

# ASSESSMENT OF FACTORS LIMITING AGRICULTURAL PRODUCTIVITY OF FEMALE FARMERS IN SIERRA LEONE (CASE STUDY OF PORT LOKO DISTRICT IN THE NORTH-WEST REGION)

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**Abstract:** Agriculture forms the economic backbone in Sierra Leone as almost all rural communities embark in subsistence agriculture. Poverty is widespread and deep and the country's poverty profile shows that the main poverty indicators are insufficient food, poor housing, poor health, high illiteracy, limited access to clean water, and lack of money. Maternal mortality, infant mortality and fertility rates are among if not the worst in the world.

The primary focus of this study was on rice, cassava groundnut and vegetables mainly pepper and tomatoes value chains in Port Loko Districts, North-West region of Sierra Leone where most rural development organizations are working with farmers, especially women, growing the crops mentioned with the goal of improving the livelihood of rural communities through poverty reduction.

The farm management survey (FMS) and socio-economic surveys (SES) methods were the structured research tool used in this study. Data was collected via interviews based on a structured questionnaire, Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) which generated both quantitative and qualitative data.

The study shows a lag in agricultural production which is caused by insufficient attention to agriculture coupled with the fact that crop production, especially crops investigated, is plagued by myriad of problems including; (i) unfavorable producer prices for most agriculture products, (ii) low crop yields, (iii) attack from pests like birds and rodents, (iv) low soil fertility, (v) high post-harvest losses, (vi) lack of inputs such as viable seeds, fertilizers and technical expertise; farmers are unaware of new varieties of viable seeds and fertilizers are very expensive and unaffordable to the local farmers, (viii) lack of credit for expansion, and (ix) inadequate access to food markets as a result of poor road infrastructure continue to be risks to food security. Furthermore, there is no governance structure and very weak market coordination, so farmers, especially female farmers, are left at the mercy of other key players (traders, store keepers, drivers and middlemen) in the value chain who actually determine prices of the produce. Perishable produce like raw pepper is often seen littering around the vicinities of Freetown and urban markets due to poor storage and preservation methods at the points of sales.

The study shows that agricultural production of the crops mentioned above is carried out by 65% women above 40 years and 79% of these farmers are illiterate. The active labour force (18-28 years), which would have contributed meaningfully to increase agricultural productivity, relocates to urban cities in search of better livelihood. Hence escaped the hazards of repeated crop failure and unreliable marketing infrastructures and channels.

To resuscitate and boost crop production in the study area the following recommendations were made; (i) improvement of the present rudimentary agricultural practices, (ii) Support to increased agricultural production and marketing potential through the rehabilitation and large scale cultivation of boli lands, uplands and inland valley swamps, rehabilitation of feeder roads linking farm to market and agricultural infrastructure, extension workers should be provided for farmers, (iii) Direct support to agricultural production through supply of high yield variety seeds and micro credits facilities to farmers (iv) Support to mechanization and (v) Management support (vi) gender equity in production and marketing.

**Keywords:** Subsistence agriculture, poverty, poverty indicators, gender equity, value chain, livelihood, rudimentary agricultural practices

## 1.0 INTRODUCTION

Sierra Leone, like most developing countries, is primarily dependent on agriculture with about 75 percent of its population getting its living from farming. The agricultural sector contributes to over 40 percent of Sierra Leone's GDP.

According to FAO and World Bank 2000, more than 1.3 billion people worldwide live in poverty – nearly three-fourths of them in rural areas. Virtually all depend directly or indirectly on agriculture for their livelihoods. Many are farmers or pastoralists, while others depend on forestry or fishing.

In Sierra Leone, poverty is widespread and deep and there is a disparity in poverty's geographical distribution. About 66% of the population (4,963,000) lives in rural areas and three-quarters of this rural population are poor. In the poorest districts (where war destroyed tree crops, or which rely on poor subsistence agriculture or artisan mining) more than 8 out of 10 people live in poverty (Comprehensive Food Security and Vulnerability Analysis (CFSVA 2007) . About 28% of the population is food poor and cannot afford three meals a day. In 2008, Sierra Leone ranked 84 out of 88 countries in the Global Hunger Index and last out of 179 countries in the Human Development Index. Sierra Leone's poverty profile shows that the main poverty indicators are insufficient food, poor housing, poor health, high illiteracy, limited access to clean water, and lack of money. Maternal mortality, infant mortality and fertility rates are among if not the worst in the world. Contraceptive prevalence remains low, as does female school attendance. Household poverty is high among subsistence farmers, as well as among households whose heads have little formal education, and large households.

In Sierra Leone, smallholder farmers operate in vertical supply chains. They either sell directly to consumers or sell to retailers and to some limited extent to wholesalers. Growing evidence and experience indicates that sustaining success in productivity-based agricultural growth critically depends on expansion of market opportunities (Diao and Hezel 2004; Gabre-Madhin and Haggblade, 2004; Haggblade, 2004) and requires thinking beyond productivity to incorporate profitability and competitiveness (Kaplinsky, 2000). It is now increasingly evident that smallholder farmers' key concern is not only agricultural productivity and household food consumption, but also increasingly better market access.

The most important development challenges facing both governments and nongovernmental organizations is to enhance the ability of smallholder, resource-poor farmers, especially women, to access market opportunities, and diversify their links with markets (IFAD, 2001; IFPRI, 2002; Kindness and Gordon, 2002). Linking farmers to growth markets is therefore an important strategy for improving the adoption of agricultural technologies, raising rural incomes and reducing poverty.

The farming system is characterized by the use of crude implements, small farm holdings producing below subsistence level. There was no evidence of female farmers producing above subsistence levels. To keep female farmers in business, some innovative measures such as subsidizing farm inputs, providing credit facilities with minimum collateral security as well as improving socio-economic facilities should be adopted.

In President Bio's "big five game-changers for transformative development" the Government of Sierra Leone has declared agricultural development and food security to be the foundations for the country's economic growth and poverty reduction through the "Feed Salone". The "Feed Salone" is a laudable initiative to ignite agricultural productivity, safeguard food security, and foster inclusive economic growth, laying the foundation for sustained prosperity.

The research primarily targets female farmers growing rice, groundnut, and vegetables mainly pepper and tomatoes.

### 1.1 Problem Analysis

Sierra Leone is classified as a low-income food-deficit country. According to WFP Sierra Leone Country Office Food Security Monitoring System Report - February 2023, 78% of Sierra Leone's population is food insecure. One in five households (20%) are severely food insecure. This WFP 2023 report further pointed out that the Global Acute Malnutrition rate in children under 5 remains low and improved from 5 percent in August to 3 percent in February 2023. There are district variations with Karene, Falaba and Western Area urban at 5-6 percent. (MUAC, April 2024)

The WFP February 2023 survey results revealed that 21 percent of the Sierra Leonean households have a poor food consumption score, which is a 6 percentage points deterioration from the 15 percent reported during the last post-harvest period in January 2022. Most households, in rural communities cannot afford a healthy diet which has implications on their health and nutritional status in the long run. Larger household size who depends on subsistence agriculture as a source of income faced acute food insecurity. The Districts of Falaba, Koinadugu, Moyamba and Pujehun have highest levels of vulnerability across the majority of the indicators (WFP 2023).

In 2004, approximately 70% of its 4.9 million people were below the national poverty line, with 52% living on less than US\$1 per day, while 28% could not afford minimum daily calorific requirements (Sierra Leone Integrated Household Survey, 2004).

The farming system in Sierra Leone is characterized using crude implements, large number of small holdings-averaging about two hectares per farm. Most of these farms are fragmented. Large-scale farming is a recent development, and the few large farms are either government or quasi-government institutions, confined to crops that require expensive machinery and timely processing. In the country's search for new sources of economic expansion, agriculture assumed priority. This was due, in part, to the fact that a large percentage of the population derived its living from agriculture. In addition, the development of agriculture has proven to be the safest and most stable avenue for increasing rural income and employment and improving the shortage of foreign exchange.

The 2007 Comprehensive Food Security and Vulnerability Analysis (CFSVA) documented that 28% of Sierra Leone's rural and peri-urban households are highly vulnerable to food insecurity. The districts with very high concentration of food insecure households are Bonthe (56%), Western Rural (42%), Port Loko (38%), Pujehun (32%), Moyamba (31%), Bombali (29%), Tonkolili and Bo (both 26%) (CFVA 2007). The underlying causes of food insecurity are: (i) low purchasing power due to limited income-generation/employment opportunities; (ii) low agricultural production levels due to low farm productivity and high post-harvest losses; and (iii) poor marketing system, especially outside of the main cities, due to very bad road conditions and limited transport facilities. If the root causes of rural poverty are not addressed, an ever-increasing number of poor rural people will hover on the edge of subsistence, with few, if any, avenues to a better life.

## 2.2 Aim and Objectives

The aim of this research is to identify problems limiting agricultural productivity of farmers in Port Loko and Bombali District in the Northern Province of Sierra Leone so that informed decisions could be made to improving the livelihoods of female farmers, their families and communities.

The following objectives are pertinent to the study:

(1) Current agricultural activities of farmers in the study area (i.e Bombali and Port Loko districts), which is an indication of type of investment on inputs, labour, and technical expertise; (2) Existing marketing infrastructures and channels – available markets, condition of roads, and access to transportation; (3) Income levels of farmers, which actually classifies farmers as either smallholders producing below subsistence level or media scale farmers producing at subsistence level or large scale farmers producing above subsistence level; (4) Policies relating to pricing and marketing: This helps in ensuring that the value chain maintains equilibrium.

## 2.0 RESEARCH METHODOLOGY

### 2.1 Area of Study

The study was conducted in Port Loko District in the North-West region of Sierra Leone. The North Western region is one of the five administrative regions of Sierra Leone. The region was created in 2017 from the Northern Province. The North West Region consists of three districts namely Kambia, Karene and Port Loko. The region has a total of 34 Chiefdoms and a population of 1,162,065 inhabitants (as of 2017). Port Loko City is the administrative capital of the North West region.

According to the 2017 Census Thematic Report on land area under food crops cultivation, Port Loko District has a total of 310,294 hectares. Out of this 310,294 hectares, upland rice cultivation covers 101,556 hectares, lowland rice is 78,774 hectares and 44,779 hectares are for cassava cultivation; groundnut is 35,404. The main economic activities in the North West province is farming, livestock, fishing and natural resources including bauxite and iron ore.

In this study, five chiefdoms were selected as the Primary Sample Unit (PSU) and two communities as Secondary Sample Unit (SSU) selected from each chiefdom as presented in Table 1.

Table 1: Selected Chiefdoms and communities in Port Loko District for the study

District	Chiefdom (PSU)	Village/Community (SSU)
Port Loko	Bureh Kasseh	Mange
		Topeito
	Kamasodo	Katonya
		kathoma
	Tinkatopa	Robaka
		Mankenne
	Buya Romende	Foredugu
		Mabettor
	Maforki	Rotapr
Magbegbera		



Figure 1: Map of Sierra Leone showing Port Loko District, which is the study area. (Source: OCHA, ESRI, UNCS, DCN, OSM, WFP, Gov., August 2021)

North-West region is suitable for the cultivation of a wide range of crops, including rice, cassava, maize, millet, cashew, ginger, vegetables, fruits, oil palm, as well as the rearing of livestock.

**2.2 Research Design**

A mixed methodology of both descriptive qualitative and quantitative approach were adopted. For the quantitative method, both closed-ended and open-ended questionnaire was designed, pre-tested and administered to farmers in the 10 selected communities in Port Loko Districts. The qualitative method primarily involved Focus Group Discussion (FGD) and Key Informant Interviews (KII).

**2.3 Sampling Methods and selection**

The Participatory Agricultural Market Survey Method was used for the sampling in this study. Separate focus group discussions were held with female farmers’ groups. However, this survey method, though useful for understanding the process of marketing, a more systematic method was needed for undertaking a meaningful quantitative analysis so structured survey methods were used as an adjunct to the participatory agricultural market survey. The structured survey methods used were farm management survey (FMS) and socio-economic surveys (SES).

Farm management surveys (FMS) provide data on all aspects of the farming system, including agricultural inputs (seeds, fertilizers), soils, fields and grazing areas, livestock numbers and types, technology, yields or production, and markets. The socio-economic survey (SES) aims at establishing the economic and social characteristics of the target population, including: demographic data, access to and use of services and infrastructure, and sources of income.

In this study the target population was one hundred (100) farmers of ages 18 years and above were randomly selected from the study area with 10 farmers from each of the 10 selected communities in Port Loko District. The randomly selected farmers were asked to complete a questionnaire that was used to analyze the factors limiting agricultural productivity of women in Port Loko District.

**2.4 Determination of Sample Size**

The sample size was calculated using standard methods based on key variables from the household questionnaire. To determine the sample size to be selected, the following formula was used:

$$n = \frac{z^2 pq}{d^2}$$

where n= sample size

z= statistical certainty desired

p= estimated prevalence rate

q= 1-p (proportion without the attribute of interest)

d= degree of precision.

The desired precision (d) was set at 8% (0.08) and the statistical certainty at 95% (z = 1.96). Since the general prevalence rate of key variables was not known, the value of p was set at 50% (0.5) in order to maximize the impact of this variable on sample size (thus any error in estimation would be negated). The resulting sample size per sampling community was 10 (5 women and 5 men). The resulting total sample size was 100 farmers.

## 2.5 Data Collection Methods

Data was collection via interviews based on a structured questionnaire, Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) which generated both quantitative and qualitative data. The researchers utilized a three-stage random sampling methodology in an effort to provide an unbiased and representative estimation of the information obtained.

The first stage was the selection of Chiefdoms Port Loko District where the crops under investigation are grown.

The second stage was a random selection of communities/villages within each of the selected Chiefdoms. A total of 10 communities/villages were selected using Probability Proportion per Size (PPS).

The third and final stage was the random selection of 100 farmers (50 women and 50 men) from the 10 communities with 10 farmers selected from each community.

A desk review was conducted to collect secondary information relevant to the study followed by field visits to the project communities/districts were carried out to supplement the secondary information. The following data was collected (a) current agricultural activities of farmers in the study area (Port Loko districts), (b) Existing marketing infrastructures and channels – available markets, condition of roads, and access to transportation; (c) Income levels of farmers, which actually classifies farmers as either smallholders producing below subsistence level or media scale farmers producing at subsistence level or large scale farmers producing above subsistence level; (d) Policies relating to pricing and marketing:

The researchers employed data collection methods that is based on the administration of questionnaires and Key Informant Interview (KII). The Questionnaire was design for scheduled interview, for which most of them were self-administered with both open and closed ended questions to respondents who could read. The questions were read out for those who could not read, interpreted and responses were recorded accordingly for further analysis and interpretations.

## 2.6 Data Analysis Procedures

The data collected from the FGDs, KIIs and structured questionnaire using “Kobo Collect” software was statistically analyzed by “Kobo Collect”, Statistical Package for Social Scientists (SPSS) and Microsoft Excel softwares and presented in tables and graphs for interpretations.

Table1: Sample selection showing primary sampling units (PSUs), secondary sampling units (SSUs) and sample size

District	Chiefdom (PSU)	Village/Community (SSU)	Sample size	
			Women	Men
Port Loko	Bureh Kasseh	Mange	5	5
		Topeito	5	5
	Kamasodo	Katonya	5	5
		kathoma	5	5
	Tinkatopa	Robaka	5	5
		Mankenne	5	5
	Buya Romende	Foredugu	5	5
		Mabettor	5	5
	Maforki	Rotapr	5	5
		Magbegbera	5	5
<b>Total</b>			<b>50</b>	<b>50</b>

## 3.0 DISCUSSION OF RESULTS

### 3.1 Socio-Economic Characteristics of Farmers Interviewed

Several factors were considered in the assessment of the socio-economic status of farmers in the study area. They include age distribution of farmers (respondents), marital status, household size and educational status. These factors are discussed as follows:

#### 3.1.1 Assessment of age structure of respondents

The age structure of respondents was evaluated in order to ascertain the prospect for continuity and sustainability of farming in the communities. It further serves as a pointer to the opportunity of employment creation by farming in the community. The result is shown in figure 2 below.

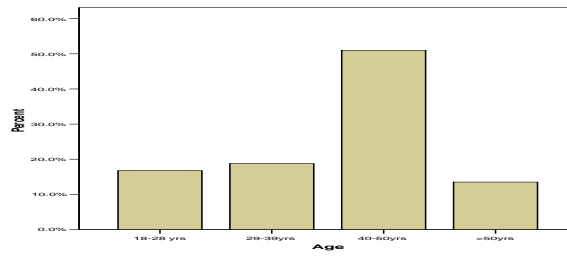


Figure 2: Age Structure of Male Farmers Interviewed

Figure 1 show that 52% of male farmers fall within the age bracket of 40 to 50 years while 17% are within the age bracket of 18-28 years. An inference could be made from these results that the communities have an aging labour force, which means that agricultural productivity will dwindle with time, except appropriate measures are taken to salvage the situation. The active labour force (18-28 years) which could meaningfully contribute to sustainable agricultural productivity has migrated from the communities in search of better life in the urban areas. There is a high level of rural to urban migration in most developing countries (Alexander Sarris 2009).

The causes presented for this massive urban-rural migration include problems of repeated crop failure, low yields, lack of viable seeds and unreliable marketing infrastructures and channels. Furthermore, female farmers explained that their husbands and adult children (youths) who moved to bigger cities for greener pastures leave the burden of the family with them in the villages with the hope of sending remittances from the minute earnings. Regrettably, most of these men/youths never gain employment and their dreams of achieving better livelihood is in jeopardy with a languishing family back home. Hence better living standards should be catered for in the rural areas so as to help retain the youthful age which forms the active labour force in the communities.

3.1.2 Health Status of the Farmers

An assessment of the health status of respondents was also an integral part of the study, in order to know the major factors that influence the health of individuals. The result is presented in Figure 3.

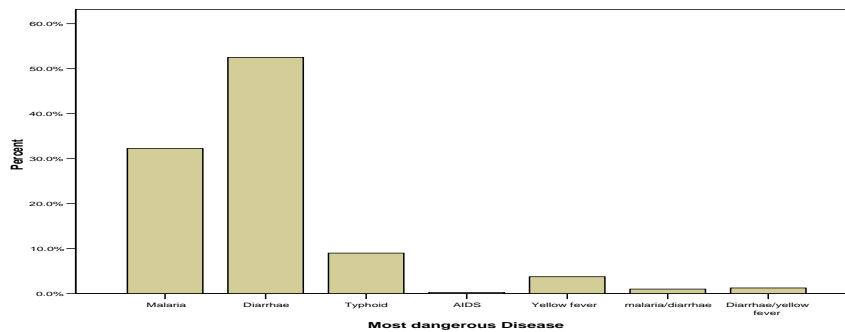


Figure 3: The Most Dangerous Disease in the Communities Studied

Figure 3 shows that the most dangerous diseases in the communities investigated include Diarrhea (52%), Malaria (33%), Typhoid Fever (9%) and Yellow Fever (3%). AIDS accounts for less than 1%, based on the responses of respondents. Therefore, Diarrhea and malaria should be seriously combated as they pose serious threats to the sustainability of agricultural development in the communities. This is because agriculture productivity significantly depends on the supply of labour, which further depends on the health of individual farmers, especially female farmers who bear the largest burden.

3.1.3 Assessment of the Educational Status of Respondents

An assessment of the educational status of farmers interviewed, which results are presented in Figure 4, shows a high degree of illiteracy. 79% of respondents never attended formal schooling system. Of those who attended schools, only 15% attained secondary school level, meaning that only 6% attained secondary level.

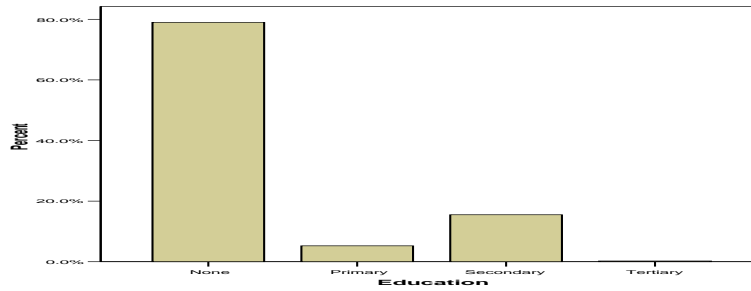


Figure 4: Educational Status of Farmers

The high degree of illiteracy level in these farming communities is an important index contributing to the low agricultural productivity. Illiterate farmers find it very difficult to learn and adopt (apply) new/improved agricultural technologies, especially in production and post-harvest losses. Thus, in order to improve the agricultural productivity of farmers, their capacity building must be an essential component of any intervention intended for these communities. This is supported by Figure 5, which presents an assessment of the agricultural skills learnt by respondents.



Figure 5: Agricultural skills learnt by farmers

98% of the farmers interviewed did not learn any agricultural skills except those rudimentary skills inherited from parents. The 2% of farmers who claimed to have learnt new skills from NGOs operating in their communities hardly apply those skills in their daily agricultural production and marketing activities. Therefore, the results from this quantitative analysis of agricultural skills advance reason for the low productivity and high post-harvest losses.

### 3.1.4 Assessment of improvement in the socio-economic condition of female farmers

An assessment of the change in the socio-economic status of female farmers was done in order to ascertain either an improvement in their living conditions or otherwise. This is because the living standard of people needs to improve continuously if sustainable development is to be realized. Otherwise, it depicts a reduction in living standards thereby repeating the vicious cycle of poverty. And since the female population comprises the bulk of the farming population in the rural areas, it was used as proxy. The result is shown in figure 6 below.

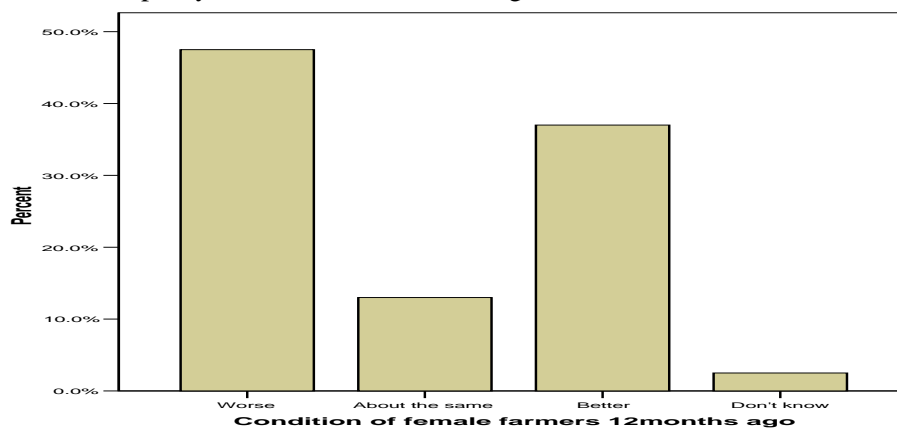


Figure 6: Condition of female farmers 12 months ago

Figure 6 shows that the living standard of this female farmers is not improving at all. Majority of the respondents indicated that they are still not better off. Instead, they are worse off compared to how they were twelve months ago. More effort is required for the situation to be improved.

The main factors that account for those changes in the living conditions of farmers include pest infestation, poor yields, and lack of seeds/cuttings. Figure 7 shows that poor yields account for most of the setbacks faced by farmers, followed by lack of seeds/cuttings.

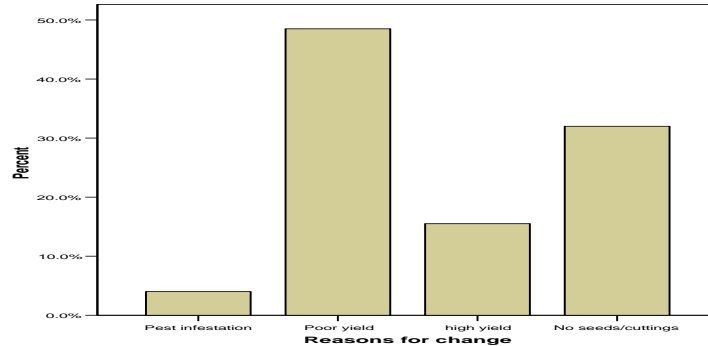


Figure 7: Reasons for change in condition of female farmers

### 3.2. Assessment of Farmers’ Income

#### 3.2.1 Assessment of the major determinants of produce prices in the community

The study probed into the major players who determine the price of the produce in the communities. The result is shown in figure 8.

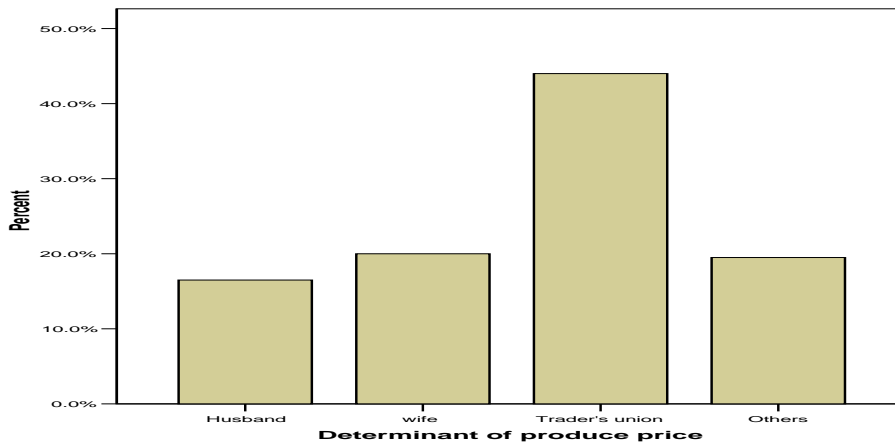


Figure 8: Determinant of produce price

Figure 8 shows that Traders unions are the major players who determine the market price of farmers’ produce in the study area. This shows that the farmers do not have an effective bargaining power. It is not very good for the farmers because they hardly realize any sustainable level of income that will enhance their livelihood security. Hence appropriate measures should be put in place in order to improve the value chain of the agricultural produce in the communities. Some of the measures include development of institutional approaches to marketing such as the arrangement of contract buying from farmers, the provision of storage and transportation facilities at affordable costs.

#### 3.2.2 Assessment of Daily Earnings

The daily income accruing to farmers from the sale of their produce was also evaluated in order to assess their daily income level. The result is shown in figure 9 below.

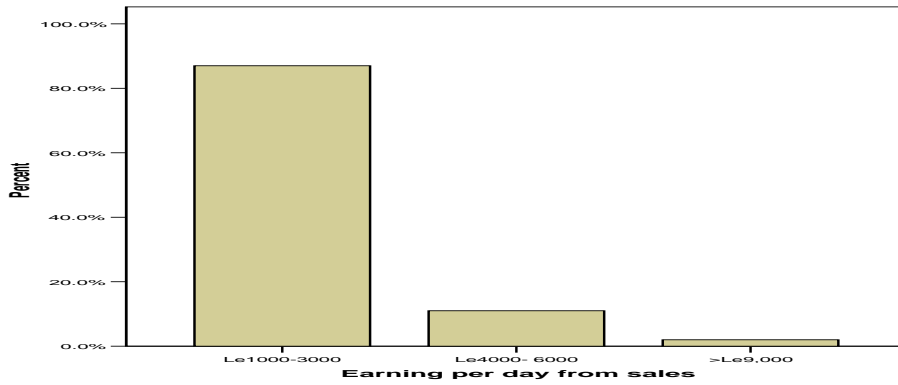


Figure 9: Earning per day from sales

Figure 9 shows that most people in the communities earn between 1000 -3000 a day. This accounts for about 90 percent of the population, meaning that most people in the community have still not transcended the poverty line of US\$1 a day. This indicates that more work is needed to be done in raising these farmers above the poverty line. Most farmers travel on foot an average distance of 3-5 miles to the market due to the deplorable roads condition in their communities. Furthermore most farmers could not afford the cost of paying the huge cost of transportation involved in moving their produce to the market.

**3.3 Assessment of existing Agricultural Activities**

**3.3.1 Assessment of the Crops Grown by Women**

An investigation of crop grown by women reveals that groundnut is the major crop grown follow by pepper and cassava. Rice is mainly grown by men who usually get labour support from women that is why there is a very low response for rice as shown in Figure10 below.

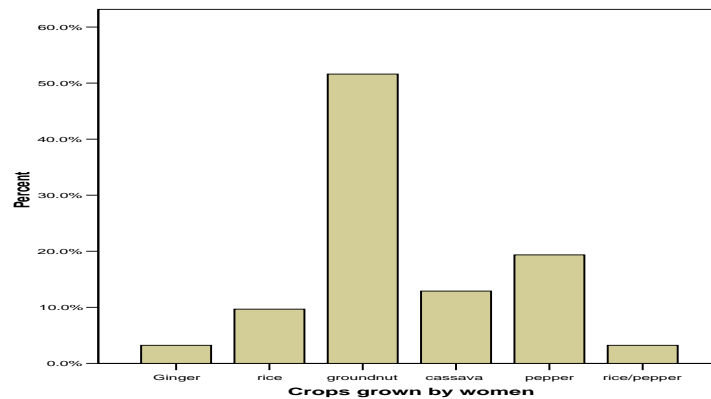


Figure 10: Crop grown by women

When further asked for their crop preference (Figure 31a), 68% of women chosed groundnut. According to Figure 31b, the reasons given for such a preference are (i) groundnut is very easy to cultivate, (ii) it is a cash crop, (iii) high yield, and (iv) seeds are easy to get.

**3.3.2 Assessment of Access to Farm Land**

Access to farm land by farmers in these communities is relatively easy as attested by Figure 32. Only 3% of farmers purchase farm lands while majority of farmers obtain land either by inheritance (33%), leasehold (38%) or family heads (28%). Farmers who leased land normally pay in kind, mostly crops from harvest. This availability of land is an opportunity for farmers to maximize production if given the necessary support.

Regrettably, this study shows that 98% of the land is controlled or owned by men because of the understanding that men are the heads of household (78%), customary law (12%), and religious belief (8%).

**3.3.3 Assessment of Farmers’ Access to Capital**

Figure 11 gives an assessment of farmers’ access to capital

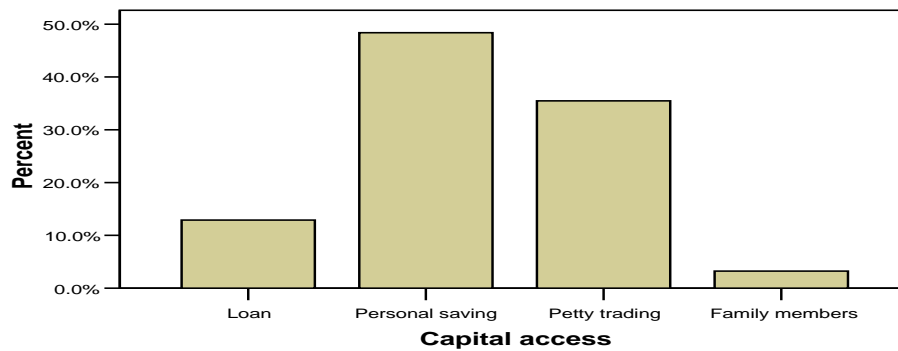


Figure 11: Assessment of source of funds for farmers

Petty trading and personal savings finance over 85% percent of farming in these communities. This is because the agricultural finance system is generally very weak. It offers little credit solutions (12%) to the farming needs of the large proportion of farmers. The prevailing absence of farming financing has generally reflected negatively on the quality and quantity of agricultural production. Therefore, there is an urgent need to create opportunities for development-oriented investment in farming in these areas. If given the opportunity, these farmers are willing to participate in the improvement of their living environment and they are eager to invest in farming. Unfortunately these people face lot of credit obstacles from the financial lending institutions because lending to rural farmers is perceived as being risky. The uncertainties that face these farmers, the high mortality rate, the susceptibility to market changes of mainly their agricultural produce, and to economic fluctuations, make banks reluctant to deal with these clients.

#### 3.3.4 Problems of Crop Production in the Communities Studied

Among the problems presented were lack of inputs (mainly seeds and fertilizers) 38%, lack of credits (15%), and soil infertility (12%). Poor storage and processing methods, seasonal changes and lack of food for work were also mentioned by respondents.

To help these farmers to meaningfully contribute to crop production, farm inputs such as fertilizers, improved varieties of seeds, chemicals for weeding and curbing the activities of pest, rodents and diseases etc should be made available to farmers at highly subsidized rates. Furthermore, credit facilities especially soft loan should be granted to reliable farmers with minimum collateral securities. Such collateral should not be more than mere identification of the farmers by the traditional rulers or local chief within the communities of the farmer.

### 3.4 Assessment of Market Infrastructures and Marketing Channels

78% of farmers interviewed do not have market place (buildings) in their communities and mostly depend on long distance periodic markets. 55% of the farmers interviewed reported poor road condition. This poor road condition leads to increase in transportation cost and decrease in the bargaining power of farmers in selling their produce to traders, especially wholesalers, as they have limited options. Farmers, mainly women, have to travel long distances with tiny loads of produce on their heads to periodic market. The few market buildings available in these communities are mainly provided by CARE (58%), NaCSA (25%) and UNDP and community self help in the proportion of 9% and 5% respectively.

The study confirms that the farmers participate in a vertical supply chain. 67% of farmers sell their produce to retailers and only 15 % actually sell to wholesalers.

#### 3.4.1 Major Marketing Problems

Figure 12 presents the major problems of farmers given by respondents. Among the problems, lack of transportation (38%), poor road network (32%) and poor storage and processing facilities (27%) stand out clearly. Farmers also mentioned price fluctuation (4%) affecting sales of their produce.

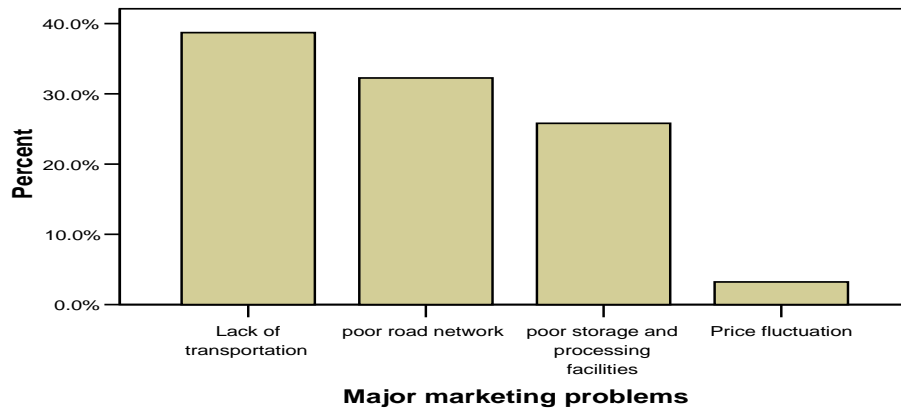


Figure 12: Major marketing problems faced by farmers

#### 4.0 CONCLUSION

The study shows a lag in agricultural production which is caused by insufficient attention to agriculture coupled with the fact that crop production, especially crops investigated, is plagued by myriad of problems including; (i) unfavorable producer prices for most agriculture products, (ii) low crop yields, (iii) attack from pests like birds and rodents, (iv) low soil fertility, (v) high post-harvest losses, (vi) lack of inputs such as viable seeds, fertilizers and technical expertise; farmers are unaware of new varieties of viable seeds and fertilizers are very expensive and unaffordable to the local farmers, (viii) lack of credit for expansion, and (ix) inadequate access to food markets as a result of poor road infrastructure continue to be risks to food security. Furthermore, there is no governance structure and market coordination is very weak so farmers are left at the mercy of other key players (traders, store keepers, drivers and middlemen) in the value chain who actually determine prices of the produce.

The farming systems and practices are characterized by the use of crude implements, illiterate and ageing farming population and small-sized farms holdings. These features constitute a blockage to the introduction of new technology into the farming system; hence, low crop yield and poor financial returns are realized by farmers.

Farm imputes such as fertilizers are very expensive and beyond the reach of the local farmers. New and improved varieties of rice seeds are not available. The use of tractors is not a common practice. Above all, yield per farm is low and it is becoming glaringly that it is more profitable for rural youths to migrate to urban cities for better pasture, leaving the farming burden to their aging and illiterate families.

Social service facilities such as markets, health centers and employment are inadequate. The few available facilities are in deplorable conditions yarning for sustenance.

#### 5.0 RECOMMENDATIONS

Based on the results obtained from this study, four points of interventions that will help in solving some of the problems faced by farmers, especially women are suggested.

1. Support to increased agricultural production and marketing potential  
This could be achieved through
  - a) Rehabilitation and large scale cultivation of the massive boli lands, uplands and inland valley swamps of Port Loko Districts using appropriate agronomic practices.
  - b) Rehabilitation of small feeder roads and agricultural infrastructure as these will help ease the problems of transportation and marketing of crops, especially perishable crops like pepper.
  - c) Extension workers should be provided for farmers. The extension workers should be fluent in the local dialect to educate the local farmers on modern and scientific methods of crop cultivation and/or production.
2. Direct Support to Agricultural Production: This could be done by
  - a) Supporting all the three levels of farmers (Low, medium and large) through Agricultural Business Units (ABUs). This ABUs supply farm tools, planting materials (viable seeds), labour saving machinery (power tillers, threshers, mills), and fertilizers to farmers at affordable cost. The involvement of business units is to ensure proper accountability and safe service delivery so that farmers benefit from their participation as producers in the value chain.
  - b) Provide credit facilities, especially soft loan, to farmers with minimum collateral securities. Such collateral should not be more than mere identification of the farmers by the traditional rulers or local chief within the communities of the farmer.
3. Support to mechanization: Tractorization scheme: Provision of plowing and harvesting machinery that will eventually replace the traditional equipments.

**References**

1. Alexander Sarris 2009: World Agricultural Trade Challenges to 2050 and Requirements for Evolving Structure of New World Trade Rules Compatible with Food Security for Developing Countries. Presentation at the Expert Meeting on “How to Fed the World in 2050, held at FAO in Rome, June 24- 26
2. CFSVA (2007): Comprehensive Food Security and Vulnerability Analysis ()
3. Diao, X and Hazell, P. (2004): Exploring market opportunities for African smallholders. Paper prepared for the 2020 Africa Conference “Assuring food security in Africa by 2020: Prioritizing actions, strengthening actors, and facilitating partnerships. Kampala, Uganda. April 1-3, 2004.
4. FAO and World Bank (2000): Agricultural Knowledge and Information Systems for Rural Development (AKIS/RD). Strategic Vision and Guiding Principles. Food and Agricultural Organization of the United Nations. The World Bank. Rome, 2000.
5. Gabre-Madhin, E and Haggblade, S. (2004): Successes in African Agriculture: Results of an Expert Survey. *World Development* 32(5) 745-766
6. Haggblade, S. (2004): Building on success in African Agriculture. International Food Policy Research Institute. 2020. Focus 12.
7. IFAD (International Fund for Agricultural Development). (2001): Rural poverty report 2001: The challenge of ending rural poverty. Rome, Italy: (IFAD). [www.ifad.org/poverty/index.htm](http://www.ifad.org/poverty/index.htm)
8. IFPRI (International Food Policy Research Institute). (2002): Cutting hunger in Africa through smallholder-led growth. <http://www.ifpri.org/themes/aicha.ht>
9. Kaplinsky, R. (2000): A handbook for value chain analysis. Ottawa, Canada. International Development Research Centre.
10. Kindness, H. and A. Gordon. (2002): Agricultural marketing in developing countries: The role of NGOs and CBOs. Social and Economic Development Department, Natural Resources Institute, University of Greenwich, London, UK. (Policy Series No 13)
11. MUAC, (April 2024): The mid-upper arm circumference
12. Sanging P. C.; Best R.; Chitsike C.; Delve1R.; Kaaria S., and Kirkby R. (2004): Enabling rural innovation in Africa: An approach for integrating farmer participatory research and market orientation for building the assets of rural poor. *Uganda Journal of Agricultural Sciences*, p9:942-957.
13. Statistics Sierra Leone 2004: Sierra Leone Integrated Household Survey, in 2050, held at FAO in Rome, June 24- 26, 2009.