

# Family Income Among Small Scale Farmers A Panacea for Household Food Security in Oyo State, Nigeria

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## Abstract

Food security requires that all individual and household must have access to sufficient food either by producing it themselves or by generating sufficient income to demand for it. The study examined the effects of family income on household food security among small scale farmers in Surulere Local Government Area of Oyo State, Nigeria. Data for the study was obtained from 105 respondents, randomly selected with the aid of structured questionnaire. Data analysis was by the use of descriptive and inferential statistics. Results of the analysis revealed that majority (70.8%) of the respondents were middle age and married. Most (77.1%) of them were educated with one form of education or the other. The findings indicates that ₦944.57 was food security index of the respondents and more than half (53.3%) of the respondents were food insecure. Significant relationship at  $P < 0.05$  exist between source of income and respondents; Age ( $r = 0.216$ ), years spend in school ( $r = 0.206$ ), years of farming experience ( $r=0.236$ ) and income earn ( $r=0.233$ ). The study concluded that more than half of the respondents in the study area are food insecure. The study recommends that government should subsidies agricultural input such as seeds, fertilizers and equipments to small scale farmers in order to improve income earning. Lastly farmer should be encouraged to form cooperative societies group which will enhance their access to credit.

**Keywords:** Family, Income, household, food security small scale, farmers.

## INTRODUCTION

In Nigeria, the percentage of food insecure house was reported to be 18 percent in 1996 and over 40 percent in 2005 (Sanusi, *et al* 2008). Although, figures released by Food and Agricultural Organization in 2005 on the state of food insecurity in the world, indicated that 9 percent of Nigerian population was chronically undernourished between 2000 and 2002 (FAO, 2005). Food security is an age long concept as the quality of life of a people, and as such, a household needs to ascertain how to feed, and continue to feed its members (Food Africa, 2004).

However, food security is said to exist when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Nyam, 2005). Consequently, in Nigeria, food security which goes with food self sufficiency and sustainability is still elusive (Nworgu, 2006). This is because the agricultural sector has not been able to deal effectively with the problem of food security for the Nigerian people when viewed from the stand point of the nutritional status of Nigerians household food security and price (Vision, 2010).

The effective management of available resources through farming household gets as much income as possible from its production and consequently improves its economic access to food required by its members (Mohammed and Omotesho, 2004). For this, food security refer to ability of a household to secure either from its own production or through purchases adequate food for meeting the dietary needs of its members (Maziya –Dixon *et al*; 2004). It is in the light of these that the study was designed to examine the effects of family income on household food security. The specific objectives of the study are to:

- i. describe the socio economic characteristics of the respondents;
- ii. identify sources of income available to the respondents in the study area
- iii. determine household food security level
- iv. identify production constraints of the respondents

The hypothesis tested in this study states that; there is no significant relationship between socio economic characteristics of respondents and source of income.

## METHODOLOGY

The study was conducted in Surulere Local Government Area of Oyo state, Nigeria. It has its administrative headquarters at Iresaadu. The local government is located in tropical rain forest zone with distinct wet and dry seasons. The primary occupation of the people of the area includes farming, trading, hunting and civil service. Crops grown include: Maize, yam, cassava, cowpea, melon, vegetables and also livestock

production. To this end, the entire area is agro-allied based with processing industries which were privately owned and located in major villages. This is a prototype of about 80 percent of the Local Government areas in Oyo state. The LGA shares boundaries with Ifelodun and Irepodun LGA of Osun State, Asa-LGA of Kwara State and its sisters, Oriire, Ogbomoso North and Ogbomoso South LGAs of Oyo State with population of 142, 670 at 2006 Census. The population of the study consists of all small scale farmers who live in the study area. The Local Government headquarters represents an extension block of Oyo State Agricultural Development Programme (OYSADEP). A multistage random sampling technique was used in selecting the respondents. Three villages were randomly chosen from the block. From each village, 35 respondents were interviewed making a total of 105 respondents.

Data were collected with structured questionnaires designed in line with the objectives of the study. Data collected includes; age, gender, source of income, food expenditure pattern and constraints to production.

Frequency distribution, tables and percentages were used to describe the socio economic characteristics of the farmers in the study area. Pearson product moment correlation was used to test significant relationship between the variables.

Food security index was measured by classifying household into food secure and food insecure households using food security index, which was used to establish the food security status of various households. It is given by

$$F_i = \frac{\text{per capita food expenditure for the } i\text{th household}}{2/3 \text{ mean per capita food expenditure of all household}}$$

Where  $F_i$  = food security index

$F_i \geq 1$  = food secure  $i$ th household

$F_i \leq 1$  = food insecure  $i$ th household.

A food secure household is therefore, whose per capita monthly food expenditure fall above or is equal to two third of the mean per capita food expenditure. On the other hand, a food insecure household is that whose per capita food expenditure falls below two- third of the mean monthly per capita food expenditure Omonona and Agoi (2007).

The concept of income used in the study reckons with income in kind and in cash. Therefore, following Adams and He (1995), the study identified the following sources of income:

- **Non-farm income:** includes income realized from non- farm labour, government and private sector employment (full or part time), and profits from non –farm enterprises.
- **Agricultural income:** includes net income from all crop production.
- **Transfer income:** includes incomes from relatives within and outside the country, government pension and other gifts received.
- **Livestock income:** includes net income from cattle, poultry, sheep, goat and pigs etc.
- **Rental income:** includes net income received from ownership of assets.

## RESULTS AND DISCUSSION

### Socio-economics characteristics of respondents

Results in Table 1 shows that majority (70.8%) of the respondents were between the age range of 31-50 years this could be regarded as middle age, only few (6.4%) could be regarded as fairly old i.e. above 50 years and 8.6% were relatively young (below 21 years). The mean age of the respondents is 43.2. This suggests that the majority of the respondents were within their economic active age and this will enhance their production in order to be food secure. Most (68.6%) of the respondents were female while 31.4% were male. This finding implies that women contribute to food security in many significant ways in addition to their crucial roles in food production. Going through the distribution of marital status as shown in Table 1 majority (80.0%) of the respondents were married and 6.7% were single. This implies that respondents in the study area will have additional responsibility to carried out to their spouses. The study revealed further that 11.4% of the respondents had between 1 and 4 children, 65.4% had between 5 and 8. While, 22% of the respondents had more than 9 children. The mean household size is 6. This result suggests that large household size can serve as source of family labour. The result in Table 1 shows that 22.9% of the respondents had no formal education while 33.3%, 29.5% and 14.3% of the respondents had primary, secondary and tertiary school respectively. This implies that majority of the respondents had one form of education or the other. The level of education can enhance food security status of respondents. The income earn was also investigated and the analysis showed that most (62.9%) of respondents fell within the range of ₦5, 000 – ₦15, 000 per month. The mean income is ₦9, 300 per month.

### Sources of Income of Respondents

Table 2 shows that 94.3% of the respondents were involved in farming activities as their source of income generating activity. About 70.5% were into trading, 80% into processing farm produce. Others were non-farm activities such as Artisan /Hair plaiting 37.1%, craft making 40.1% and food vending 49.6%. This implies that

respondents were involved in more than one income generating activities in order to be food secure.

### **Food Security Status**

The food security index was used to determine the food security status of respondents. The mean per capita food expenditure per week was estimated to be ₦944.57 this value was used as food security index that is any respondents whose per capita weekly mean food expenditure less than N944.57 were regarded as being food insecure. While respondents with values equal or above N944.57 are regarded as being food secure.

Food secure  $\geq$  N944.57

Food insecure  $\leq$  N944.57

Table 3 shows that 45.7% of the respondents were food secure while 53.3% were food insecure. This implies that income alone was not sufficient for the respondents to be food secure. This is in line with Zertlin and Brown (1992) which stated that household with insufficient income to enable continuous access to adequate supplies of safe and good quality food will be vulnerable to food insecurity.

### **Production Constraints of the Respondents**

The production constraints faced by respondents in the study area were presented in Table 4. The result reveals that majority of the respondents faced with one production constraints or others. The production constraints includes; poor access to credit facilities (80.0%) low processing capacity (67.6%), poor storage facilities (64.7%), low agricultural yield (69.5%), lack of input (83.8%), shortage of labour (35.2%), High cost of labour (54.3%), pest and diseases (61.9%) and poor infrastructural facilities (43.9%). The finding indicates that all the respondents were faced with one problem or the other.

### **Summary of Correlation Coefficient**

The result of correlation coefficient as indicated in Table 5 shows that age ( $r=0.216$ ), years spent in school ( $r=0.203$ ), years of farming experience ( $r=0.236$ ) and income ( $r=0.200$ ) were significantly related to income generating activities. This implies that for every unit increase in these variables it will leads to another increase in source of income which will enhance food security status of respondents.

### **CONCLUSION AND RECOMMENDATIONS**

Based on the result of the findings, the study concludes that sources of income of the respondents cannot meet up with food security status. However, the respondents in the study area are within their active and economic age, married with children. Respondents have multiple source of income and more than half are food insecure. However, constraints to production include poor access to credit faculties, poor storage facilities and shortage of labour. The following recommendations are important to improve the food security status respondents.

- (i) Farmers should be encouraged to practice family planning.
- (ii) Farmers should be encouraged to form cooperative group which can enhance their access to credit.
- (iii) Government should provide functional infrastructural facilities in the rural area such as good road network, electricity and good water supply.
- (iii) Farmers are encouraged to engage in activities that are productive and viable in the study area.

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**Table 1: Distribution of respondents Socio-Economic Characteristics**

Variable	Frequency	Percentage
<b>Age</b>		
Less than 21	9	8.6
21-30	15	16.1
31-40	46	4.0
41-50	28	26.8
Above 50	7	6.4
<b>Gender</b>		
Male	33	31.4
Female	72	68.6
<b>Marital Status</b>		
Single	7	6.7
Married	84	80.0
Divorced	5	4.7
Widowed	9	8.6
<b>Household Size</b>		
1-4	13	12.4
5-8	69	65.7
7-9	red5●	17.2
Above 10	5	4.7
<b>Educational Level</b>		
No formal education	24	22.9
Primary School	35	33.3
Secondary School	31	29.5
Tertiary School	15	14.3
<b>Income earn (₦)</b>		
1000 – 5000	16	15.2
5001 –10,000	42	40.0
11,001 – 15,000	24	22.9
16,001 and above	23	21.9

*Source: Field Survey 2011*

**Table 2: Distribution of respondents Sources of Income**

Sources of Income	Frequency	Percentage
Farming	99	94.3
Non farm	74	70.5
Remittance/gifts	84	80.0
Pensioners	31	29.5
Livestock Production	84	80.0
Rental Income	23	22.1
Civil Servant	42	

*Source: Field Survey 2011*

*\* Multiple Responses Recorded*

**Table 3: Distribution of Respondents According to Food Security Status**

Food Security Status	Frequency	Percentage
Food Insecure	57	54.3
Food Secure	48	45.7
<b>Total</b>	<b>105</b>	<b>100</b>

*Source: Field Survey 2011*

**Table 4: Distribution of Respondents According to Production Constraint**

Constraints	Frequency	Percentage
Poor access to credit facilities	84	80.0
Low processing Capacity	71	67.6
Poor storage facilities	68	64.7
Low agricultural yield	73	69.5
Lack of input	88	83.8
Shortage of labour	37	35.2
High cost of labour	57	54.3
Pest and diseases	65	61.9
Poor infrastructural facilities	46	43.9

*Source: Field Survey 2011*

*\* Multiple responses recorded*

**Table 5: Relationship between selected Socio Economic Characteristics**

Variable	r-value	Remark
Age	0.216	Significant
Level of Education	0.206	Significant
Years of farming experience	0.231	Significant
Income earn	0.233	Significant

*Source: Field Survey 2011*