DETERMINANTS OF HOUSEHOLD'S POVERTY AMONG CROP FARMERS IN KADUNA STATE, NIGERIA

[*1]Adamu, B. D., [2]Tanko, F., [2]Barnabas, T. M. and [3]Adejoh, E. U.

[1]Department of Agricultural Extension and Rural Development, Faculty of Agriculture, Ahmadu Bello University Zaria, Kaduna State, Nigeria.
[2]Department of Agricultural Economics and Farm Management Technology, Federal University of Technology Minna, Niger State, Nigeria.
[3]National Agricultural Extension and Research Liaison Services (NAERLS), ABU, Zaria, Kaduna State, Nigeria

[*]Corresponding Author's Email: danbaba3@gmail.com 08065480011

ABSTRACT

This study examined the households' poverty status among crop farmers in Kaduna State. Multi-stage sampling procedure was used to select 242 farmers for this study. Data were collected through using structured questionnaire with the help of trained enumerators. Descriptive and inferential statistics such as tobit regression and Foster, Greer and Thorbecke (FGT) model was employed in this study. The results showed that the mean age of the respondents was 45 years and were married, mean household size of the farmers was 11 persons, and about (80.6%) had formal education. The poverty situation of the farmers revealed that 51% were poor and the strategies adopted by the farmers to combat poverty were mostly through diversification into commercial farming, increased personal savings and involvement in non-farming activities. Tobit regression analysis revealed that age, household and income negatively influences the poverty status of the farmers, statistically significant at 1%, this implied that, poverty is concentrated among households in the study area. Major constraints encountered by the crop farmers, include high cost of inputs, inadequate credit facilities and inadequate market linkages. In conclusion, poverty incidence had a negative and significant effect on rural crop farmers. It was recommended that farmers should form cooperative societies to access micro loan; farmer should be linked to the urban market through extension agent and media to attract good value for their crops. Government and Non-Governmental Organizations (NGOs) should make farm inputs readily available at a subsidized rate.

Keywords: Determinants, Households' poverty, Crop farmers and Kaduna State

INTRODUCTION

Agriculture in Nigeria has been the most important sector of the economy from history and a basis for rural employment, food production and major export earnings before the discovery of black gold (Oni, 2008). The assertion made above was based on the evidence that as at pre-independence to independence little was known of petroleum as a major source of revenue for Nigeria. The National agricultural system was able to produce food crops like, maize, sorghum, millet and soya beans to the extent that there was almost no need for importation ((Ogunlela and Ogungbile, 2014). In addition to these food crops, there was sustained emphasis on agriculture to the extent that Nigeria was a net exporter of such agricultural commodities like cocoa, palm produces, rubber and cotton (IFPRI, 2018) Hitherto, agriculture accounted for over 60% of the National Gross Domestic Product (GDP) between 1960-1970, but fell drastically to 28.4% in 1971-1980 ((Adenomon and Oyejola, 2013). However, with the advent of petroleum in the early 1970s, petroleum became the country's major foreign earner and agriculture became grossly neglected (Oni, 2008).

Poverty has been a lingering problem in Nigeria and mostly affects the rural economy, which is the dwelling place for over 70% inhabitants who depend mainly on agricultural production for livelihood. Nigeria has about 79 million hectares of arable land of which 32 million hectares are cultivated. Over 90% of agricultural production is rain-fed, smallholders, mostly peasant account for over 80% of all farm holdings (Nwajinba, 2012). Both crops and livestock remain below potential as a result of inadequate access to and low uptake of high quality seeds, little or no fertilizer use, inadequate or absence of farm machineries, low application of agrochemical and insufficient production system as a result of rural poverty (Yahaya, 2009)

The notion of poverty is determined in different ways by different institutions. The indicators of poverty also differ for ease of reference and coherence in global assessment. Development agencies use quantitative measures of poverty, such as those setting a threshold of one or two dollar a day. However, poverty has a number of definitions that have different measuring dimensions. The United Nations High Commission for Refugees (2004) defines "Poverty" as a human condition characterized by the sustained or chronic deprivation of resource capabilities choices, security and power necessary for an adequate standard of living and other civil, cultural, economic,

political as well as social right. Thus poverty can be described as the state of being without the necessities of daily living, often associated with need, hardship and lack of resources across a wide range of circumstances.

The Copenhagen Declaration of 1995 describes absolute poverty as a condition characterized by severe deprivation of basic human needs including food, safe drinking, water sanitation facilities, health education, and information. World Bank (2019) on the other hand identifies "extreme poor" as people who live on less than $1day. On that standard, 21% of the world's population was in extreme poverty, and more than half the world's population was poor in 2001. However, the dollar a day poverty lines have been widely publicized, even many analyst (Reddy and Kakwani, 2006; Bhalla, 2002) have noted their shortcomings. They are of the view that poverty lines under-estimate the actual extent of poverty. Reddy (2009) has suggested the possibility that some of the recent lines might themselves have been expediently put at the dollar a day mark. The improved World Bank poverty line of $1.25 per person a day has been based on the average poverty line for the poorest 15 countries. Alternatively, Pogge and Reddy (2006) argued that, an inconsistent procedure with regard to correcting for rural – urban price differences, applying it only to cases of Indian and China.

Similarly, in 2015, the United Nations' Global Multi-Dimensional Poverty Index (MPI) has used three dimensions and 10 indicators in estimating Overall poverty in Nigeria, and each dimension is equally weighted, each indicator within a dimension is also equally weighted, and added. These three dimensions include: education, health and living standards. According to the Multi-Dimensional Poverty Index (MPI) Report (2019), about 54% of Nigerians lived below the national poverty line. It also shows that the prevalence of poverty among the geo-political zone varied; North-east 76.8%, North-west 80.9%, North-central 45.7%, South-east 27.38%, South-west 19.3% and South-south 25.2%.The urban poverty rate was 28%, while the rural poverty rate was 70%.Nigeria rural households are considered to be poor and hungry despite its abundant fertile land and other natural resources that could guarantee adequate crops production, but productivity have seriously declined over the years as result of rural poverty especially in developing countries like Nigeria (Folorunso, 2016).). Rural poverty contributes to poor agricultural productivity, as many farmers in Nigeria cannot afford to purchase necessary farm inputs such as fertilizers, pesticides and improved seeds, which would bring about increased productivity. Also, the ability of poor consumers to purchase food necessary for maintenance of health and productive life is reduced. The fact that food security in Africa has greatly worsened since 1970 (Rosegrant *et al;* 2005) has resulted in decline in per capita consumption of food in some African regions in recent times (Ogunlela and Ogungbile, 2014). International Food Policy Research Institute (2018) reported that, food crops (cereal, roots and tuber crops) dominated Nigeria crop production and Nigeria is the world's leading producer of cassava yams cowpea and cereal crops. However, productivity is below potential yields with the farmer yields of most crops are less than half of the yield potential due to increased population pressure and high demand for land for non-agricultural uses which has led to decrease in available agricultural land and consequently small farm sizes resulting in low food production, low income, high food insecurity and high poverty prevalence despite the resource endowment of Nigeria (Igbenaese and Okojie-Okoedo, 2017). Although, concerted efforts have been made by past and present government of Nigeria towards improving agricultural productivity in alleviating poverty among rural farmers, yet millions of people in Nigeria are still poor and hungry (Simonyan *et al.,* 2010). Hence, the role of increased productivity of cereal, root and tuber crop farms is no longer debatable but a great necessity in order to reverse the productivity of small farms in Nigeria, since cereal, root and tuber crops (maize, sorghum, millet, rice, wheat, cassava,yam and irish potatoes) have the potential for bridging the food gap, as they have been discovered from research that famine rarely occur where these crops are widely grown (Nweke *et al*.,2012)

Studies have been conducted on the determinant of poverty among rural farmers in Nigerian population. These include Oladimeji *et.al*. (2014), Simpa 2014, Adamu and Michael*,* (2019). However, there is scanty empirical information on the effects of households' poverty on farmers' crop productivity in Kaduna State. Against this background, this study was therefore, designed to determine the households' poverty among crop farmers in Kaduna State, Nigeria. Specifically, it describes the socio-economic characteristics of crop farmers, examine the poverty status and strategies adopted in mitigating incidence of poverty among crop farmers in the study area; and identify the constraints faced by crop farmers.

MATERIALS AND METHODS
Description of the study area
This study was conducted in Kaduna State Nigeria. The State is situated in the North – West geo-political zone of the country at about 200km^2 away from the Federal capital territory Abuja. It is located between latitude 9° 04´to 11° 50´N and longitudes 07° 09´ to 10° 04´E, respectively. It shares boundary with Katsina and Kano States to the North, Plateau State to the North East, Nasarawa State and Federal Capital Territory, Abuja to the South and Niger and Zamfara States to the West. The National Population Census (NPC, 2006), provisional census shows that the State has a population of 6,066,562, and farm families of 606,007 (KADP, 2014), going by the population growth rate of 3.2% in Nigeria, the population of the State was   projected population to be 9,428,842 by 2020.

Sampling Procedure and Sampling Size
Multistage sampling technique was used for the selection of respondents. In the first stage, one Local Government Area (Kagarko, Lere and Kudan) was randomly selected from each of the four agricultural zones; Samaru, Maigana, Birni-Gwari and Lere, respectively. In the second stage, three villages were randomly selected from each Local Government Areas chosen to give a total of twelve villages. In the third stage, respondents (farmers) were selected proportionately from the sampling frame of 23 total registered farm families in the study area obtained from Kaduna State Agricultural Development Project (KADP). (KADP, 2014). Lastly, a sample size of two hundred and forty-two (242) farmers which is ten percent (10%) of the sampling frame was selected for this study. Data were collected through interview schedule using structured questionnaire with the help of trained enumerators under the supervision of the researcher.

Table 1: Distribution of crop farmers in the Study Area

Agricultural Zones	LGA	Villages	Sample Frame	Sample Size 10%
Samaru	Kagarko	DogoKurmi	288	29
		Katugal	149	15
		Chinka	137	14
Lere	Lere	Mariri	228	23
		Gure	321	32
		Dama-kasuwa	230	23
Birni-Gwari	Chikun	Kujama	250	25
		Gwagwada	198	20
		Kakau-daji	168	17
Maigana	Kudan	Doka Kudan	201	19
		Dandubus	122	12
		Pabea	131	13
Total	**4**	**12**	**2423**	**242**

Source: Kaduna State Agricultural Development Project (KADP) (2014).

Poverty status: To determine their poverty status, information on both quantifiable and non-quantifiable factors of household expenditure was elicited. These include:

Household expenditure: Household expenditure refers to all spending on goods and services intended for consumption. It includes payment by the household for goods and services supplied accommodation, education, health, transportation, communication, clothing, utility supplies, bills and food. Reardon. T. and Vosti, S. A. (1995). This was computed and measure in naira value. The expected effect of households' poverty on crop productivity will below

Method of Data Analysis

Descriptive statistics such as frequencies, percentages and arithmetic mean and inferential statistic (Foster, Greer and Thorbecke, multiple regression model and Total Factor Productivity (TFP). The t-value of the OLS regression results was used to test the hypotheses of the study.

Foster, Greer and Thorbecke indices were used to determine the poverty status of the farmers, while descriptive statistics was used to determine strategies adopted in mitigating poverty. Adopting the model used by de Janvry (2010), FGT poverty index is given as:

$$P\alpha = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{z-y_1}{z}\right)^{\alpha}$$

Where;

$P\alpha$ = Poverty Index; N = total population; q = the number of poor (i.e. households below the poverty line); z = the poverty line for the household (two-third of Mean Per Capita Household Expenditure (MPCHE) of the farmers; yi = income of *ith* household

α = poverty aversion parameter which takes the value 0, 1, 2 representing incidence, depth and severity of the poverty, respectively. The 2/3 means per capita expenditure is referred to as the moderate poverty line, while its 1/3 is referred to as the core poverty line. This study was however, limited to the moderate poverty line because, because it closely approximates the \$1/day international poverty line (NBS, 2007).

α = degree of poverty aversion

Per capita expenditure = $\dfrac{Total\ expenditure}{household\ size}$

Mean per capita household expenditure (MPCHE) $= \dfrac{Total\ household\ PCE}{Total\ number\ of\ Households}$

The categorization of respondents based on the poverty line is given as:

Extreme poor: those spending < 1/3 of MPCHE; Moderately poor: those spending <2/3 of MPCHE; Non-poor: those spending> 2/3 of MPCHE.

Tobit regression model: The Tobit model is a statistical model proposed by James Tobin in 1958. It describes the relationship between a non-negative dependent variable y_i, and independent variables x_i. The Tobit model is defined as a latent variable model and is mathematically expressed as:

$$y^* = \beta_1 + \beta_2 x_i + \varepsilon_i$$

$y_i = 1$ *if* $y^* \geq 0$ (i.e., the poverty index is "high enough")

$$y_i = 0 \quad if \quad y^* < 0 \text{ (i.e., the poverty index is not "high enough")}$$

The latent variable y^* satisfies the classical linear assumption of normality and homoscedastic distribution with a linear condition mean.

The Tobit model in its implicit form is specified as:

$Y = f(X_1, X_2, X_3 \ X_4, X_5, X_6, X_7, X_8, X_9)$

The explicit form of the Tobit model is expressed as:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + e$

Where;

Y^* = Poverty Status of the farmers (Y^* = 0 when household is not poor and Y^* = Y_i when household is poor)

The independent variables are defined as:

X_1 = Age of the farmers (years), X_2 = Sex (male = 1, female = 0), X_3 = Education (years)

X_4 = Marital status (1 if married and 0 otherwise), X_5 = Household size (No), X_6 = Farm size (Ha), X_7 = Farming experience (years), X_8 = Income per annum (₦), X_9 = Amount of credit (₦)

RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

The results presented in Table 2 show that, majority (51%) of the crop farmers were within the age group of 40 years and above, with the mean age of 45 years, implying that farmers were in their productive stage of life and have the capacity of carrying out agricultural production. This result agrees with the findings of Ajah and Ajah (2014) who reported mean age of rice crop farmers in the country as 44 years. Results on gender distribution showed that majority (84.7%) of the farmers were male while (15.3%) were female implying that male farmers dominated agricultural activities in the area. This study is in tandem with the findings of Okere and Shittu (2012) which revealed that the males dominated the work force in Nigeria's agricultural rural areas.

Results in Table 2 reveal that majority (87.1%) of the farmers were married, while 12.9% were single, divorced or separated. This implies that there were more married crop farmers with some level of family responsibility in the area. This finding is in agreement with that of (Ugwuja *et al.* 2011) who reported that 88.7% of the farmers in Ekiti State were married. Findings of this study shows that majority (80.6%) of the farmers had formal education. This implied that literacy level in the study area was high. This result is in consonances with the findings of Awoniyi and Salma (2012) who pointed out that high educational level of

farm household could increase income earnings and reduce poverty level. About 86% of the farmers had more than 11 years of farming experience in the study area with a mean of 22 years and had farm size which ranges between 1.1 – 2.0 hectares with a mean farm size of 3.4 hectares. This finding is in line with the work of Oyekale and Idjesa (2009) who reported a mean farming experience of 20 years of maize crop farmers in River State, Nigeria.

The result in Table 2 shows that, the mean household size of 11 persons. This implied that the household size in the study area was fairly large and could negatively influence the expenditure pattern of the household especially on food consumption. Large family size is important in subsistent agricultural production especially within the rural setting. (Odoemenem and Obinne,2015) This is in line with the findings of Okere and Shittu (2012) who affirmed that larger households could experience poverty than smaller sized households. The result of the finding in Table 2 indicated that, (50.8%) of the farmers acquired their land through inheritance which could lead to farmland fragmentation while majority (66.1%) of the farmers indicated that their primary occupation was farming. This implied that farming was the pre-dominant occupation in the study area as those who engaged in other form of occupation still practice farming as their secondary occupation.

Table 2: Distribution of Socio-economic characteristics of food crop farmers

Variables	Frequency	Percentage	Mean
Age (Years)			**45**
< 21	6	2.5	
21 – 30	30	12.4	
31 – 40	82	33.9	
>40	124	51.2	
Sex			
Female	37	15.3	
Male	205	84.7	
Marital Status			
Single	12	5.0	
Married	211	87.1	
Widower	13	5.4	
Divorced	6	2.5	
Educational Status			
Non Formal	47	19.4	
Primary	46	19.0	
Senior Secondary	80	33.1	
Tertiary	69	28.5	
Farming Experience (Years)			**22**
1 – 5	8	3.3	
6 – 10	25	10.3	
11 – 15	36	14.9	
> 15	173	71.8	
Household Size			**11**
1 – 5	52	21.5	
6 – 10	119	49.1	
> 10	71	29.4	
Farm Size (Hectare)			**3.4**
0.1 – 1.0	14	5.8	
1.1 – 2.0	104	43.0	
>2.00	124	51.2	
Land Ownership			
Inheritance	123	50.8	
Purchase	46	19.0	
Rent/Lease	67	27.7	
Gift	6	2.5	
Primary Occupation			
Farming	160	66.1	
Gathering	2	0.8	
Trading	35	14.5	
Civil Servant	40	16.5	
Artisan	4	1.7	
Agro-processing	1	0.4	
Total	242	100.0	

Source: Field Survey, 2016

Institutional variables assessed by the food crops farmers
Cooperative membership of the farmers
The result in Table 3 revealed that, majority (62.8%) of the farmers do not belong to cooperative, while 37.2% were members of cooperative societies implying low participation of cooperative membership in the study area. This could lead to none exposure to vital information as well as lack of access to production inputs through cooperative societies.
Access to credit of the farmers
Access to credit will go a long way in improving individual farm enterprise in terms of agricultural production. As revealed in Table 3, majority of (86.0%) of the farmers had no access to credit; while14.0% had access to credit which implied that

access to credit is a problem in the study area. Access to agricultural credit has the propensity to break the vicious cycle of poverty and raise the purchasing power of farm households.
Farmers Sources of Credit
The result in Table 3 shows that, majority (86.0%) of the farmers had no access to credit as earlier indicated, hence have no source of credit. However, for those that have access to credit in the study area, 7.0% sourced their credit through cooperative, 4.5% through agricultural bank, 1.7% through Kaduna Agricultural Development Project (KADP) and Fadama Project, while paltry 0.8% of the farmers' source their credit through commercial banks.

Table 3: Institutional variables assessed by the farmers (n=242)

Variables	Frequency	Percentage
Cooperative		
Not member	152	62.8
Member	90	37.2
Access to Credit		
No Access	208	86.0
Access	34	14.0
Sources of credit		
Cooperative	17	7.0
Agric. Bank	11	4.5
KADP / Fadama	4	1.7
Commercial bank	2	0.8
None	208	86.0

Source: Field Survey, 2016

Determination of poverty line

The result in Table 4 gives a clear presentation of the estimation of the poverty line that was used to determine the poverty status of the farmers in the study area. The poverty line formed the basis for further analysis. The Foster-Greer-Thorbecke (FGT) class of poverty measures was employed to estimate the poverty status of the farmers in the study area. Following the adoption of Foster, Greer and Thorbecke measures, household total expenditure was used to determine household poverty status. The result in Table 4 show household food and non-food expenditure, total expenditure, per capita and mean per capita expenditure and the poverty line. The poverty line was constructed as two-thirds of the mean per capita household expenditure (MPCHE) of all households. This approach has been used by several researchers and institutions (NBS, 2012; Oni and Yusuf, 2008; Oyakhilomen and Kehinde, 2016) as a measure of welfare. Households were then classified into their poverty status based on the poverty line. Hence, non-poor households were those whose per capita expenditure was above or equal to two-third of the mean per capita expenditure of all households while those whose per capita expenditure was below two-thirds of the mean per capita expenditure were classified as poor. Based on this, the poverty line constructed as two-third of the mean per-capita expenditure of all the households was ₦14039.2. This implies that households whose monthly per capita expenditure fell below ₦₦14039.2 were classified as poor while households whose per capita expenditure equaled or was above the poverty line were classified as non- poor.

Table 4. Determination of households' poverty line

Items	Amount(₦)
Household food expenditure	1680700
Household non-food expenditure	16493101
Household total expenditure	17173601
Per capita household expenditure (PCHE)	1955859.82
Mean Per capita household expenditure (MPCHE)	19558.6
2/3 MPCHE (Poverty line)	14039.2

Source: Field Survey, 2016

Poverty indices of the farm households

The poverty profile of households (poverty headcount index or incidence (P_o), poverty gap or depth (P_1) and squared poverty gap or severity (P_2) were calculated (Table 5). The headcount index (poverty incidence) in the study area was 0.51 implying that the proportion of the farming households whose per capita expenditures fell below the poverty line was 51%. The Table shows that 51% of the farm households in the study are poor while 49% are non-poor. This result is in line with the findings of Oyakhilomen and Kehinde, (2016) on farm households' livelihood diversification and poverty alleviation in Giwa Local Government Area of Kaduna State, who reported that the poverty line was ₦13,039.10 (monthly). Adekoyo (2014) reported that poverty is higher among male headed households who depend solely on agriculture for livelihood. More so, Asogwa *et al.* (2012) posited that poverty is disproportionately concentrated among households whose primary livelihood lie in agricultural activities. The poor are conventionally defined as the population that falls below a certain poverty line (Reardon and Vosti, 1995). Poverty Gap (depth) (P_1), usually referred to as the depth of an average poor person from the poverty line. Poverty gap was 0.28, and this implies that the poor rural households require 28% of the poverty line to escape from poverty group. It is a measure of the poverty deficit of the entire population. Poverty Severity Index (P_2) which measures the distance between two poor persons was found to be 0.12. Implies that the severity of the poverty among the households in the study area was 12%. The poverty severity takes into account not only the distance separating the poor from the poverty line, but also the inequality among the poor. This result conforms to Asogwa *et al.* (2009) who reported a poverty severity of 0.15 in a study on poverty among farming households in Nigeria.

Table 5: Poverty measures for the households' in the study area

Poverty measures	Result
Poverty line (₦)	14039.2
Poverty headcount	0.51
Poverty gap	0.28
Poverty severity	0.12
Poor (%)	51
Non-poor (%)	49

Source: Field Survey, 2015

Factors influencing households' poverty in the study area

Some of the factors influencing households' poverty in the study area were presented in Table 6. Tobit Regression model was used to determine the factors influencing rural poverty in the area. The Pseudo R-square (coefficient of determination) was 0.2846 indicating that about 28.5% variation in poverty incidence was explained by the explanatory variables included in the model. From the z – value of the regression, two independent variables (household size and income) out of the nine variables included in the model were found to be statistically significant at 1% level of probability. They both have negative coefficients and inversely related to incidence of poverty in the study area.

As shown in Table 6, the coefficient of household was negative (-5.60) and statistically significant at 1% level of probability indicating an inverse relationship with the dependent variable. This implied that a unit increase in household size of the food crop farmers will decrease the poverty incidence of the respondents. For instance, as household size increases, the likelihood of being poor is reduced. This can be justified base on the fact that the more individuals in a household, the more the

tendency to increase the number of workforce that source for income to cater for the need of the family thereby increasing the amount of income in that household. However, where the dependency ratio is high, large household size will increase the total consumption needs and thus increase the probability of being poor. This is in contrast to the work of Anigbogu *et al.* (2014) who reported that household size had a direct relationship with the poverty situation of their respondents in the study area. More so, the coefficient of income was negative (-22.71) and significant at 1% level of probability indicating an inverse relationship with the dependent variable. This implies that a unit increase in income of the food crop farmers will decrease the poverty incidence of the respondents in the study area. For instance, the more they generate income from food crops production, the less their poverty situation. This finding is in agreement with the result of Asogwa *et al.* (2012) who reported that income had an inverse relationship with poverty severity, as income generation of farmers increases the probability and intensity of poverty decreases.

Table 6: Tobit regression coefficients of determinants of the Households' poverty

Variables	Coefficients	Standard error	Z – value
Constant	-9.41316	3.66869	-2.57***
Age	0.06390	0.09168	0.70
Sex	1.04280	1.53719	0.68
Education	-0.03240	0.11625	-0.28
Marital status	1.01408	1.93009	0.53
Household size	-0.62836	0.11227	-5.60***
Farm size	-0.11461	0.17093	-0.67
Experience	-0.21887	0.08949	-2.45
Income	-0.00003	1.13E-06	-22.71***
Credit	-7.77E-07	1.55E-06	-0.50
Sigma	6.674543	0.4082013	16.35***
Pseudo R-squared	0.2846		
Chi-squared	337.51***		
Log likelihood function	-424.2139		

Source: Field Survey, 2016. *significant at 10%, **significant at 5%, ***significant at 1%

Strategies for mitigating poverty

Strategies for mitigating poverty in the study area by the farmers were presented in Table 7. Diversification into commercial farming (41.3%) was the most used strategy in mitigating poverty by the farmers in the study area. There was paradigm shift from subsistence to commercial farming in order to produce more foods for the teaming population. This is achieved through increased acreage and resources utilization. The next strategies adopted by the farmers for mitigating poverty was through personal savings (34.3%), followed by involvement in non-farming activities (28.5%) and engagement in agricultural

marketing (25.6%). It was also observed that borrowing from relatives (21.5%) was used by the farmers, while the least used strategies in mitigating poverty is through asset accumulation (5.4%). This implied that engagement in commercial farming and involvement in non-farm activities to generate extra income were some of the strategies for mitigating poverty by farmers in the study area. This study corroborate the findings of Simpa (2014) who stated that, major strategies used by the poor female-headed household rural farmers in coping with poverty are skipping of one or two meals a day which ranked 1st (96 %,), but they might eat leftover food in the morning and/or take

snacks (garri in cold water and groundnut cake in the afternoon), however; take full and heavy dinner, quantity of meal reduced ranked 2nd (90%), purchasing of less preferred food items ranked 3rd (85%) and distress sales of growing crops (80%, ranked4th). Other coping strategies are engaging in wage labour (75%, ranked 5th), borrowing from friends and relations (60%,

ranked 6th), supplying farm labour for food items and not cash (55%, ranked 7th), sales of assets other than growing crops (30%, ranked 8th) and reducing expenditure on unproductive activities (28%, ranked 9th). Engaging in wage labour with low pay as farm workers and house helps by members of the household help to complement the efforts of the household head.

Table 7: Farmers' strategies for mitigating poverty

Variables	Frequency*	Percentage
Mixed cropping	33	13.6
Involvement in non-farming activities	69	28.5
Asset accumulation	13	5.4
Diversification into commercial farming	100	41.3
Engagement in agricultural marketing	62	25.6
Personal savings	83	34.3
Borrowing from relatives	52	21.5

Source: Field Survey, 2016.   *multiple response

Constraints Faced by the crop farmers
The result in Table 8. shows that the major constraints faced by the respondents includes: high cost of inputs (76.4%), inadequate market linkages (65.7%), and inadequate credit facilities (57.4%), respectively. This finding is in agreement with Aniedu (2007) who posited that high cost of input is a constraint face by most farmers.

Table 8: Distribution of crop farmers based on their constraints

Constraints	Frequency*	Percentages	Rank
High cost of inputs	185	76.4	1st
Inadequate credit facilities	159	65.7	2nd
Inadequate market linkages	139	57.4	3rd
Problem of pest and diseases	119	49.2	4th
Small size of farmland	117	48.3	5th
Inadequate labour supply	98	40.5	6th
Inadequate extension services	93	38.4	7th
Poor yield of farm produce	84	34.7	8th
Inadequate information and communication	53	21.9	9th
Complexity of farm technology	41	16.9	10th
Small household size	19	7.9	11th

Source: Field Survey, 2016**signifies multiple response.**

SUMMARY, CONCLUSION AND RECOMMENDATION
Based on the empirical evidence from the findings of this study, it is concluded that majority of the farmers were married, educated, highly experienced and actively involved in crop production and most of the farmers were poor in the study area; poverty situation of the farmers shows that a little over half (50.8%) were poor in the study area. Strategies adopted by the farmers to combat poverty are mostly through diversification into commercial farming, increased personal savings and involvement in non-farming activities. High cost of inputs, inadequate credit facilities and inadequate market linkages were the major constraints faced by the crop farmers in the study area. It was recommended that farmers should form rotating saving

association to enable them have access to micro loan; rural crop farmer should be linked to the urban market through appropriate information channels such as extension agent and media to attract good value for their crops.

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