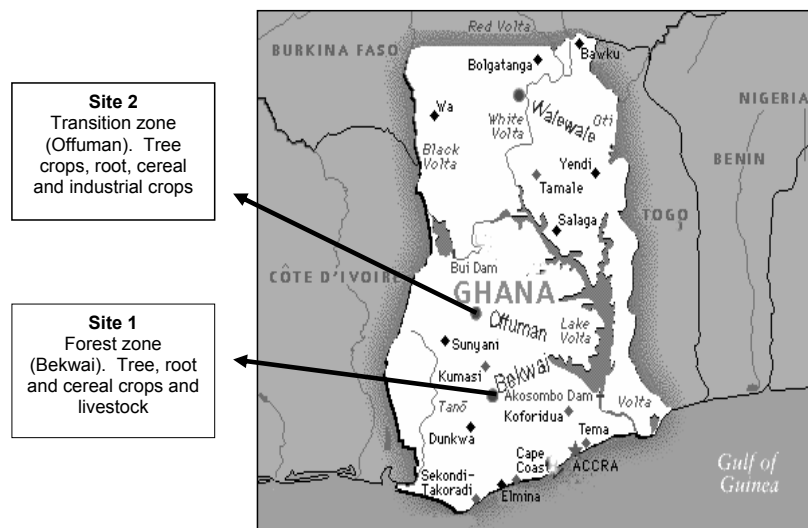
A principal village was first selected and studied in each of the three farming systems for a study on globalization and the African smallholder. Further field visits were undertaken in two of the sites to collect data for SFC analysis. Two subsidiary villages were chosen in each farming system, in the vicinity of the principal study village, where SFC had been adopted or considered. Offuman was selected as the principal village for the transitional zone and Bekwai for the forest zone (Table 2). The shaded villages were revisited to collect specific information on SFC after the globalization study. The study sites are shown in Figure 1.

Bekwai is near the regional capital of the Ashanti Region, which has a vibrant non-farm economy with significant marketing and trading activities. A considerable amount of food is produced in the region, leading to a market-oriented farming system. Offuman is about 30 km from Techiman, the district capital. Techiman has an international market that is patronized by traders from different parts of Ghana, Togo, Burkina Faso, Mali and Côte d'Ivoire. The Techiman market runs from Tuesday to Friday every week, unlike many markets that have a specific market day.

**Table 2: Selected sites for data collection**

	Forest zone	Transitional zone	Savannah zone
Principal village	Bekwai	Offuman	Walewale
Subsidiary villages	Adankranja	Nyansuaka	Kperiga
	Denyasi	Ampenkro	Wungu
	Amoamo	Patakoro	Gbam Gbeduri

**Figure 1: Map of the three selected farming system zones**

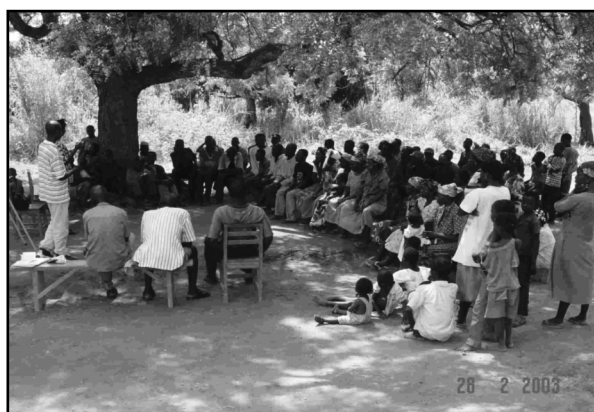


Attendance at community meetings was very high during the globalization study in all sites. During the SFC study, involvement was higher in the transitional zone than in the forest zone, as shown in Table 3. The degree of women's participation in the discussions varied from one area to another. Women participated actively and were very outspoken in Offuman, Bekwai and Adankranja. At Ampenkro in the transitional zone, no woman was present when the meetings started and women had to be persuaded by the men to come to the meetings (Ampenkro is shown in Figure 2). The women made few contributions. This situation was peculiar to locations where there were many migrants from the north and a high Moslem population. It was observed that women's participation improved whenever encouraged. However, women were found to perform better when grouped separately.

**Table 3: Attendance at community meetings for appraisals**

Farming system zone	Town/village	Participants		Total
		Men	Women	
Forest zone	Bekwai	15	12 (44%)	27
	Adankranja	13	7 (35%)	20
	Denyasi	13	0	13
Transitional zone	Offuman	27	19 (41%)	46
	Nyansuaka	28	19 (40%)	47
	Ampenkro	48	32 (40%)	80

**Figure 2: Ampenkro community**



## **2.2 FOCUS-GROUP DISCUSSIONS**

Community/group interviews were initially held in all the 12 towns and villages for the globalization study. Three towns and villages in two farming systems were revisited for the SFC study, making a total of six towns and villages. A participatory approach was used in which all community members present were encouraged to participate in discussions.

Village and community profiles were developed, and income-generating activities being undertaken in the various communities were identified and documented. Principal crops, livestock production and non-agricultural activities were analysed to determine commercialization patterns and changes in response to policy. Different communities have varying production structures, potential for economic growth and value-added systems, and these were discussed in focus groups as well as with key informants. The latter included the District Agricultural Development Unit (DADU), district assemblies and village leaders.

Different methods were used in focus-group discussions, including village agricultural timelines, wealth ranking, benefits-analysis flow charts, income and expenditure matrices and problem analysis. Participants were divided into wealth categories for in-depth analysis of their characteristics. They were also grouped by gender for some analyses. Patterns of input use and trade, market channels and networks, household typology and profiles, and economic flows between and among households were analysed.

## **2.3 HOUSEHOLD INTERVIEWS**

A questionnaire was developed for household interviews in the selected sites. The interviews involved 42 households for each farming system, randomly selected in the principal villages. Research assistants administered the questionnaires, with the researchers actively taking part. An effort was made to cover women and men equitably in the administration of the questionnaires.

The information and data collected covered farming activities, farm practices, livelihood assets (human, social, financial, natural and capital), consumption and production patterns, systems of resource allocation and labour exchange, and market and institutional linkages. The interviews were undertaken in the principal village of each farming system, as qualitative approaches are limited in capturing the net impact of the changes that had occurred over the years.

## **2.4 CLASSIFICATION OF HOUSEHOLDS**

To identify the household typology, households were classified according to their level of wealth: rich, medium or poor. Participants in the village-level meetings were asked to group the people in the village into categories according to the different rankings.

They listed the characteristics of each category and discussed the rationale for each reason given. After obtaining the characteristics of the groups, participants were asked to group themselves into the categories in which they thought they belonged, in order to create smaller discussion groups. A resource person held further discussions with each group. The criteria for household classification are shown in Table 4.

**Table 4: Criteria for household classification**

	Forest zone: Bekwai	Transitional zone: Offuman	Savannah zone: Walewale
Main factors	Farm size, asset ownership, livestock ownership (herd size)	Farm size, asset ownership, livestock ownership (herd size)	Farm size, asset ownership, livestock ownership (herd size)
Secondary criteria	Ability to educate children, type of housing Level of individual's contribution to community development	Ability to educate children, adoption of improved production methods	Ability to educate children, type of housing
Share of farmers classified into each of the three types	Rich 8% Medium 55% Poor 37%	Rich 5% Medium 71% Poor 24%	Rich 2% Medium 64% Poor 34%



### 3. Village profile

**Forest zone.** The forest zone is located in the Ashanti Region of Ghana, in the Amansie East District, with Bekwai as the district capital. The area has bimodal rainfall patterns, which permits two-season cultivation of annual crops. Rainfall in Ghana is seasonal and highly unpredictable from year to year. Rainfall distribution during the year varies considerably from one climatic-ecological zone to another. The site falls within the tropical rainforest, with hilly topography. No access roads from Bekwai to the surrounding villages are blacktopped, leading to further deterioration from runoff and gulley erosion.

Illiteracy, poor health facilities and limited off-farm and non-farm employment opportunities constitute the nature of poverty in the forest zone. However, trading activities are vibrant due to the Kumasi market, which is about 40 km away.

Rich households have a larger average household size than poorer ones. Average area of cultivated land is 170 ha for rich households and 2 ha for poor households (Table 5). As such, production levels are proportional to wealth status. Though some farmers have small ruminants and chicken, cattle-rearing was not found in the forest zone.

**Table 5: Basic characteristics of household types in the forest zone – Bekwai**

	Rich	Medium	Poor	Total/average
Households (HHs) in village (no.)	160	1 100	740	2 000
percent of HHs in village or zone	8%	55%	37%	
Family members (average)	10	7	5.6	7.5
Average cultivated land/farm (ha)	170	11	2.4	18.5
percent of crop 1 in cult. land (roots/plantain)	61 ha	4 ha	.4 ha	36%
percent of crop 2 in cult. land (vegetables)	52.7 ha	3.4 ha	.3 ha	31%
percent of crop 3 in cult. land (oil palm)	44 ha	2.9 ha	.3 ha	26%
percent of crop 4 in cult. land (cocoa)	11.9 ha	.8 ha	.07 ha	7%
percent of crop 5 in cult. land (maize)	1.7 ha	.1 ha	.01 ha	1%
Cattle (no.)	0	0	0	0
Small ruminants (no.)	13	49	0	62
List livelihood sources other than agricultural income				Off-farm agricultural labour, trading
Main factor justifying definition of type	Farm size	Farm size	Farm size	----



**Transitional zone.** The transitional zone is located in the Techiman District in the Brong-Ahafo Region of Ghana, with Techiman as the district capital. It has bimodal rainfall patterns also. This zone is the area between the forest zone in the south and the savannah zone in the north. Techiman is a major international market centre in the West African subregion. The presence of the market, coupled with an improved road network to Offuman and one of the subsidiary villages has resulted in lively market activities and trading in the community.

Population density is fairly low. Crops cultivated in the transitional zone include maize, cassava, yam, cocoyam, vegetables, and tree and industrial crops (tobacco and cashew). Cattle and small ruminants are also reared.

A majority of households are said to have medium wealth – neither poor nor rich. Only 5 percent are rich, while 71 percent are in the medium category. Unlike in the forest zone, average household size is larger for the medium group than for rich households (Table 6). Farm size, however, is related to wealth status.

**Table 6: Basic characteristics of household types in the transitional zone – Offuman**

	Rich	Medium	Poor	Total/average
Households in village (no.)	142.5	2 023.5	684	2 850
percent of HHs in village or zone	5%	71%	24%	
Family members (average)	3	6.6	5.6	5.1
Average cultivated land/farm (ha)	80 ha	11 ha	3 ha	12.5
percent of crop 1 in cult. land (vegetables)	24.8 ha	3.4 ha	0.9 ha	31 %
percent of crop 2 in cult. land (maize)	24.0 ha	3.3 ha	0.9 ha	30%
percent of crop 3 in cult. land (roots/plantain)	13.6 ha	1.9 ha	0.5 ha	17 %
percent of crop 3 in cult. land (cocoa)	8.0 ha	1.1 ha	0.3 ha	10%
percent of crop 3 in cult. land (tobacco)	6.4 ha	0.9 ha	0.2 ha	8%
percent of crop 3 in cult. land (cashew)	3.2 ha	0.4 ha	0.1ha	4%
Cattle (no.)	0	50	0	50
Small ruminants (no.)	38	82	21	141
List livelihood sources other than agricultural income				Migration, off-farm agricultural labour, trading and stores
Main factor justifying type definition	Farm size	Farm size	Farm size	----

### 3.1 HOUSEHOLD CHARACTERISTICS BY VILLAGE

Significant differences exist in the distribution of community members by wealth. A wealth-ranking exercise revealed three main categories, namely, those that are rich, those that are not rich and not poor, and those that are poor. These categories are ‘*osikani*’ for rich, ‘*dantemni*’ for medium, and ‘*obiani*’ for poor in the Akan language, which is widely spoken in the forest and transitional zones.

All three categories of households were found in all the communities visited. An analysis of data from household interviews shows that the proportion of the community population within the rich category ranges from 2 to 8 percent in the study areas. In one particular village in the forest zone, there was only one participant in the rich category among the participants (Figure 3). The farmers explained that though there are very rich people that are from their communities, they have moved out to live in other areas. It was also noted that, though some of them are poor, there are no very poor (or absolutely poor) among them. Box 1 provides an explanation of household classification in the principal village of the transitional zone.

The characteristics of the households by typology are summarized in Table 7, and the criteria used for the classification are those shown in Table 4. Farm size, ability to educate household members and type of housing are among the criteria used for classifying households. The majority of farmers are classified under the medium category (not rich, not poor) in all three farming-system zones. Community members indicated that it is desirable for them to have more people in the rich and medium categories, as they contribute significantly towards community development projects. Though food-security status was not used directly, households in the poor category are often food insecure due to very small farm sizes, very low income levels and limited diversity in economic activities. The household classification for each village in the two sites revisited is presented in Tables A5 and A6 (Annexes).

### **Box 1: Classification of households in Offuman**

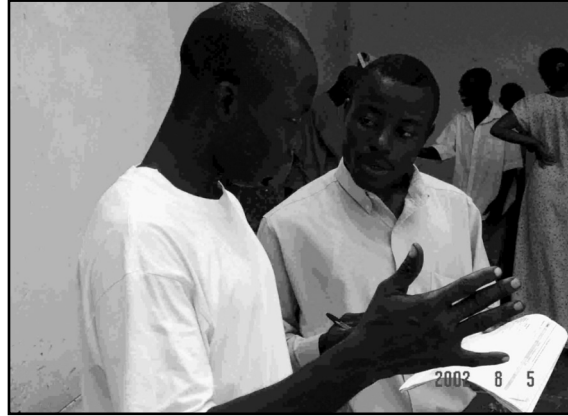
Offuman is the principal village in the transition zone. A household classification there showed that the rich had slightly more people living in the household than the poor and medium categories. The rich live in cement houses, which are roofed with iron sheet-roofing. About 65 percent of those in the medium group have cement block houses, and 35 percent have brick houses roofed with iron sheet. All those considered poor live in mud houses, with 30 percent thatch roofing and 70 percent iron sheet. Most of the households in the rich and medium categories have built their own houses, but only 40 percent of the poor live in their own houses. Only 0.5 percent of the population is classified as rich.

The level of education of the household head is not an important determining factor of household classification. However, there are significant differences in the level of education of household members among the categories. Farm sizes are also different among the categories. The rich have farm sizes of 10 acres (4 ha) or more and have larger areas of uncultivated land available, while the poor have only about 3 acres (1.5 ha).

All household categories are engaged in crop and livestock farming and marketing activities, though the rich are able to own large stores and buy farm produce in bulk for resale in other markets. In coping with livelihood difficulties, the poor resort to providing labour services on other farms for daily wages in order to provide food, pay school fees for children, and meet other household needs.

### Figure 3: Focus-group discussions.

Focus-group discussions were held with the different household categories. Here, a discussion takes place with a man in the rich category in a village in the forest zone.



**Table 7: Characteristics of winners and losers by household typology**

	Zone 1 – Bekwai	Zone 2 – Offuman
Rich	<ul style="list-style-type: none"> <li>• Must own a house with at least two bedrooms</li> <li>• An oil-palm plantation of at least 10 acres</li> <li>• Savings of at least 2 million Ghanaian cedis in the bank<sup>a</sup></li> <li>• Must own a store (supermarket)</li> <li>• Contributes immensely to community development, e.g. the building of a school for the community</li> <li>• 8% of population</li> </ul>	<ul style="list-style-type: none"> <li>• Adopts improved methods of farming</li> <li>• Has a car, private tractor and farm equipment</li> <li>• Has self-contained house</li> <li>• Assists in community development</li> <li>• Very large farm of about 55 acres, about 10-acres vegetable farm</li> <li>• Owns about 100 cattle</li> <li>• Children go to very good schools, plus can afford private teachers</li> <li>• Expanding business</li> <li>• 5% of population</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• Able to finance children's education to secondary level or trade</li> <li>• Must own a house with at least two bedrooms</li> <li>• Able to meet basic needs</li> <li>• Owns a store (kiosk)</li> <li>• Has employment other than farming, e.g. teaching</li> <li>• 55% of population</li> </ul>	<ul style="list-style-type: none"> <li>• Food crops of about 10 acres, vegetable farm of about 5 acres, and tobacco farm of about 20 acres</li> <li>• Children go to good schools</li> <li>• Hardworking</li> <li>• 71% of population</li> </ul>
Poor	<ul style="list-style-type: none"> <li>• An old person, not working and has no remittance</li> <li>• One who has no farm, so if not employed on a daily basis, would go to bed with an empty stomach</li> <li>• 37% of population</li> </ul>	<ul style="list-style-type: none"> <li>• Small farm, cannot hire labour and could therefore abandon farm</li> <li>• Thatch house</li> <li>• Cannot pay school fees for children</li> <li>• Poor food and nutrition security</li> <li>• Hires out as day-labourer</li> <li>• Wears poor clothing and sometimes borrowed clothing</li> <li>• Does not contribute to community development</li> <li>• 24% of population</li> </ul>

<sup>a</sup> The Ghanaian currency is called the cedi. At the time of data collection, the exchange rate was about US\$ 1 to 8 300 cedis.

The household categorization provided insights into the livelihood assets of each household category, which gave an indication of their ability to benefit from globalization. The rich categories have more resources, are more educated and have skills that allow them to produce on a larger scale. They are also able to take their produce to marketing centres outside of village communities and to sell at more competitive prices. Some are engaged in trading activities and also buy farm produce from other farmers to sell in the markets. As a result of their financial standing and social disposition, they can be said to have better market linkages and access to a wider range of information, and could benefit more from globalization.

However, it is difficult for the poor and medium household categories to receive or tap the benefits of globalization. They are less educated, with limited skills, and are unable to take produce to the urban market centre. They depend on buyers that come to the village and are compelled to sell their produce early. While the richer farmers are more diversified in both agricultural and non-agricultural activities, poorer households have farming as their only occupation and means of livelihood. Richer households are able to adopt new technologies faster than poorer households.

Statistically, household characterization was based on farm size and value of assets owned. Assets are generally very important in sustaining life, particularly given that they can serve as collateral when seeking productive resources such as land and credit, whether from formal or informal sectors of the economy. Although the informal sector may not require specific assets as collateral, the asset base of the prospective borrower is often taken into consideration. A computation of chi-square<sup>1</sup> to establish a relationship between asset ownership and farm size of the household was found to be significant. The chi-square<sup>1</sup> computed (13.3) is significant at the 1 percent significance level, showing that the asset base of the farmer significantly influences farm size.

**Table 8: Characterization of household typology by wealth status**

	Farm size	Value of asset
Rich – High	50 acres and above	Above 90 million cedis
Intermediate – Medium	4.5 to 49 acres	Between 1.5 to 90 million cedis
Poor – Low	Up to 4 acres	Up to 1.5 million cedis

<sup>1</sup> A method of comparing observed and theoretical values in statistics.



## 4. Small-farmer commercialization activities

Small-farmer commercialization in Ghana includes farming and non-farming activities. In farming communities, commercialization encompasses: selling of a marketable surplus of traditional crops; diversification into the production of new crops; introduction of new income-generating activities; and post-harvest activities such as processing of farm produce. Livestock sales are undertaken in limited communities in the transitional zone. Livestock production is not widespread in the forest zone beyond keeping a few animals for household consumption.

Marketing activities are common in addition to farming. Marketing takes the form of transporting farm produce to markets outside the village for sale and/or ownership of small shops in the village. Artisanal activities such as carpentry and masonry are present. Post-harvest activities involve processing maize into cooked food for vending within the villages, and processing of cassava into *gari* on a small scale.

### 4.1 PATHWAYS OF COMMERCIALIZATION

Pathways for small-farmer commercialization can be classified under farm, non-farm and off-farm activities. For farm activities, farmers could either engage in large-scale production of traditional crops (or use of improved varieties) or shift to high-value crops and livestock production. Livestock production is more prevalent in the savannah zone, but also exists in the transitional zone. Small farmers engage in non-farm activities such as hiring of labour services, and processing of farm produce to add value. Off-season activities include *pito* brewing, firewood gathering, charcoal production and marketing of agricultural and non-agricultural commodities. Some men have established stores and kiosks in the villages, where they sell minor provisions and drinks.

As mentioned, post-harvest activities were limited to small-scale processing of cassava and maize for household consumption and sale. Cassava is often processed into *gari*, but not on a large scale in the study areas. *Kenkey* (made from maize) is often sold by women. Some also roast plantain and fresh maize for sale.

The production of taro is found to be profitable in two villages in the forest zone. Though taro cultivation is profitable, it does not present a general opportunity for many, as its production is limited to a few people and it only thrives in valley-bottom areas.

Vegetable production was found to be the most important pathway to commercialization, identified in the six villages visited in the forest and transitional zones of Ghana (Table 9). Commercial production of vegetables (garden-egg [eggplant], tomato and pepper) was found to be prevalent. Rich households devote about 31 percent of total cultivated land to vegetable production and 35 percent to the production of root and tubers. Poor households devote only 13 percent of cultivated land to vegetable production. Overall, about 31 percent of all cultivated land is devoted to vegetable production in the forest zone (Table 5). The percentages are the same in the transitional zone, except that poor households also devote about 30 percent of their total cultivated land to vegetable production (Table 6). In Table 7, rich households are identified as those that can cultivate about 10 acres of vegetable farm, and medium households as cultivating about 5 acres of vegetables.

Vegetable production was found to be very effective when producers had formed a group for production and marketing of the produce. Vegetables are mostly sold and only small amounts are consumed. Some are used in the preparation of soups and stews and some are used as planting materials for the following season. A lot of the cassava, plantain, maize and taro produced are used for home consumption. Tree-crop producers were limited and cultivated cocoa, oil palm and citrus. No new income-generating activities such as fish ponds were found.

**Table 9: Commercialization pathways in two study zones in Ghana**

	Forest zone		
	Asanso	Adankranja	Denyasi
Commercialization pathways	<ul style="list-style-type: none"> <li>• <i>Vegetables</i>. Brought to village 8 years ago from the Brong-Ahafo Region</li> <li>• Trading in district and regional capital</li> <li>• Artisanal work</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Vegetables (peppers)</i>. Taro, cocoa, oil palm are also lucrative, but limited to a few people and areas</li> <li>• Widespread, small-scale trading in agricultural and non-agricultural products</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Vegetables</i></li> <li>• Intensification of cocoa production</li> <li>• Trading</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Transitional zone</b></li> </ul>		
	<ul style="list-style-type: none"> <li>• <b>Offuman</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Nyansuaka</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Ampenkro</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Vegetables (tomatoes and garden-eggs)</i></li> <li>• Trading in agricultural produce and ownership of stores</li> <li>• Keeping of livestock</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Vegetables (very limited)</i>. Grows a lot of maize</li> <li>• Rearing of livestock</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Vegetables (tomatoes)</i>. Tomato-processing factory being rehabilitated in a nearby town</li> <li>• Limited trading</li> </ul>

The livelihood activities identified in the study villages are shown in Table 10. Farming is the predominant activity in all the villages. Agricultural activities in the forest zone include cereals, roots and tubers, tree crops, livestock and vegetables. Tree-crop systems require a right to the land, as the crop occupies the land for a long time.

**Table 10: Livelihood activities by gender**

Specific to women	Specific to men
Farming	Farming
Day-labour services	Day-labour services (weeding around crops, fertilizer application, harvesting). Limited to a few
Marketing (goods and farm produce)	Marketing. Limited to a few
Preparation and selling of firewood and charcoal (Nyansuaka)	Firewood (limited) and palm-wine tapping
Hairdressing, sewing	Barbering, tailoring, mechanical and electrical services, driving, cobbling, photography
Teaching	Teaching
	Artisanry (carpentry, masonry, batik)
	Fishing (Bekwai) and hunting (Nyansuaka)

## 4.2 PATTERNS AND TRENDS OF SMALLHOLDER COMMERCIALIZATION

Different factors contributed to the start of SFC activities in the various communities. While some farmers are located in the same place for several years, others move from one place to settle in another. Thus new farming ideas are introduced to the communities in which farmers settle – and are sometimes adopted if profitability is observed. New crops were introduced into communities through the settling of farmers from other locations, such as those from northern Ghana that settled in the Brong-Ahafo Region. Some of these crops include bean and tomato cultivation in the transitional zone and pepper cultivation in the forest zone.

An example of changes in SFC is pepper production in the forest zone, which was introduced by migrants from the Brong-Ahafo Region (Box 2). When farmers in a community observe the profitability of a new crop, it serves as an incentive for them to attempt its cultivation. As such, adoption of SFC is enhanced in situations in which farmers can see such activities on the farms of their neighbours. Sharing of information therefore plays an important role in the adoption of SFC activities among farmers.



### **Box 2: An example of how SFC started**

In one village in the forest zone where pepper production is successful, the production process was initially financed through borrowing. The farmers formed a group and were able to obtain credit, which they paid back promptly, from a non-governmental organization (NGO).

A community member brought the pepper seeds from the Western Region of Ghana and started production in the Adankranja community in 1983. After the first cultivation, he introduced four of his friends to it. All the four friends that started with him have stopped and migrated to the city after earning enough money through cultivation.

The famine in 1983 was also a factor in the shift from tree crops to pepper in order to receive income quickly. Pepper production was initially done on a small scale, sometimes intercropped with cassava, but has expanded over the years. Farmers began to use fertilizers and agrochemicals in 1988, due to low soil fertility and pest and disease incidence respectively.

In 1988, the pepper farmers came together to form a cooperative. They bought a pumping machine, which helped with dry-season cultivation. The formation of the cooperative helped obtain a good, stable price for the peppers, because harvesting was done in batches (five farmers per week) to control the quantity sent to market. The cooperative was also able to access loans from the market women that bought the peppers. Current membership stands at 30 farmers.

There was a change in the variety of pepper cultivated, from the long type to an improved variety that is round. The new variety has higher yield but is very difficult to dry. Pepper cultivation has changed from small-scale farms to large acreages, involving the use of fertilizers and chemicals.

**Storing and processing activities.** Ability to store farm produce makes it possible for farmers to sell at a time when the price is favourable and/or when they are in need of money. However, not all crops can be stored in the local setting. Those that are stored include maize, beans, dried peppers and yams. Maize can be stored for a long time and sold during the lean season at a higher price. Vegetables are perishable and are neither stored nor processed. Ability to store farm produce depends on the ability to pay off debts without being forced to sell produce early. Rich households are more capable of storing farm produce than medium and poor households. The poor are compelled to sell immediately after harvest, making it difficult for them to get out of poverty.

Availability of non-farm income in a household enhances its ability to store produce for a long time. Nevertheless, early sale of produce was one vital problem indicated by some study villages. They indicated that financial pressure, lack of alternative income-generating activities and non-farm employment opportunities compel them to sell their produce early. This phenomenon could bring them into the vicious cycle of poverty, as selling very early has implications for food security, investment and other financial obligations. Due to the ability of rich households to educate their children to higher levels, they have stronger links with the rest of the world, and thus an advantage in

accessing information. Some rich households are also more diversified in farm activities, although others are specialized.

Very little processing is carried out in the study sites. Cassava is processed into *gari* on a large scale in the transitional zone. In the forest zone, *gari* production is undertaken only for household consumption. A major *gari* processing village, Asueyi, is located in the transitional zone, not far from the principal village. Milling machines are available in most communities. In the savannah zone, groundnut is processed into oil, and shea nuts are processed into nut butter. The presence of processing machines has reduced the drudgery of grinding and the hard labour involved in the process. New processing machines are now available in the savannah zone, including maize shellers, winnowers and rice mills for the processing of grains. The degree of processing determines the extent of value-added and could provide opportunities for non-farm, income-generating activity. The ability to add value to farm produce has implications for food and nutrition security, as well as providing pathways for escaping poverty.

**Other economic activities and non-farm income.** African smallholders have diverse sources of livelihood that include crop and livestock farming and off-farm activities. Generally, crop farming constitutes the major economic activity in most areas. However, a focus on traditional cropping activities makes farmers vulnerable to economic and climatic shocks. Crop failure is on the increase due to land degradation and population growth. Very few farmers are diversified, which would reduce their production and financial risk.

Family and non-family labour is used in production processes. Hired labour is expensive and accounts for a major part of farm investment. Due to the low level of agricultural mechanization, labour is used for land preparation, weeding, harvesting and for transporting produce from the farm to the village. The demand for agricultural labour is high.

Different livelihood strategies are the result of differences in household resource endowment, institutional linkages, infrastructural development, and proximity to a major marketing centre, among others. Where household members are engaged in non-farm activities or diversified agricultural production activities, farmers are able to finance the production of new crops.

The number of farmers that reported non-farm income was found to be independent of household typology. On average, 52 percent of households have non-farm income. Of these, 37 percent of poor households have non-farm income, against 62 percent of medium households and 33 percent of rich households (Table 11). The percentage of farmers in non-farm activity is higher in areas characterized by a single farming season. Agricultural activities are dominant, and wealth status is not determined by the extent of diversification into non-farm activities.

**Table 11: Non-farm income**

	Rich	Medium	Poor	Total
Yes	33%	62%	37%	52%
No	67%	38%	63%	48%

Source: Survey Data.

### 4.3 MOTIVATION FOR SFC

Several factors motivated the farmers that adopted SFC in the study area. An important factor was the need to emerge from poverty. Increased income has therefore been a major driving force. For women, economic independence is also greatly desired, either because they perceive that their husbands alone cannot cope with the financial demands of the household or because they are reluctant to request financial assistance from their husbands for even minor needs.

Another factor was the profitability of the crops, most of which are high-value crops with good yields due to appropriate farm management practices. The production of vegetables is not carried out in the same manner as the production of traditional crops. Vegetables are less resistant to harsh environmental conditions and require more care in the form of frequent weeding, spraying against insects and diseases, fertilization and prompt harvesting. As such, SFC has compelled farmers to adopt better farm management practices.

#### **Box 3: Motivation for SFC - the example of pepper production at Adankranja in the forest zone**

- Profitability
- Early maturing - cultivated about three times a year
- Good yields
- Regular and quick source of income
- High demand
- Competitive pricing system
- Needs less land
- Pepper farmers association provides good information on inputs and prices and enables farmers to bargain for better prices. Credit has also been received through the group.

Given an acre of land to be used for the production of pepper, cassava or maize, the yield from pepper in terms of bags would be about three times that of cassava and maize. Pepper can be harvested every week for about three to four months, while cassava and maize are harvested once in a planting season.

Vegetables mature quickly and provide farmers with quick and constant income throughout the year, as compared with other traditional crops (Box 3). Yam, cocoa and other tree crops have high value, but they bring income only annually.

The withdrawal of government subsidies from agricultural inputs through the Economic Recovery Programme (ERP) and SAP resulted in very high input costs and presents a constraint on adopting SFC.

Farmers in Nyansuaka, a subsidiary village in the transitional zone, cultivate a lot of maize for sale. The driving force behind the cultivation of maize is its storability. This quality presents an incentive, as it can be stored and sold during the lean season at better prices. As mentioned previously, vegetables are neither stored nor processed and must be sold immediately after harvest, regardless of the prevailing price. Maize is also consumed in large quantities throughout the year. In addition, the Nyansuaka farmers have constructed a maize storage unit, where they store maize in bulk and receive some occasional inventory credit. Maize can be planted twice in a year and also brings quick income to farm households. It is the most profitable staple crop if it can be cultivated on a large scale and stored for long periods. However, farmers are often compelled to sell their maize early to meet pressing financial needs.

No project-based, gender-sensitive initiatives that support commercialization were observed in the communities visited. NGO activities are also limited in the study sites. Certain varieties of pepper and sunflower were introduced to the farmers in Offuman by the NGO CARE International and CAPRICA. However, these varieties had no market and farmers were unable to sell them, which resulted in great losses for the farmers that attempted their cultivation. The Village Infrastructural Project (VIP) assisted the Ampenkro and Nyansuaka communities in constructing a building to store maize, but the buildings are in need of renovation to be able to continue the storage. TechnoServe/Ghana once gave out loans to farmers in Nyansuaka to help them store their maize longer. These inventory loans could be a contributing factor in the community's view of maize as their important commercial crop.

#### **4.4 SFC CHANGES**

The production of cassava, maize, taro, cocoa and oil palm was formally the main agricultural activity that brought income to farmers in the forest zone. Now there is a shift from the large cultivation of these crops to the large-scale cultivation of vegetables. This change came as a result of the realization that activities were needed that would bring households a regular source of income.

In terms of on-farm commercialized activities, there have also been changes in the varieties, but some are associated with other kinds of problems, such as high perishability and lack of resistance to pests and diseases. Besides, farmers whose income levels improve are able to diversify into non-farm and off-farm activities, especially trading and the ownership of shops.



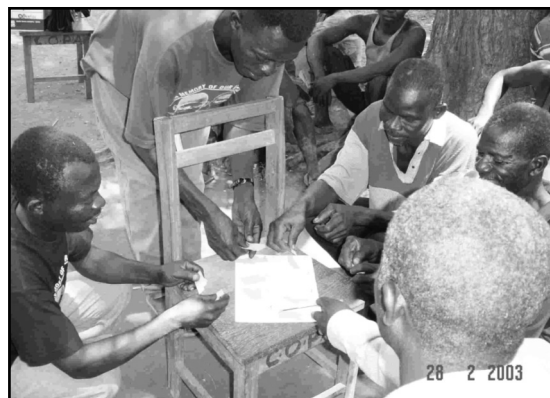
## 5. Income and expenditure analysis

To determine the sources of income and expenditure, participants were divided into two groups: men in one and women in the other. Each group was asked to indicate their main sources of expenditure. They were given cards to represent 100 000 cedis to distribute among their major expenditure items. This was carried out with a lot of lively discussion among themselves to agree on the proportions for each item as shown in Figure 4. After allocating the money among the expenditure items, they were asked to indicate the main sources of income. They then had the task of distributing the 100 000 cedis according to their income sources. The income and expenditure exercise gave a clear indication of the patterns of expenditure of men and women as well as their income sources.

The main source of income was from farming activities for both men and women. Women in the transitional zone obtain from 20 to 50 percent of their income from marketing activities (Table 12). Major expenditure sources comprise food, education and farming (Table 13). Men spend more money on food than women. Expenditure items with asterisks are those items that can be reduced in time of crises. No income sources were found to be specific to particular age groups. An example of a community output is shown in Figure 5. The income and expenditure analysis for the forest zone is presented in Table A 1 and Table A 2 in the annexes.

### Figure 4

*An income and expenditure analysis exercise in the village of Ampenkro in the transition zone.*





## 6. Impacts of commercialization by gender

Farmers are aware that the production of non-staple or even non-traditional crops can generate higher income. It was observed that adopters of commercialization had higher living standards than non-adopters. The reasons for adoption and the characteristics of adopters and non-adopters are presented in Table 15. The key aspects of the impact of SFC have to do with increase in income, change in social status, economic and financial independence, empowered decision-making position and gender equity. This is particularly important for women given that men usually play leadership and decision-making roles in society.

For men, commercialization has resulted in improved income levels, which have enabled some of them to build houses, purchase pumping machines and vehicles. For women, SFC has led to increased income levels with which to care for their children and themselves and to improve household nutrition. Women adopters achieved greater financial independence, which improved their status in the household and community, especially when they controlled funds generated by commercialization activities.

Vegetable production was found to be beneficial to the land poor, as its adoption does not require many acres of land. Moreover, vegetables mature quickly and do not occupy land for long periods.

**Table 14: Reasons for adoption and characteristics of adopters and non-adopters**

	Adopters	Non-adopters
Characteristics	<ul style="list-style-type: none"> <li>• Have more income and own property such as house, television and fridge</li> <li>• Able to give better education to children</li> <li>• Able to provide good, nutritious food for family</li> <li>• Good physical appearance (clothing)</li> <li>• Less borrowing</li> <li>• Some men understood the value of maintaining one wife</li> </ul>	<ul style="list-style-type: none"> <li>• Some successful farmers are non-adopters that devote their efforts to taro, cocoa and oil-palm production</li> <li>• Poor with less income</li> <li>• Not able to educate children to higher levels</li> <li>• Not able to provide good, nutritious food for family</li> <li>• Poor physical appearance (clothing)</li> <li>• Borrow money often</li> </ul>
Reasons for adoption and non-adoption	<ul style="list-style-type: none"> <li>• The quest for better standard of living</li> <li>• The need to get quick income to meet financial expenses, especially to pay for children's education</li> <li>• In the case of vegetables, they are early maturing and can be harvested every week</li> </ul>	<ul style="list-style-type: none"> <li>• Have another viable enterprise (taro, cocoa, cassava and maize) that can also be sold for money</li> <li>• Inadequate capital</li> <li>• High cost of chemicals and fertilizers</li> <li>• Need a lot of labour</li> <li>• Very intensive and difficult to undertake – requires hard work</li> <li>• No interest in vegetable production</li> <li>• Have few fertile lands that can support such production activities</li> </ul>



## **6.1 INTRAHOUSEHOLD RELATIONSHIPS**

Most families farmed together as a team. However, women heads of households have their own farms, and some married women also had their own farms. There is often limited conflict of interest when farming is done together. The households involved in commercialization are financially more comfortable because of the extra income it brings. However, this comfort and peace can only be sustained when there is mutual understanding on the adoption of SFC. Sometimes, when there is no agreement and production is done separately, it could result in disharmony in the home. The men observed that some women become disrespectful when their income level increases, and some could separate from their husbands. The morality of the men decreases when they have a lot of available cash, which affects the security of the married women. Some of the men that adopted SCF took girlfriends when their income level began to increase.

When both the man and the woman undertake commercialization activities, they pool their resources for their children's education and the general upkeep of the home. The children also provide the necessary assistance to their parents, as they benefit also.

## **6.2 INTERHOUSEHOLD RELATIONSHIPS**

There is a reduced level of borrowing on the part of those that have adopted SFC. This is due to the financial independence of the adopters that results from small-farmer commercialization. Commercialization also results in the provision of employment opportunities in the communities. Adopters hire people for land preparation, weeding, chemical application, harvesting and transportation (headloading), among other tasks. As a result, these employment opportunities benefit those that are not engaged in commercialization. Those engaged in vegetable production often employ young people and other community members to work in exchange for wages or farm produce, which they then sell.

SCF is said to result in food shortages, as the products are often not consumed in large quantities. Households involved in food production were found to be key contributors to making commercialization possible, because they grow the food for consumption and support SFC adopters with food produce when the need arises. Households with resources such as spraying machines lend them to those without such access. This type of collaboration and interdependence has strengthened interhousehold relationships. People from different households help each other.

Adopters of SFC are identified as major contributors towards community development. They are able to contribute more to enhance progress in the villages. SFC has resulted in reducing rural-urban migration, because it is an additional motivation to stay in the villages.

### 6.3 ACCESS AND CONTROL OF RESOURCES

The benefits of agricultural development interventions have been taken over by better-off and more powerful members of the household and community. Traditional tools such as cutlasses and hoes are readily available to both men and women. Few women have access to knapsack sprayers and pumps. As seen in Box 3, men predominantly own most resources in the household. Women have control over items that they purchased themselves and those that were purchased for them in male-headed households, including sewing machines, cooking utensils, hoes and cutlasses. Women that farm on their own are often women in polygamous marriages or women heads of households (*de facto* and *de jure*).

#### Box 3: Access to resources

Most resources in the household are controlled by men. Women are said to own and control cooking utensils and, in some cases, sewing machines. Women also contribute towards household expenses through income generated from trading and farming activities.

It was learned that before some women could get access to a knapsack sprayer or a pump for work on their vegetable farm, they had to work for three days on the farm of the owner of the equipment. They are then allowed to use to these resources.

Access and control of resources depends on who in the household controls the income from economic activities. Household members that have control over the income from SFC are able to hire land and labour, purchase fertilizer, agrochemicals and farm equipment. Accordingly, lack of control of income is directly linked to lack of access to productive resources.

The ability of women to move into commercial production depends on resource availability, new technologies and market opportunities. Women often need to adopt strategies that allow them to bypass gender constraints in order to have access to land, capital and other productive resources. The transformation of traditional farming economies into modernized small farming has cultural implications, including important changes in indigenous patterns of gender relationships within the household and the community.

A benefit-analysis flow chart was constructed to observe how income from different income-generating activities was controlled and used (Table 16). Produce from food crops was consumed in the household, with the surplus being sold for income. Oil palm was processed into palm oil, and the mature trees were used to distil local wine (*akpeteshie*). Men generally decide on the use of the income from farm produce, and women market, process and use the farm produce in food preparation.

Income from the sale of agricultural produce is used to buy books and uniforms, and pay fees for the education of children. The money is also used to buy food items (fish, meat, etc.) for nutritional security and clothing. Income from SFC activities and oil palm is mostly used for the acquisition of fixed assets, such as cars and buildings, since income from these activities is relatively higher compared to other activities. Some of the money is saved and reinvested in farming. Money from non-agricultural activities, such as trading, artisanry and day labour, is used for food, clothing and general household needs, but the decision as to how it should be used depends on the person involved. However, women often seek the approval of men.

**Table 15: Benefit-analysis flow chart**

Item	How it is used	Who decides on use	Who does it	If sold, how cash is used	Who decides on cash use
Maize	Consume, sell, store	Men	Women	Used in the education of children or to buy food items, fish and clothing	Men
Cassava	Consume, sell	Women	Women	Education, clothing, buy food items	Men
Oil palm	Sell raw, soup, palm oil, wine	Men	Women	Build houses, buy cars, educate children, and buy clothing and food items	Men
Taro	Sell, consume	Men	Women	Food, education, general housekeeping	Men
Vegetables	Sell, consume	Men	Women	Building, education, food and buy cars	Men
Artisanry			Men	Food, clothing, education	Men
Day labour			Both	Food, clothing, education	Depends on the person that does it
Marketing			Both		Women seek approval from men
Hairdressing			Women		Women

## 6.4 GENDER DIVISION OF LABOUR AND WORKLOAD

In the past, household units – men, women and children together – were responsible for the foodstuffs needed to maintain their families. A division of labour existed, but everybody worked for the direct survival of the family. With the introduction of cash crops, women's responsibility to provide the required food crops increased, while men's main responsibility shifted to the production of cash crops, often with considerable labour contributions from women. The adoption of commercial crop production was partly induced by the growing need to obtain cash, which was necessary for survival in increasingly monetized societies. The introduction of cash crops resulted in the weakening of the traditional gender division of intrahousehold rights and obligations, the gender-based division of labour broke down, and farm women increasingly undertook tasks previously done by men (Saito *et al.*, 1994).

Women are involved in harvesting, while men are involved in land clearing, application of chemicals and transporting harvested produce to the house. Children mostly do planting and application of fertilizer. In Nyansuaka and Ampenkro, women do most of the farm work after men have cleared the land. Women are generally responsible for marketing, except in large-scale marketing of farm produce in bulk, where men like to be in charge.

The introduction of profitable commercialization activities has changed the intrahousehold division of labour. In general, when more money is earned from SFC activities, women and children work less on the farm in male-headed households, since there is more money to hire labour. When there is no money but there is an increase in the size of the farm, women work more on the farm, which could affect the preparation of meals at home. Food is sometimes prepared on the farm when the children join their parents after school.

In woman-headed households (single, divorced and separated women and women with absentee husbands), women work more on the farm. Women engaged in non-agricultural, income-generating activities may come home early to complete household activities. Religious and cultural backgrounds are said to play a role in whether or not men help out with household activities; Christian men are said to normally help their wives in the household chores when there is money from SFC.



## **7. Barriers to participation in commercialization activities**

SFC is hard work and only those that are determined can adopt it. Older people cannot participate due to its intensive nature. Even when one has credit, supervision needs to be thorough in order to achieve success. Identified pathways of commercialization are both capital and labour intensive and thus some community members are unable to participate. SFC requires high outlays of capital for fertilizer and agrochemicals as well as for labour. Access to credit and other means of financial support are necessary before farmers can consider moving into commercialization and adopting such practices. Apart from credit, some farmers do not have sufficiently fertile land on which to cultivate vegetables.

Some are unsure about adopting vegetable production, as the output price is sometimes unfavourable. Farmers are compelled to sell even when the price is very low, because the produce is perishable and not storable. Farmers incur large losses when traders fail to arrive. Alternative marketing avenues need to be explored by farmers, apart from middleman.

Widespread adoption of SFC has caused food shortages in some communities, because vegetables occupy most of the fertile land. It must be understood that, at this stage of development and given the risk-averse behaviour of the small-scale farmer, farmers are rather unwilling to purchase food items that they can grow themselves.

Opportunities for SFC abound, but they will depend on financial assistance and credit availability. Vegetables have to be sold immediately after harvest due to their perishability. However, better prices can be obtained if the produce can be stored or processed, as in the drying of peppers in Adankranja in the forest zone. Thus processing and storage avenues should be explored in order to further increase profitability.



## 8. Lessons learned

The major limitation in commercialization is access to productive resources and services such as land, technical knowledge and skills, and inputs and other services. Other constraints on adoption of SFC are lack of information, credit limitations and the lack of opportunity to observe SFC activities locally. Some communities are simply not exposed to any SFC activity and therefore have no example to follow or even consider. Provision of adequate, relevant agricultural information and the sharing of that information play important roles in the adoption of small farmer commercialization.

SFC is generally capital intensive and many smallholders are unable to meet the high production costs from their own savings. The roles of credit and small starter packs become increasingly relevant in enhancing smallholder adoption of SFC. Commercialization of livestock production was not prevalent in the study area. Rich households are more able to adopt SFC activities that require large capital outlays, followed by medium households. Exploring opportunities for increased income-generation, such as large-scale *gari* production, presents a great opportunity for farmers to add value to farm produce in order to obtain higher prices. *Gari* production takes place in a neighbouring village in the transitional zone and could be adopted in Offuman, for example. This would also provide employment opportunities in the communities.

The entry of women into commercial agriculture is individual and therefore sustainable. However, it requires technical assistance (integrated production and pest management – IPPM, and credit). In addition, participation in SFC results in lasting changes at the household and community level. Having control of enterprises and the income generated by them helps integrate women into national and global markets. It enables them to achieve financial independence and increased social status. This economic independence can increase through commercialization if the woman has access to and control of resources and revenue.

Some of the advantages of adopting SFC can only be derived through the simultaneous adoption of improved farm and production management practices. SFC has compelled farmers to adopt better farm management practices. Vegetables are less resistance to harsh environmental conditions and require more care in the form of frequent weeding, spraying against insects and diseases, fertilization, and prompt harvesting. If more farmers can be encouraged and given incentives to adopt SFC, general agricultural practices will be enhanced.





## 9. References

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## Annexes

**Table A1: Expenditure analysis for the forest zone**

Expenditure	Forest zone					
	Men			Women		
	Asanso	Adankranja	Denyasi	Asanso	Adankranja	Denyasi
Food	40*	40*		50	50	
Farming	10	15*		15	15	
Clothing		8*		25	10	
Education	20	12			5	
Health	10	5			5	
Utilities	3	5				
Travelling	5*	2*				
Savings	4	10*				
Household items	4					
Community levy	4					
Entertainment		2*				
Funerals					10	
Other		2		10	5	

**Table A2: Income analysis for the forest zone**

Income	Men			Women		
	Asanso	Adankranja	Denyasi	Asanso	Adankranja	Denyasi
Farming	40					
Day labour	20					
Artisanry	20					
Firewood	5					
Driving						
Mechanics						
Electrical services						
Trading	10					
Palm-wine tapping	5					

**Table A3: Presence of remittances for different household categories (percent)**

Household category		Village			Total
		Offuman	Walewale	Bekwai	
Small-scale (up to 4 acres)	Yes	10	14	29	18
	No	90	86	71	82
Medium (4.5 to 46 acres)	Yes	17	11	10	13
	No	83	89	90	87
Large-scale (47 acres and above)	Yes	50	0	0	17
	No	50	100	100	83

Source: Survey Data, 2002/03.

**Table A4: Crops grown and their ranking for the study villages**

Crop	Forest zone			Transitional zone		
	Bekwai	Adankranja	Denyasi	Offuman	Nyansuaka	Ampenkro
Maize	2	2	1	1	1	1
Vegetables	5 (garden-egg, pepper, okro, tomato, carrot & cabbage)	5 (pepper, garden egg, onion, tomato, okro & cabbage)	3 (tomato, pepper, garden egg & okro)	2 (garden-egg, tomato, pepper, okro & onion)	5 (tomato, garden egg, okro & pepper)	4 (tomato)
Yam	4	6		3	3	2
Cassava	1	-	2	4	2	3
Oil palm	3	4	4	-	-	-
Cocoa		3		6	-	-
Tobacco				5	-	-
Teak				7	-	-
Cocoyam (& taro)	6	7	2	-	-	-
Beans	-	-	-	-	4	5
Plantain	7	6	2	-	6	-
Groundnut	-	-	-	-	7	-
Sorghum	-	-	-	-	8	-

<sup>a</sup> Ranking: 1 is the most important crop. Specific vegetables are presented in parentheses.

**Table A5: Characteristics of households for specific villages in the forest zone**

	Bekwai	Denyasi	Adankranja
<b>Rich (osikani)</b>	Must own a house with at least two bedrooms At least an oil-palm plantation of 10 acres Savings of at least 2 million cedis in the bank Must own a store (supermarket) Contributes immensely to community development, e.g. the building of a school for the community	Has between two to three self-contained houses at different locations Able to support children's education up to tertiary level Able to support children's travel overseas 20 acres of cocoa farm Owns a vehicle  About 2% of the total population of the village falls into this category.	Large cocoa farm Owns a house Must be able to educate children to the tertiary level Eats nutritious foods  About 5% of the total population of the village falls into this category.
<b>Medium (adantem) (Not rich not poor)</b>	Able to finance children's education to secondary level or trade Must own a house with at least two bedrooms Able to meet basic needs Owns a store (kiosk) Has employment other than farming, e.g. teaching	Able to meet basic needs Able to finance children's education or training Can assist those in need (food, finance, etc.)  About 69% of the population falls into this category.	Zealous worker One or two single rooms, not self-contained Able to contribute to all levies Fair levels of expenditure  About 70% of the total population falls into this category.
<b>Poor (ohiani)</b>	An old person, not working and has no remittance One who has no farm, so if not employed on a daily basis, would go to bed with an empty stomach	Disabled and cannot work Does not have enough to eat Drinks a lot out of frustration Children are in tattered clothes Unable to finance children's education Cannot make contributions to communal labour and community development  About 29% of the total population falls into this category.	Cannot pay levies, debts or school fees Cannot send children to school Cannot provide relatively good clothing for children Sick and disabled  About 25% of the total population falls into this category.

**Table A6: Characteristics of households for specific villages in the transitional zone**

	<b>Offuman</b>	<b>Nyansuaka</b>	<b>Ampenkro</b>	<b>Patagoro</b>
<b>Rich (osikani)</b>	<p>Adopts improved methods of farming Has a car, private tractor and farm equipment Has self-contained house Assists in community development Very large farm of about 55 acres, about 10-acre vegetable farm Owns about 100 cattle Children go to very good schools, plus can afford private teachers Expanding business</p> <p>0.5% of population</p>	<p>Has about 10 cattle Has a vehicle Owns a compound house Has a corn mill Able to cloth himself and family Able to meet basic needs of family Has large farm, about 20 acres of maize, 5 acres of yam, 2 acres of cashew</p> <p>Able to educate children to higher level</p> <p>0.1% of population</p>	<p>4 people Large farm size (20 acres of maize, teak, yam) Livestock – cattle of 20 and above Cement house with more than 4 rooms Corn mill Has a car Able to educate children to higher levels Able to afford basic needs</p> <p>1% of population</p>	<p>Money lender Livestock of about 20 animals Large farm size (5 acres yam, 3 acres maize and 1 acre tomatoes) Able to educate children to secondary level</p> <p>There is no rich man – 0%</p>
<b>Medium (adantem) (Not Rich not Poor)</b>	<p>Food crops of about 10 acres, vegetable farm of about 5 acres, and tobacco farm of about 20 acres</p> <p>Children go to good schools Hardworking</p> <p>60% of population</p>	<p>About 5 sheep and goats, about 10 birds Landcrete house with 6 rooms Farm size about 3-4 acres Able to educate children to secondary level Has set of furniture, radio, TV Men support their wives to trade Able to feed and cloth family Owns a store with stock value of 1 million Women who are traders and can buy about 15 bags of maize</p> <p>About 80% in category</p>	<p>Does not owe people Able to help people Able to feed family adequately Clothes family well Has 10 or more livestock Cement or brick house with 2-3 rooms</p> <p>60% of population</p>	<p>Does not take a loan from anyone to do his work. Does not owe people Able to meet basic needs Farm size of about 3-5 acres Builds a brick house with iron sheet Able to educate children to JSS level Eats better food and selects the type of food to eat Clothes family well</p> <p>80% in category</p>
<b>Poor (ohiani)</b>	<p>Thatch house Cannot pay school fees for children Poor food and nutrition security Small farm, cannot hire labour and could therefore abandon farm Hires out as day labourer Wears poor clothing and sometimes borrowed clothing Does not contribute to community development</p> <p>39.5% of population</p>	<p>Farm size of about 1 acre Cannot hire labour Mud house with single room Livestock: 2 goats and sheep Unable to cater for children's education Not well clothed (second-hand clothing) Unable to pay levies Cannot feed family well (poor food)</p> <p>19.9% in category</p>	<p>Isolated with no helper Cannot afford quality food for family Unable to cloth family Cannot meet health needs of family The sick who cannot work Farm size of 1 acre Owes a lot of people – people go after him for their money, making him even more sorrowful Dilapidated house or no house at all Often has food shortage</p> <p>39% in category</p>	<p>Unable to buy farm inputs Cannot hire labour for farm work Cannot pay children's school fees Eats poor quality food Cannot meet health needs of family Can only build mud house with thatch.</p> <p>20% poor people</p>

