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# STATISTICAL ANALYSIS OF THE ROLE OF WOMEN IN AGRICULTURAL PRODUCTION AND HOUSEHOLD-DECISION MAKING IN BUM CHIEFDOM 

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#### Abstract

The purpose of this study is to investigate "The Role of Women in Agricultural Production and Household-Decision Making in Bum Chiefdom". It has assessed the various ranges of activities that are performed by women and identified the overall drawbacks encountered by women. The survey was conducted in 16 villages in four sections of Bum Chiefdom in rural districts of Bonthe and 80 households by taking $75 \%$ women and $25 \%$ men in their residents or sometimes in their farm site. The interviewees were selected using a stratified random sampling technique picking up 16 households from each section. The data were analyzed through descriptive and inference statistics. The Pearson Chi-Square Test was used to the test relationship between variables. The results have shown that women have a primary role in providing labour for agricultural production and household works in the study area. Women play a significant role in the agricultural labour force and in household activities. As a result, their contribution to agricultural output is undoubtedly extremely significant. The most general conclusion reached from the study is that women spend more time than men in activities and agriculture tasks. In day-to-day agricultural transactions, the village men in Bum Chiefdom, southern Sierra Leone make more decisions than women. Division of Labour by gender in farming exists. Women perform their duties on the common plot and prepare food from what is designated for consumption from the farm products. To strengthen and develop women in economic and social, men, local authority government, and other concerned bodies should take all appropriate measures to ensure women empower and actively participate in deciding on agricultural activities, income/expenditure and household decision-making, without any discrimination. Women should also participate at all stages of project agricultural planning, implementation and assessment.


KEYWORDS: Agriculture, Role of rural women, Participation, Decision and Women

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## 1. INTRODUCTION

In rural areas of Sierra Leone, women play a leading role in agricultural production, livestock rearing and remain busy from dawn to dusk to supply food to men in fields, fetch water, collect fuel wood, and take care of young children. Until now without the integral contribution of women's work, such efforts and programs would barely work even though men own such assets and inputs as land and infrastructure. As part of the Sierra Leone women, the Bum Chiefdom rural women in Bonthe District share the female subordination and the overall problems that are faced by the Sierra Leonean women. The dominance of men in various income-generating activities affects highly the economic empowerment of women, but there is a positive relationship between women entrepreneurs and socioeconomic development [1]. In the developing and the developed world, men show enormous power over the lives of women in many aspects [2]. The purpose of this study was therefore to evaluate the activities of rural women and their participation in agricultural production to fulfil the food security of their families and evaluate labour contribution. More specifically to answer the question, "what is the role of women in agriculture and household activities including decision-making?"

Historically, agriculture played a prominent role in Sierra Leone, despite the presence of a large mining sector. Agriculture constitutes a significant part of Sierra Leone economy, and two-thirds of the population of Sierra Leone is engaged in subsistence agriculture mainly because the country lacks a viable agricultural value chain and entrepreneurial activity [3]. Most households in the former homelands (Bantustan areas) depend on multiple sources of income, and amongst others, agriculture contributes a relatively insignificant part compared to wages from mining and pensions [4]. It was also state agriculture plays an important role in providing supplementary income to a considerable number of households in the homelands.

The "trickle-down" theories of development have illustrated how modernization has had different effects on men and women, and modernization has often contributed to a deterioration in status and increased workloads for women [5]. Specifically; self-identity, role and status; family and household task allocation and decision making; and agricultural and market conditions were considered.

There have been a number of studies on the role of women as producers and reproducers [6]. The discourses in many of the literature concerned with women's role in agricultural production rest heavily upon the assumption made about the nature and social organization of subsistence systems. A number of studies approach the subject from the perspective of gender relations [7] Still others concentrate on the factors related to women's status, such as the topology of subsistence cultivation, as it relates to women's status and [8] women's position as ecologically determined [9]; women's position as related to kinship system and with the mode of transmitting property [10]. The relationship of means of production to kinship system as it affects the status of women has continued to be the
subject of many analyses [11] propose that the difference between women's farming systems is not in the tools they use, but in the appropriation of land, of surplus, and of women's productive capacity. Though these studies and others on the role of women as producers and reproducers are available, almost all the current research on women in agriculture on several key issues further investigation is still needed as society changes with time. Agricultural enterprises require different types of farm tasks, depending upon commodity, farm structure and season. These factors affect the nature and amount of women's participation to an unspecified degree [12]. Very little research on the role of women in agriculture exists to provide a theoretical framework that allows the interpretation of how work and family roles are integrated into the household condition within the context of agricultural activities. [13].

In agriculture the majority of women are food producers working on joint family farms and tending their own land for household food production while only a small percentage is independent farmers [14]. They are involved in both crop and livestock production at subsistence and at small scale commercial levels (cite). They produce food and cash crops and manage mixed agricultural operations often involving crops and livestock farming. The sustainable production of food is the pillar of food security. Women in developing nations play a vital role in maintaining the three pillars of food security: food production, access to available foods and nutritional security [15]. According to the March 2007 Labour Force Survey, there were just over 1 million Africans engaged in farming in Limpopo in the previous 12 months, of whom about 746000 (69\%) were women [16].

Women's exact contribution both in terms of magnitude and of its nature is often difficult to assess and shows a high degree of variation across countries and regions [17]. Nowadays, about 60 to $80 \%$ of basic foodstuff in Africa and more than half of all food worldwide are produced by the smallholder of women farmers [14]. They accounted for about 70-80\% of food production in Sub-Saharan Africa [18]; hey perform about $90 \%$ of the work of processing food crops and providing household water and fuel wood as well as the work of hoeing and weeding, $80 \%$ of the work of food storage and transportation from farm to the village, and $60 \%$ of the work of harvesting and marketing of farm produce [19].

In rural areas of the developing world, women play a key role in running households and make major contributions to agricultural production, but the inequalities that exist between women and men make it difficult for women to fulfill their potential [20]. Gender is a fundamental issue in assuring food security both at national and household levels. This is because increasing attention is now being paid to the gender dimension of poverty and development particularly in relation to the role of women in agricultural processes [21]. Rural women play key role by working with full passion in production of crops right from the soil preparation till post-harvest activities. Their activities naturally
compriscropps production, livestock ranching, food processing and preparation, fetching water and collecting fuel-wood, working for wages in agricultural or other rural enterprises, caring for family members and maintaining their homes [22]. Their wages are generally less because it is assumed that the efficiency of women's labour is poor compared to that of men [23].

From one society and culture to another, gender division varies, and within each culture external circumstances influence the level of activity. Women's role in ensuring household food security remains largely unrecognized in policy and resource allocation, especially in developing countries, and the voices and concerns of rural women are little heard at the national and global levels [24].

Overall, the labour burden of rural women exceeds that of men and includes a higher proportion of unpaid household responsibilities related to preparing food and collecting fuel and water [25]. Moreover, labour-intensive and time-consuming activities further hinder women's ability to improve their income-earning potential. Women are poor because they have fewer economic opportunities and less autonomy than men. Their access to economic resources, education and training and support services are limited. They also have very little participation in decision-making The rigidity of so prescribed roles for women and the tendency to scale back social services have increased the burden of poverty on women [14].

Their relevance and significance, therefore, cannot be overemphasized [26]. Similarly, [27] revealed that women have no power in the decision-making process either inside or outside the home. Women workers in agriculture suffer from a high illiteracy rate among them and drop out of school (cite). Women account for more than half of the workforce by participating in different activities directly or indirectly. As was reported by [28] and [26]. WWomen face a number of problems in their position concerning food production, income generation, and education. They are not only wives and mothers, but women are food producers in many countries of the Third World; for instance, in Africa women perform 60 to 80 per cent of the agricultural work, more than in any other continent [29].

## 2. METHOD AND MATERIALS

### 2.1 An Overview of the Research Setting

Bum is a chiefdom in the Bonthe District of Southern Sierra Leone with a population of 24,339 (SSL, 2015). On the east border are Malema and Kpanga Chiefdom both in the Pujehun District; Bagbo Chiefdom in Bo District. River Sewa divides the chiefdom in two parts. Bum chiefdom has nine (9) sections, namely: Torma, Tamba, Yargbe, Komato, Yorma, Gbondubum, Langei, Feikie and Gbengai. The chiefdom does not border the Atlantic Ocean. Bum is predominantly an agricultural area, known for rice production. The soil in this area is fertile for agricultural production especially cereal crops and vegetables and permanent crops like oil palm. Farming is the main livelihood activity of the large
majority of the chiefdom population. The majority are farmers that practice subsistence farming.

### 2.2 Data Collection and Sampling Procedure

The techniques for data collection included interviews for the primary data. Men and women were interviewed and their activities were observed. Notes were taken on cultural factors that could not be captured by the questionnaire but through discussion with older men and women in the villages. Activities were timed to determine the accuracy of the reports made by the respondents. The interviewers stayed in the villages for two to three weeks. The collected data were computerized.

We had to walk around the area, from the village to the field (scheme) and back again, looking for the respondents, due to the fact that some respondents start working on their plots in early morning.

Basically, primary data were considered for this study; The primary data were conducted in household surveys which were administered through field observations, questionnaires, formal interviews and focal group discussions with rural women, men, and other concerned authorities. For this purpose, questionnaires were developed and provided to all key respondents. Most of the items were closeended and some open-ended questions were also included due to accomplish qualitative information on the attitudes, beliefs and practices of the people.

The target populations were rural women and to know the attitudes of men toward women's jobs $25 \%$ of the total population were considered men. The sample size was 80 rural households of which $75 \%$ of women. One of the motives of the survey was to investigate variation in the patterns of agricultural works,

The sample size of this research is drawn from four sections in the Bum chiefdom. A total of 80 samples were selected from 16 villages/towns, and in each section 4 villages were randomly selected. In each village, 4 questionnaire forms were administered. The sections are Torma, Tamba, Yargbe, Komato and Yorma.

### 2.3 Operationalization of Variables

The operational variables are explained below:
Income: The variable is defined as the total earnings from all economic activities, salary is included separately as a specific earning for a periodic activity from an employee. One year's total income (salary and other income) was collected. The earnings in kind were converted to cash.

Education: The variable refers to several years of formal education completed by the respondent at the time of the interview. Respondents were asked the question: "How many years of formal education

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have you completed?"

Age: Age is defined as the chronological age of the respondent, the variable was measured by a single indicator, i.e., the number of years reported by the respondent concerning how old she was up to and including her last birthday.

Performance: Performance (of task) is defined as the percentage of time spent in activities (as shown in the list of activities in the Appendix), i.e., domestic activities, reproductive activities, etc. These activities are prescribed roles for women because women are expected to perform these tasks or activities.

Decision making: This is measured by the number of decisions made in different areas of responsibility, for example, domestic decision making, farm decision making, rights of disposal, etc. Each decision is given a value of 1 . The decision made by the respondent (woman) is presented by relationship code 1 and decisions made by the husband are indicated by relationship code 2 . When both spouses are involved in the decision, the one with the final say is considered the decider. Decisions made by others in the household are indicated by the respective relationship code (see Appendix for codes).

### 2.4 Data Analysis

Both the qualitative and quantitative data were analyzed, though as mentioned above the qualitative data were used primarily for sake of descriptive statistics. The qualitative and quantitative data were initially captured into SPSS and some data was manipulated in Microsoft Excel where necessary. Through identifying themes, we were able to code the data, for example, land possession, agricultural production activities, livelihood strategies contribution of agriculture to households and extension support. This process was facilitated using summarizing the interviews in a matrix format.

Because one of the basic objectives of the study is to provide information on time allocation and the nature of women's tasks, descriptive techniques are used to demonstrate women's activities on the farm from a cross-cultural perspective. Summary descriptive tables are used to show the involvement of women in farm tasks and activities.

The other objective is to determine how individual characteristics could influence decision-making. The effort, in this case, is to find the influence of women's income, women's education, and women's age on women's decision-making. For this purpose, the Chi-Square Test was carried out.

## 3. RESULT AND DISCUSSION

### 3.1 Result

### 3.1.1 Demographic Characteristics

Majority of the respondent are married ( $61.3 \%$ ); and the unmarried individual make up $32.5 \%$; who's separated from their partner make up $3.8 \%$ and $2.5 \%$ divorce. Nuclear type family system makes up $82.5 \%$ and $17.5 \%$ joint type. The family size indicates that $58.8 \%$ have small size (1-6) persons, medium size $28.8 \%(7-9)$ persons and large family (above 9 persons) make up $17.5 \%$. Majority of people in Bum chiefdom are Muslims (83.8\%), and Christians are in small number (16.3\%). In the area of educational level, majority are illiterate ( $81.3 \%$ ), (Table 1).

Table 1: Demographic Characteristics

| Sr. No | Variable | Frequency | Percent | Valid Percent | Cumulative percent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Selected Section in Bum Chiefdom |  |  |  |  |
| i. | Torma | 16 | 20.0 | 20.0 | 20.0 |
| ii. | Tamba | 16 | 20.0 | 20.0 | 40.0 |
| iii. | Yargbe | 16 | 20.0 | 20.0 | 60.0 |
| iv. | komato | 16 | 20.0 | 20.0 | 80.0 |
| v . | Yorma | 16 | 20.0 | 20.0 | 100.0 |
|  | Total | 80 | 80.0 | 80.0 |  |
| 2 | Marital Status |  |  |  |  |
| i. | Unmarried | 26 | 32.5 | 32.5 | 32.5 |
| ii. | Married | 49 | 61.3 | 61.3 | 93.8 |
| iii. | Divorce | 2 | 2.5 | 2.5 | 96.3 |
| iv. | Separated | 3 | 3.8 | 3.8 | 100.0 |
|  | Total | 80 | 100.0 | 100.0 |  |
| 3 | Type of family |  |  |  |  |
| i. | Nuclear | 66 | 82.5 | 82.5 | 82.5 |
| ii. | Joint | 14 | 17.5 | 17.5 | 100.0 |
|  | Total | 80 | 100.0 | 100.0 |  |
| 4 | Family size |  |  |  |  |
| i. | Small (1-6 ) members | 43 | 58.8 | 58.8 | 58.8 |
| ii. | Medium (7-9) Members | 23 | 28.8 | 28.8 | 82.5 |
| iii. | Large (Above 9) Members | 14 | 17.5 | 17.5 | 100.0 |
|  | Total | 80 | 100.0 | 100.0 |  |
| 5 | Religion ${ }^{\text {R }}$ |  |  |  |  |
| i. | Muslim | 67 | 83.8 | 83.8 | 83.8 |
| ii. | Christian | 13 | 16.3 | 16.3 | 100.0 |
|  | Total | 80 | 100.0 | 100.0 |  |
| 6 | Educational Level |  |  |  |  |
| i. | Illiterate | 65 | 81.3 | 81.3 | 81.3 |


| ii. | Formal | 1 | 1.3 | 1.3 | 82.6 |
| :---: | :--- | :--- | :--- | :--- | :--- |
| iii. | Non-Formal | 14 | 17.5 | 17.5 | 100.0 |
|  | Total | $\mathbf{8 0}$ | $\mathbf{1 0 0 . 0}$ | $\mathbf{1 0 0 . 0}$ |  |

### 3.1.2 Persons that Participate more in Agricultural Activities

There are many agricultural activities performed by various person in a household. In this section a comparative analysis made on the activities performed by various set of persons (men, boys, women and girls). The main focus is based on comparing role of women and that of men. During the interpretation in this section emphasis is laid more on the 'yes' response. The respondents were asked to select "yes' for participating in a particular agricultural activity and 'no' for not performing it. The combine percent of the 'yes and 'no' response sum up to $100 \%$.

Cereal Crops: Participation in ploughing activity revealed that men are ahead with $94 \%$, followed by boys $75 \%$, then women at $65 \%$ and girls $10 \%$. Also, sowing of cereal cropssuggestst men do more ( $93 \%$ ), next women ( $73 \%$ ), boys ( $53 \%$ ) and girls ( $29 \%$ ). In all the other activities women perform more: Weeding ( $88 \%$ ), harvesting ( $93 \%$ ), threshing ( $75 \%$ ), Storing of cereacropsop ( $83 \%$ ) and transporting/marketing ( $86 \%$ ). Men on the other hand performed fewer activities than the women in the other areas mentioned above; namely: Weeding (91\%), harvesting (44\%), threshing (5\%), Storing cereal crops and transporting/marketing (16\%) (Table 2).

Table 2: Participation in Cereal Crop Production Activities

| Participation in Farm <br> Activities (Cereal <br> Crops) | Men |  | Boys |  | Women |  | Girls |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Yes | No | Yes | No | Yes | No | Yes |
| Ploughing in cereal crop | $6 \%(5)$ | $94 \%(75)$ | $25 \%(20)$ | $75 \%(60)$ | $35 \%(28)$ | $65 \%(52)$ | $90 \%(72)$ | $10 \%(8)$ |
| Sowing in cereal crop | $8 \%(6)$ | $93 \%(74)$ | $48 \%(38)$ | $53 \%(42)$ | $28 \%(22)$ | $73 \%(58)$ | $71 \%(57)$ | $29 \%(23)$ |
| Weeding in cereal crop | $69 \%(55)$ | $31 \%(25)$ | $69 \%(55)$ | $31 \%(25)$ | $13 \%(10)$ | $88 \%(70)$ | $24 \%(19)$ | $76 \%(61)$ |
| Harvesting in cereal | $9 \%(7)$ | $91 \%(73)$ | $20 \%(16)$ | $80 \%(64)$ | $8 \%(6)$ | $93 \%(74)$ | $19 \%(15)$ | $81 \%(65)$ |
| Threshing in cereal crop | $56 \%(45)$ | $44 \%(35)$ | $81 \%(65)$ | $19 \%(15)$ | $25 \%(20)$ | $75 \%(60)$ | $54 \%(43)$ | $46 \%(37)$ |
| Storing in cereal crop | $95 \%(76)$ | $5 \%(4)$ | $80 \%(64)$ | $20 \%(16)$ | $18 \%(14)$ | $83 \%(66)$ | $66 \%(53)$ | $34 \%(27)$ |
| Transportation/marketin <br> g | $84 \%(67)$ | $16 \%(13)$ | $73 \%(58)$ | $28 \%(22)$ | $14 \%(11)$ | $86 \%(69)$ | $66 \%(53)$ | $34 \%(27)$ |

Cash Crops: Cash crop production include pepper, tomatoes, beans and groundnuts. Women participate more in this area than men. Women participate in land clearing ( $80 \%$ ), cultivation ( $76 \%$ ), manuring in cash crop ( $86 \%$ ), product collection ( $83 \%$ ) and transporting/marketing ( $83 \%$ ); men clearing (39\%), cultivation (53\%), manuring in cash crop (43\%), product collection (73\%) and transporting/marketing ( $25 \%$ ). Boys and girls also contribute in cash crop production. Boys: land clearing (39\%), cultivation ( $53 \%$ ), manuring ( $43 \%$ ), product collection ( $73 \%$ ) and transport/marketing
( $25 \%$ ); Girls: land clearing ( $16 \%$ ), cultivation ( $23 \%$ ), manuring ( $19 \%$ ), product collection ( $61 \%$ ) and transport/marketing (16\%) (Table 3).

Table 3: Participation in Cash Crop Production

| Participation in Farm | Men |  | Boys |  | Women |  | Girls |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Activities (Cash crops) | No | Yes | No | Yes | No | Yes | No | Yes |
| Land clearing | $61 \%$ | $39 \%$ | $61 \%$ | $39 \%$ | $20 \%$ | $80 \%$ | $84 \%$ | $16 \%$ |
| Cultivation | $48 \%$ | $53 \%$ | $53 \%$ | $53 \%$ | $24 \%$ | $76 \%$ | $78 \%$ | $23 \%$ |
| Manuring in cash crop | $58 \%$ | $43 \%$ | $58 \%$ | $43 \%$ | $14 \%$ | $86 \%$ | $81 \%$ | $19 \%$ |
| Product collection | $28 \%$ | $73 \%$ | $28 \%$ | $73 \%$ | $18 \%$ | $83 \%$ | $39 \%$ | $61 \%$ |
| Transporting/marketing | $75 \%$ | $25 \%$ | $75 \%$ | $25 \%$ | $18 \%$ | $83 \%$ | $84 \%$ | $16 \%$ |

Root/Vegetable Crops: Table 4 represents the participation of individuals in the production of root/vegetable activities. Men are $70 \%$ engage in the cultivation of root/vegetable crops, while women $88 \%$; boys participate $35 \%$ and girls $34 \%$. Manuring, watering, weeding and harvesting shows women in the lead; they account for $88 \%, 85 \%$, and $81 \%$ respectively. The men counterpart is: manuring ( $75 \%$ ), watering ( $60 \%$ ), weeding ( $15 \%$ ), and harvesting (65) \%). This boy participated highest in manuring of crops (59\%), while female in watering and weeding ( $76 \%$ ).

Table 4: Participation in Root/Vegetable Crop Activities

| Participation in Farm Activities <br> (Root/Vegetable Crops) | Men |  | Boys |  | Women |  | Girls |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Yes | No | Yes | No | Yes | No | Yes |
| Cultivation in root <br> crops/vegetables | $30 \%$ | $70 \%$ | $65 \%$ | $35 \%$ | $13 \%$ | $88 \%$ | $66 \%$ | $34 \%$ |
| Manuring in root crops/vegetables | $25 \%$ | $75 \%$ | $59 \%$ | $41 \%$ | $13 \%$ | $88 \%$ | $66 \%$ | $34 \%$ |
| Watering in root crops/vegetables | $40 \%$ | $60 \%$ | $14 \%$ | $86 \%$ | $15 \%$ | $85 \%$ | $24 \%$ | $76 \%$ |
| Weeding in root crops/vegetables | $85 \%$ | $15 \%$ | $28 \%$ | $73 \%$ | $19 \%$ | $81 \%$ | $24 \%$ | $76 \%$ |
| Harvesting in root <br> crops/vegetables | $35 \%$ | $65 \%$ | $26 \%$ | $74 \%$ | $19 \%$ | $81 \%$ | $48 \%$ | $53 \%$ |

Households grow variety of root/vegetable crops for home consumption and income. The pictures in Figure $1 \& 2$ show cassava product. Cassava can be eaten directly without processing it further, but farmers get more income when processing in different ways, Figure 1 shows how carried if process into gari (a popular food eaten by most Sierra Leonean) and Figure 2 is processing cassava into foofo. Women and children participate more in the early processes (pealing the cassava and grinding), and men are mostly involved in harvesting and setting up final stage of processing. Pepper is among the

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crops that is widely and mostly cultivated (Figure 3). Other crops include okra, garden edges and potatoes. Sometimes these crops are planted by the mix-cropping method (Figure 4).


Figure 1: Cassava Processing into gara


Figure 3: Pepper Cropping


Figure 2: Cassava Processing into Foofo


Figure 4: Mix Cropping of Vegetables

Livestock include goats and sheep. The activities show men participating more in clearing ban for livestock production ( $90 \%$ ) and women ( $60 \%$ ). Boys participate $41 \%$, and girls ( $23 \%$ ). Taking animals to field is done more by boys ( $80 \%$ ); men ( $70 \%$ ); women $10 \%$ ); and girls zero. Feeding of animals is seen been done more by boys ( $73 \%$ ); men and women do very little in this area ( $10 \%$ ); and while girls ( $39 \%$ ). Men are more involved in the marking of livestock ( $79 \%$ ) and women ( $5 \%$ ). Boys and girls are not usually involved in these activities ( $0 \%$ ).

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Table 5: Participation in Livestock Production Activities

| Participation in Farm Activities (Live Stocks) | Men |  |  | Boys |  | Women |  | Girls |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
|  | No | Yes | No | Yes | No | Yes | No | Yes |  |
| Clearing ban for livestock production | $10 \%$ | $90 \%$ | $59 \%$ | $41 \%$ | $40 \%$ | $60 \%$ | $78 \%$ | $23 \%$ |  |
| Taking animals to the field | $30 \%$ | $70 \%$ | $20 \%$ | $80 \%$ | $90 \%$ | $10 \%$ | $100 \%$ | $0 \%$ |  |
| Feeding animals | $90 \%$ | $90 \%$ | $28 \%$ | $73 \%$ | $90 \%$ | $10 \%$ | $61 \%$ | $39 \%$ |  |
| Marketing livestock | $21 \%$ | $79 \%$ | $100 \%$ | $0 \%$ | $95 \%$ | $5 \%$ | $100 \%$ | $0 \%$ |  |

Poultry Production: Poultry is seen has more of women job as shown in Table 6. The table revealed that women participate $94 \%$ in caring for eggs, feeding in poultry (94\%), collecting eggs (94\%), marking chicks ( $78 \%$ ) and marketing eggs ( $84 \%$ ). Closed to poultry activities is the girls as indicate in Table 6: caring for eggs ( $80 \%$ ), collecting eggs ( $70 \%$ ), feeding in poultry ( $56 \%$ ), marketing of checks ( $54 \%$ ) and marking of eggs ( $51 \%$ ). Men and boys performed low in this area.

Table 6: Participation in Poultry Production Activities

| Participation in Farm Activities (Poultry) | Men |  | Boys |  | Women |  | Girls |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No | Yes | No | Yes | No | Yes | No | Yes |
| Caring for chicks in poultry production | 25\% | 75\% | 59\% | 41\% | 6\% | 94\% | 20\% | 80\% |
| Feeding in poultry production | 26\% | 74\% | 60\% | 40\% | 6\% | 94\% | 30\% | 70\% |
| Collecting eggs | 26\% | 74\% | 60\% | 40\% | 6\% | 94\% | 44\% | 56\% |
| Marketing chicks | 33\% | 68\% | 59\% | 41\% | 23\% | 78\% | 46\% | 54\% |
| Marketing eggs | 30\% | 70\% | 59\% | 41\% | 16\% | 84\% | 49\% | 51\% |

Table 7 depicts the participation of men, boys, women and girls in various fruit/tree production. The activities donated here by men are: land preparation (95\%), planting (98\%), pruning 993\%), harvesting ( $95 \%$ ). The women participation is high in watering ( $81 \%$ ), manuring of young plants ( $84 \%$ ) and marking ( $70 \%$ ). Boys land preparation ( $81 \%$ ), transporting/marketing ( $69 \%$ ), and girls; watering (66\%) and transport/marketing (45\%).

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Table 7: Participation in Fruit/Tree Production Activities

| Participation in Farm <br> Activities (Fruit/Tree) | Men |  | Boys |  | Women |  | Girls |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Yes | No | Yes | No | Yes | No | Yes |
| Land preparation | $5 \%$ | $95 \%$ | $64 \%$ | $36 \%$ | $76 \%$ | $21 \%$ | $73 \%$ | $28 \%$ |
| Watering | $35 \%$ | $65 \%$ | $19 \%$ | $81 \%$ | $19 \%$ | $81 \%$ | $34 \%$ | $66 \%$ |
| Planting | $3 \%$ | $98 \%$ | $63 \%$ | $38 \%$ | $60 \%$ | $40 \%$ | $80 \%$ | $20 \%$ |
| Manuring | $0 \%$ | $100 \%$ | $63 \%$ | $38 \%$ | $16 \%$ | $84 \%$ | $75 \%$ | $25 \%$ |
| Pruning | $8 \%$ | $93 \%$ | $54 \%$ | $46 \%$ | $100 \%$ | $0 \%$ | $100 \%$ | $0 \%$ |
| Harvest | $5 \%$ | $95 \%$ | $56 \%$ | $44 \%$ | $45 \%$ | $55 \%$ | $80 \%$ | $20 \%$ |
| Transporting/marketing | $49 \%$ | $51 \%$ | $69 \%$ | $31 \%$ | $30 \%$ | $70 \%$ | $55 \%$ | $45 \%$ |

The main permanent cash crop in Bum is the oil palm tree. The physically hard work like cutting palm fruit is done by men (Figure 1). Processing of the fruit to final product (palm-oil) is done locally by women.


Figure 5: Oil Palm Plantation and Oil Palm Processing

### 3.1.3 Relationship between Women's Task Performance and Intra-Family Decision - Time allocation

Here the number of hours spent in each activity are considered. A list of the activities that are taken into account are given in categories in the Figure 1. Women spend more time in cooking. The respondents agree that about 4 hours is spent in cooking within a 24 -hour period. Of course, the following activities are purely performed by women: fetching water, cleaning the house, caring for children, boiling water, clearing of the ban and milking babies. And about 1 hour each is spent on each of these activities, with the exception of caring for children (2 hours). Caring for animals is done more

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by men (1 hour daily) and women (half an hour (30minutes)). Attending social meetings is completely dominated by men ( 2 hours) and women ( 0 hour). Food for work activities is carried out more by women ( 1 hour) and men (half an hour ( 30 minutes)). Other activities are done more by men ( 2 hours) and women (1 hour) (Figure 6).


Figure 6: Time Allocation for Different Activities in 24-hour

### 3.1.4 Relationship between income and Role in Decision Making and income

Women participation in decision making on house income in relationship to agricultural products sold is presented in the Crosstab Table 8 . Those women who response 'no' to participating in decision making after been made (uninformed) is $9.3 \%$ (4). Women who making decision on their own is $17.1 \%$; those involve in the initial stage made up $28.9 \%$; most of them informed after decision $51.3 \%$, and $2.6 \%$ have an equal saying. The total suggests that majority of women are only informed about the decision on income after been made. The values of $\mathrm{Phi}=.213$ and Cramer's $\mathrm{V}=.213$ are both not statistically significant ( p -value $=.305>.05$ ). The Cramer's V indicates a weak relationship between women decision making on income and agricultural products sold (Table 10).

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Table 8: Agricultural product earn income * Participation on making decision on income

|  |  | Participation on making decision on income/expenditure |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | my own | Involve in the initial stage | after decision | equal saying |  |
| Agricultural products sold to earn income | Count | 0 | 0 | 4 | 0 | 4 |
|  | \% Within Agricultural products sold to earn income | 0.0\% | 0.0\% | 100.0\% | 0.0\% | 100.0\% |
|  | No \% Within Participation on making decision on income/expenditure | 0.0\% | 0.0\% | 9.3\% | 0.0\% | 5.0\% |
|  | \% of Total | 0.0\% | 0.0\% | 5.0\% | 0.0\% | 5.0\% |
|  | Count | 13 | 22 | 39 | 2 | 76 |
|  | \% Within Agricultural products sold ton earn income | 17.1\% | 28.9\% | 51.3\% | 2.6\% | 100.0\% |
|  | Yes \% Within Participation on making decision on income/expenditure | 100.0\% | 100.0\% | 90.7\% | 100.0\% | 95.0\% |
|  | \% of Total | 16.2\% | 27.5\% | 48.8\% | 2.5\% | 95.0\% |
|  | Count | 13 | 22 | 43 | 2 | 80 |
| Total | \% Within Agricultural products sold to earn income | 16.2\% | 27.5\% | 53.8\% | 2.5\% | 100.0\% |
|  | \% Within Participation on making decision on income/expenditure | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
|  | \% of Total | 16.2\% | 27.5\% | 53.8\% | $2.5 \%$ | 100.0\% |

Table 1:Chi-Square Tests

|  | Value | df | Asymp. Sig. (2- <br> sided) |
| :--- | ---: | ---: | ---: |
| Pearson Chi-Square | $3.623^{\mathrm{a}}$ | 3 | .305 |
| Likelihood Ratio | 5.147 | 3 | .161 |
| N of Valid Cases | 80 |  |  |

a. 5 cells ( $62.5 \%$ ) have expected count less than 5 . The minimum expected count is .10 .

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Table 10: Symmetric Measures

|  | Phi | Value |
| :---: | :--- | :--- |
| Approx. Sig. |  |  |
| Nominal by Nominal Cramer's V | .213 | .305 |
|  | .213 | .305 |
| N of Valid Cases | Contingency Coefficient | .208 |
| 80 | .305 |  |

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

### 3.1.5 Other Factors influencing Intra-Family Decision making

Age * Participation on making decision on income/expenditure: Age distribution was one of the factors considered for decision making by women in Bum Chiefdom villages in making decision on income/expenditure. Women within age 18-25 shows that majority are inform about decision after been taking; $30.8 \%$ take their own decision and $23.1 \%$ are involve; and $7.7 \%$ involve in equal saying in decision making (Table 11). The age category ( $26-35$ ) revealed that most $(78.9 \%)$ experience decision taking and them inform thereafter, $15.8 \%$ involve and $5.3 \%$ are involved in equal saying. In this age group, no woman takes decisions on her own.

The age group ( 3645 ) also show the majority ( $56.6 \%$ ) are involve in decision making after it has been made. However, $30.4 \%$ are involved at the initial stage of making decision and $13.0 \%$ making their own decision. Age distribution of $46-49$ are more involved in making decisions ( $46.7 \%$ ), $40.0 \%$ are involved after the decisions and $13.3 \%$ make their own decision. No members of this group are involved in equal saying. The age of 60 and above which represents the old age group shows an equal proportion of women making the decisions on their own and involved at the initial stage of decisionmaking accounting for $40.0 \%$ each. Those who are involved in decision-making account for $20.0 \%$ and none has an equal saying in the decisions.

The total decision-making of women on income/expenditure shows that irrespective of age group, the majority are only involved after decision is made ( $53.8 \%$ ). Those who are involved in decision making account for $27.5 \%, 16.2 \%$ taking decision on their own and $2.5 \%$ do not have equal saying. The Pearson Chi-Square test show that the association between age distribution and decision on income/expenditure is statistically significant (Pearson Chi-square value $=18.694(\mathrm{df}=12) \mathrm{p}$-value $=$ $.096>.05$ ) (Table 12). The phi value $=.483$, Cramer's $\mathrm{V}=.279$ are not statistically significant (pvalue $=.096>.05)$. And the relationship between age distribution and decision making on income/expenditure is weak (Cramer's $\mathrm{V}=.279$ ) (Table 13).

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Table 11: Age*Participation on making decision on income/expenditure Crosstab


Table 2:Chi-Square Tests

|  | Value | df | Asymp. Sig. <br> (2-sided) |
| :--- | ---: | ---: | ---: |
| Pearson Chi-Square | $18.694^{\text {a }}$ | 12 | .096 |
| Likelihood Ratio | 20.693 | 12 | .055 |
| N of Valid Cases | 80 |  |  |

a. 13 cells ( $65.0 \%$ ) have an expected count of less than 5 .

The minimum expected count is .25 .
Table 3:Symmetric Measures

|  |  | Value | Approx. <br> Sig. |
| :--- | :--- | ---: | ---: |
|  | Phi | .483 | .096 |
| Nominal by | Cramer's V | .279 | .096 |
| Nominal | Contingency | .435 | .096 |
| N of Valid Cases | Coefficient | 80 |  |

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
c. Correlation statistics are available for numeric data only.

Possession of land * Participation in making decisions on income/expenditure: Land acquisition/possession is vital for agricultural production. Those women who do not have land on their own show that $38.5 \%$ ( 4 respondents) are involved in decision making on income/expenditure; $30.8 \%$ make decision on their own; and $30.8 \%$ are informed after decision is made. Those who possess land up to 1 to 5 hectares revealed that $66.7 \%$ are only involve after decision is been taken; $15.4 \%$ involved from start; $12.8 \%$ take their own decision; and $5.1 \%$ have equal saying. Women possessing land above 5 hectares most are informed after the decision is been made ( $46.6 \%$ ), followed by those who are involved from start (39.3\%), making decisions on their own (14.3\%). The total response suggests that most women are informed of the decision after it is been made ( $53.8 \%$ ), involved in $t$ decision at the start ( $27.5 \%$ ), decision on one's own ( $16.5 \%$ ) and a small number have equal opportunity in decision making ( $2.5 \%$ ) (Table 14). The Pearson Chi-Square value ( $=10.969, \mathrm{df}=6$ ) is not statistically significant $(p-v a l u e=.089>.05)($ Table 15). In Table $\ldots$ Phi value $=.370$, Cramer's V value $=.262$ indicating a weak association between land ownership and women's decision-making. This result is also not statistically significant ( p -value $=.089>.05$ for Phi and Cramer's V, p-value $=.086>.05$ ). In Table 16, the value of $\mathrm{Phi}=.370$ and Cramer's $\mathrm{V}=.262$ showing weak relationship between land possession and decision on income/expenditure. But both Phi value and Cramer's V are statistically not significant $(\mathrm{P}$-value $=.089>.05)$.

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Table 14; Possession of land*Participation in making decisions on income/expenditure Crosstab

|  |  |  | Participation on making decision on income/expenditure |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | my own |  | after decision | equal saying |  |
| Possession of land | Nil | Count | 4 | 5 | 4 | 0 | 13 |
|  |  | \% Within Possession of land | 30.8\% | 38.5\% | 30.8\% | 0.0\% | 100.0\% |
|  |  | \% Within Participation in making decisions on income/expenditure | 30.8\% | 22.7\% | 9.3\% | 0.0\% | 16.2\% |
|  |  | \% Of Total | 5.0\% | 6.2\% | 5.0\% | 0.0\% | 16.2\% |
|  | 1-5 hectares | Count | $5$ | 6 | 26 | 2 |  |
|  |  | \% Within Possession of land | $12.8 \%$ | 15.4\% | $66.7 \%$ | 5.1\% | 100.0\% |
|  |  | \% Within Participation in making decisions on income/expenditure | 38.5\% | 27.3\% | 60.5\% | 100.0\% | 48.8\% |
|  |  | \% Of Total | 6.2\% | 7.5\% | 32.5\% | 2.5\% | 48.8\% |
|  | Above 5 hectares | Count | 4 | 11 | 13 | 0 | 28 |
|  |  | \% Within Possession of land | 14.3\% | 39.3\% | 46.4\% | $0.0 \%$ | 100.0\% |
|  |  | \% Within Participation in making decisions on income/expenditure | 30.8\% | 50.0\% | 30.2\% | 0.0\% | 35.0\% |
|  |  | \% Of Total | 5.0\% | 13.8\% | 16.2\% | 0.0\% | 35.0\% |
| Total |  | Count | 13 | 22 | 43 | 2 |  |
|  |  | \% Within Possession of land | 16.2\% | 27.5\% | 53.8\% | 2.5\% | 100.0\% |
|  |  | \% Within Participation in making decisions on income/expenditure | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
|  |  | \% of Total | 16.2\% | 27.5\% | 53.8\% | 2.5\% | 100.0\% |

Table 4: Chi-Square Tests

|  | Value | df | Asymp. Sig. <br> (2-sided) |
| :--- | ---: | ---: | ---: |
| Pearson Chi-Square | $10.969^{\mathrm{a}}$ | 6 | .089 |
| Likelihood Ratio | 11.741 |  | 6 |

a. 6 cells $(50.0 \%)$ have expected count less than 5 . The minimum expected count is .33 .

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Table 16: Symmetric Measures

|  |  | Value | Approx. <br> Sig. |
| :--- | :--- | ---: | ---: |
|  | Phi | .370 | .089 |
| Nominal by | Cramer's V | .262 | .089 |
| Nominal | Contingency | .347 | .089 |
| N of Valid Cases | Coefficient | 80 |  |

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
c. Correlation statistics are available for numeric data only.

## Period stay in village * Participation in making decisions on income/expenditure

The period residents (specifically) lived in the villages in Bum chiefdom and how that relates to their household decision-making is shown in Table 17. Participation in decision making by women base on income/expenditure has been grouped into four: decision-based on my own, involved in decision making, consulted after the decision is made and equal saying in decision making. A resident who has spent $1-5$ years viewing a decision on their own is $30.0 \%$ and involve in it is also $30.0 \%$, but the majority ( $40.0 \%$ ) in this age group experience being told after taking a decision.

Most of the women ( $75.0 \%$ ) in the age bracket 6-10 years are not involved in initial decision-making on income/expenditure and are only informed after men have taken a decision. The is an equal proportion involved and after the decision ( $41.5 \%$ each) for those who have stayed 10 years or more. Decisions based on 'my own' account for $17.1 \%$ for 10 years or more. The total decision-making by women shows that the majority ( $53.8 \%$ ) are involved after; they involved in decision making shows $27.5 \%$ and $16.2 \%$ making a decision on their own on income/expenditure. The Pearson Chi-Square value (17.263), df $=9$, p -value $=.045<.05$, is statistically significant. This show that the duration in which women live in the villages is an important factor for household decision-making on income (Table 18). The Phi value (.465) and Cramer's V (.268) are both statistically significant (p-value $=$ $.045<.05$ ). The Cramer's V show a weak association between year of stay in the village and decision on income (Table 19).

Table 17: Period Stay in Village*Participation on making a decision on income/expenditure

## Crosstab



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Table 5: Chi-Square Tests

|  | Value | df | Asymp. Sig. <br> (2-sided) |
| :--- | ---: | ---: | ---: |
| Pearson Chi-Square | $17.263^{\mathrm{a}}$ |  | 9 |
| Likelihood Ratio | 19.208 |  | .045 |
| N of Valid Cases | 80 |  | .023 |

a. 10 cells $(62.5 \%)$ have an expected count of less than 5. The minimum expected count is .03 .

Table 6: Symmetric Measures ${ }^{\text {c }}$

|  |  | Value <br> $\quad$ Phi | Spprox. |
| :--- | :--- | ---: | ---: |
| Nominal by | Cramer's V | .465 | .045 |
| Nominal | Contingency | .268 | .045 |
| N of Valid Cases | Coefficient | .421 | .045 |

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
c. Correlation statistics are available for numeric data only.

### 3.1.6 Constraints Face by Women in Agriculture

Table 20 presents how general leadership for agriculture and government help women in solving their socio-economic problems. The majority of women feel their socioeconomic problem is not being handled by leaders in their communities.

Another problem is the grass root leadership's influence on the role of women in society. The majority of the women ( $78.8 \%$ ) believed that to some extent their role is influenced by the kind of leadership provided. However, few women show that to a greater extent ( $12.5 \%$ ) do influence them (Table 21). The attitude of traditional leaders toward women shows 'somewhat encouraging' ( $38.8 \%$ ) and 20.0\% indicate very encouragingly. However, $31.3 \%$ are discouraged by traditional leadership (Table 22). Other problems faced by women farmers are irrigation of crops during the dry season which lasts for several months (November to April), and lack of finances for higher tractors for ploughing.

Table 20: leaders help women in socio-economic problems

|  |  | Frequency | Percent | Valid Percent | Cumulative <br> Percent |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Valid | No | 79 | 98.8 | 98.8 | 98.8 |
|  | Yes | 1 | 1.3 | 1.3 | 100.0 |
|  | Total | 80 | 100.0 | 100.0 |  |

Table 21: Grass root leaders influence role of women

|  |  | Frequency | Percent | Valid Percent | Cumulative <br> Percent |
| :--- | :--- | ---: | ---: | ---: | ---: |
| Valid | To greater extent | 10 | 12.5 | 12.5 | 12.5 |
|  | To some extent | 63 | 78.8 | 78.8 | 91.3 |
|  | Hardly | 7 | 8.8 | 8.8 | 100.0 |
|  | Total | 80 | 100.0 | 100.0 |  |

Table 22: Attitude of traditional leaders towards women

| very encouraging | 16 | 20.0 | 20.0 | 20.0 |  |
| :--- | :--- | ---: | ---: | ---: | ---: |
|  | Somewhat encouraging | 31 | 38.8 | 38.8 | 58.8 |
|  | Discouraging | 25 | 31.3 | 31.3 | 90.0 |
|  | Indifferent | 8 | 10.0 | 10.0 | 100.0 |
|  | Total | 80 | 100.0 | 100.0 |  |

### 3.2 Discussion

The main objective of this study was to understand the trend whereby women have come to dominate farming activities at Bum Chiefdom and to understand the implications of this trend for women's wellbeing. Farming plays an important role in women's lives through the provision of food and sometimes income, and is especially important for those who have no other sources of sustenance. Women's participation in development endeavours discussions so far has indicated that a number of social and cultural factors determine the extent of women's role in various activities. They are, for instance, excluded from deciding what crops to plant; purchase and sale of livestock, farm inputs, land plots, etc. The major decisions are usually made by husbands and in rare cases shared by both. The traditional sexual division of labour confined women to domestic labour, including the entire range of food preparation, fetching water, collecting fuel wood and caring for the family as stated early.

The majority of rural women depend on land for their livelihoods, but their relationship to it is characterized by insecurity and lack of control [30]. And this lack of ownership and control over land creates differences between men and women in relation to economic well-being. This is reflected in Bum women. Despite carrying substantial rural responsibility, women have been generally ignored by
the planners (UNDP, 1980); for example, in her study "A Plot of One's Own, in Dakiri Irrigation Scheme in Burkina" Faso, [31]. Land remains substantially in control of men through patrilineage and as such, women cannot own land but they often have secure rights [32]. For Bum women ownership of land is based on the fact that they are married and therefore, decisions are often taken by men on household income and what to produce. Those on family lands are given little rights as compared to their male counterpart. When women have equal access to resources as men, their maize output per acre surpasses that of men [33]. In Sierra, Leone women get access to land through marriage. Women are most times marginalized for the use of their family land [4], and if women could be given land rights, productivity would increase [34].

All these are exclusively performed by women. They carry out the heavier workload and perform more time-consuming tasks on the field and in the household. Women have an extra load than men because they participate in all activities (agricultural and domestic work). The division of labour in the study area is quite traditional. This is due to the socioeconomic and cultural constraints against women's involvement in decision-making. While men grow cash crops with a share of labour offered by women [35] and [36] talks about the sexual division of labour and division of labour into paid and unpaid work. Furthermore [37] argues that the labour of women in agriculture, supported by their domestic labour on a homestead provides a subsistence base upon which the society depends and the surplus upon which it is structured.

Bum Chiefdom in the Bonthe Districts suggests a Muslim-dominated area with $83.8 \%$ women belonging to the Muslim religion (Table 1). Religion plays a key role in the behaviour of women toward their husbands; as it demands submission. The majority of the women are married, $61.3 \%$ (Table 1) with high illiteracy among them (81.3\%). These contribute to women's decisions in the household. Women are engaging in almost all the farming activities from start to finish. In the area of cereal crops (e.g., rice and maize) men are more involved in brushing the farmland and clearing and ploughing. However, at the ploughing stage women, boys and are girls actively involved. The participation of weeding activities is mostly done by women and mainly assisted by girls. This indicates a stereotype role play in households by gender. Harvesting, threshing and storing cereal crops is dominated by women and most of the time assisted by children. A greater proportion of the rice produced is for household consumption, and any quantity for sale is done mostly done by women.

Root/vegetable crop activities are also dominated by women. The root crop that is widely and mainly planted is cassava. Men, as usual, are seen dominating physically hard work like brushing and land clearing; and the majority of the rest of the farm activities are undertaken by women and assisted by girls and boys. Cassava is processed into mainly two types of food common in Sierra Leone, namely: gari and foofoo. Women again dominate the pilling and grinding processes and are frequently assisted
by children. Men also do the park but in a small way. The main vegetable crop grown in this area is pepper. Other vegetable crops include: okra, garden eggs and tomatoes. Vegetable crop production activities are highly dominated by women and children; men sometimes participate little. Women and girls as usual mainly do the weeding and fruit gathering (Figure 1). Women are engaged in vegetable production is the main source of their income. But vegetable production is seriously hindered in the dry season usually from January to April due to irrigation problem. The scale of vegetable production is drastically reduced during this period. Some women were doing irrigation completely on their own without any assistance from men, while in some households with is a collective effort of everyone. A study conducted by [38] in Kenya and Zimbabwe shows that irrigation contributed from $25 \%$ to $80 \%$ of the total family income; [39] points out that smallholder irrigation schemes can be used to increase and diversify plant production, and as a result, the outcome of live hoods dependent on plant production improves. In many African countries small irrigation is still considered vital driving force of moral development and poverty alleviation, despite its problem and failure [40]. Irrigation is a serious problem for Bum women, they have to get water from nearby stream/river or bore holes to water their crops in dry season. During this season very little is realized from vegetable production. A study conducted in Nepal (i.e., Asia) at Chhatis Mauja Irrigation Scheme, shows that when analyzing livelihood strategies of households, irrigated agriculture is considered to be subsistence oriented [41]. Poultry production is seen as a women job and assisted by children (boys and girls). The women care for eggs, feeding of chicks and make sure chicken are roosted, and children help in these exercises. The marketing is most done by the women and as usual assisted by children. Fruit and tree activities are largely performed by men; boys also play important roles. Men do the land clearing, planting of the trees, pruning and harvesting (Figure 5).

In the past agriculture was under the control of men, even in a situation where women did most of the work [Goody and Bucky, 1973], it was evident women play a more significant role in agriculture than men [42] and [43]. But in the past 20 years, significant changes in women's role in food production have occurred [32]. Women's participation in irrigated agriculture varied according to the extent of their participation [44]. Women in the chiefdom are presently considered as one of the main supplies of vegetable crops like pepper, okra, corn etc. to Bo city and some other parts of the country. Over the past 20 years, significant changes in women's roles in food production have occurred [45]. Business persons especially women come from far distances to buy vegetable crops that are being marketed to Bo and other big towns. This is clear evidence as pointed out by [46] that in Africa, rural women produce $80 \%$ to total food production and they account for $60 \%$ of overall agriculture production.

The results of this research suggest women spent more time within the 24 -hour period on domestic work and farm activities. Apart from working on the farm, they are also engaged in cooking, caring for young kids, cleaning the house and other house chores. Men on the other hand after the day farming
spent the rest of their time on personal issues, meeting with friends and sometimes attending meetings. In Gambia women who were engaged in communal gardens along the Gambia River Basin have been doing well as compared to their husbands [47]. However, women's absence from their homes while working in their gardens was widely criticized, but this has changed over time and women gardeners were praised by their husbands for generating a greater benefit than the peanut crop men. In addition, [48], women in Kwazulu had to take on more responsibilities for Agriculture due to social changes such as male migration and children being less available because of attending school. In Sierra Leone, and in the Bum area, young men move to towns and cities for greener pastor-most engage in motorbike enterprise and some for mining. Also, the Government has made education compulsory for every child. These situations have made women to increasingly involve in agriculture, their main source of livelihoods. Many of the women are therefore vulnerable and poor. On the other hand, it has been argued that the African peasantry declined due to the mineral revolution [49], and also supported by [50] that women farmers dominate the agricultural sector, while men are in the industrial sector, and as result women have no other options but to take up the role of provider for food security [51].

In many African societies, men's role is clearing the land for cultivation, whilst women are the ones who cultivate the crops [52]. A survey from Africa and Asia revealed that African women constitute a much greater proportion of the total family labour force than in Asia [50]. Men were required to perform heavy duties of land preparation whilst women were responsible for lighter activities like weeding, planting, harvesting and food processing [53]. Culture also has an influence on the division of tasks and activities amongst household members [54]. AA study done in peon indicates that where women are the head of household, they tend to carry men's tasks [55].

Latin America [56], first classified farming systems as "male farming system" which contrasts with African Countries where women farmers are the major food produces. According to [57] gender role and relations are of particular importance in the process of livelihood decision making.

From the results presented in Table 13 to Table 19, it is evident that women in Bum Chiefdom make fewer decisions than men concerning income generated from agriculture activities and other household decisions despite the own land or age group they belong to or how long they have to stay in the village. In all the villages in Bum chiefdom, the results show that men make more decisions than men. This can be accounted for by the relative decisions making without initially involving the women.

Women in agriculture envisage many problems ranging from household decision-making to the community they live. One such problem is their involvement in making a decision on the income of which they are a pivotal part in generating it. The idea of work division according to gender has
disadvantaged women, been that that spent more time engaged in different types of gender stereotype work. Women, especially married women are restricted in attending social meetings. Providing leadership for women in communities to address their socio-economic problems is not being proper address by authorities. The result shows a $98.8 \%$ (Table 20) revealed that women feel their problems are not well addressed. The leadership provided by the traditional leader is somehow encouraging $(38.8 \%$ ), but a good number of women feel discouraged (31.3\%). Other problems faced by women are access to water for irrigation in the dry season, cost of labour and tractors for ploughing. Despite their increasing involvement in agricultural production, women in Bum Chiefdom are faced with a number of challenges, including lack of sufficient water for irrigation in the dries, expensive inputs, high costs of labour services, active involvement in agriculture and household decision making, right leadership from government and traditional leaders.

However, farmers are now in a situation where they have to hire private tractors, which are more expensive and not always readily available. As a result, land preparation is one of the constraints that hinder agricultural production at the chiefdom. The study shows that the majority of women farmers do not have formal employment, and as such they mainly depend on the money from social grants for ploughing and buying inputs which are not forthcoming, except for those who are married and who therefore can rely on their husbands. In addition, the lack of money to pay for tractor services leads to more untilled land.

The study confirmed a significant increase in women's participation in agriculture at Bum Chiefdom, irrespective of whether they owned the land or not. This increase can be attributed to the fact that; they would want to prevent or reduce poverty within their households and also to supplement the household income. This is in agreement with [58] who indicated that women in the Gambia used to rely on their husband's peanut cash crop for the household's livelihoods but over time women in the Gambia decided to become gardeners and their income surpasses that of their husbands. In the literature reviewed, [30] indicated that, despite their dependence on land for livelihoods, women lacked security and control over it. However, in Bum Chiefdom, land ownership did not discernibly affect the use of land. The majority of women farmers at Bum villages utilized land still owned by men, whether their fathers or husbands and they did not feel that was a problem for them. This is in agreement with [58], who indicates that if women farmers do not raise land ownership as a concern, it should not necessarily be considered a problem by others. Today women in Bum constitutes a very large proportion of the population, contributing economically for their households and the country's economy. Women are often marginalized and have little saying in decision making including on income in their households. This is uncommon to Bum despite their significant contributions in agricultural activities. Women represent 70 percent of the agricultural labour force of Sierra Leone and they play an important role in natural resource management and food production and yet, their critical position and contribution
in agriculture are often discriminated against ownership, access to and control of land, and most importantly, women are not realizing their economic impact from their agricultural activities [3]. This is largely because of discriminatory, customary and statutory laws which favour men to women.

## 4. CONCLUSION

Women play a significant role in the agricultural labour force and in household activities, although to a varying degree. Women make up in any agricultural labour force over $50 \%$ in the study area. As a result, their contribution to agricultural output is undoubtedly extremely significant, although difficult to quantify with any accuracy. The most general conclusion reached from the study is that women spend more time than men in activities and agriculture tasks. Obviously, this is not a new discovery. Sufficient literature and studies have been produced about this fact. In day-to-day agricultural transactions, the village men in Bum Chiefdom, southern Sierra Leone make more decisions than women. This should not be surprising because women in Bum participate in farming activities with a relative degree of dependence.

Each woman is expected to feed her children and her husband when it is her turn to provide her husband's meal in polygamous honesty. However, most of the decision is made by men, and the village women have acquired a small degree of freedom to decide on farming and the income of their farm products. Division of labour by gender in farming exists. Women perform their duties on the common plot and prepare food from what is designated for consumption from the farm products. Thus, the relative degree of freedom to decide in agriculture is hindered. Bum is a big chiefdom with nine sections and a predominantly agricultural area, more research is needed. The agricultural landowner is dynamic as more land is been acquired by the government and private organizations and individuals for commercial farming in that part of the country.

Bum Chiefdom, irrespective of whether they own the land or not. This increase can be attributed to the fact that; they would want to prevent or reduce poverty within their households and also supplement the household income. This is in agreement with [58] who indicated that women in the Gambia used to rely on their husband's peanut cash crop for household's livelihoods but overtime women in Gambia decided to become gardeners and their income surpasses that of their husband. Bum Chiefdom, irrespective of whether they own the land or not. This increase can be attributed to the fact that; they would want to prevent or reduce poverty within their households and also to supplement the household income. This is in agreement with [58] who indicated that women in Gambia used to rely on their husband's peanut cash crop household's livelihoods above time women in the Gambia decided to become gardeners and their income surpasses that of their husbands.

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