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POLAC INTERNATIONAL JOURNAL OF ECONS & MGT SCIENCE (PIJEMS)
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ANALYSIS OF POVERTY STATUS AND GAP AMONG SESAME PRODUCERS IN SUDAN SAVANNA, NIGERIA

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Abstract

The study analyzed the economics of sesame production and poverty status among sesame producers in Sudan Savanna, Nigeria. Primary data were collected from 270 selected sesame producers using multistage sampling technique across Kano, Katsina and Jigawa States and interviewed using structured questionnaire. Descriptive statistics and Foster, Greer and Thorbecke (FGT) model were used for data analysis. The results on socio-economic characteristics of producers revealed mean age of 43 years, average household size of 8 persons and a mean year of experience in sesame production of 8 years. The average farm size was 2.77 ha with an average annual income of ₦190,829.50. Result on analysis of the sesame producer's poverty status revealed a high poverty incidence of 91.11% in the region with Jigawa State having the highest incidence of 96.67%, followed by Kano state with 86.67% and Katsina state with 81.11%. It was concluded that poverty incidence was very high among sesame producers in Sudan savanna, Nigeria with Jigawa State having the highest incidence and gap. The study recommends that there should be more investment in sesame production enterprise by the sesame farmers to increase output and profit and consequently improving their poverty status. Effective extension services should be put in place to educate sesame farmers on improved production techniques and management practices for increased output. International development donors should intensify efforts of poverty eradicating by using the target approach.

Keywords: Poverty Status, Poverty Gap, Poverty Incidence, Sesame Production, Sudan Savanna.

Introduction

The agricultural sector employs more than 70% of the country's population as well as plays a vital role in the food security, poverty alleviation and human development chain in Nigeria. Agriculture also contributes over 40% to the country's GDP (CBN, 2014; World Bank, 2014). Sesame is an important component of Nigeria's agricultural export. Since its introduction into Nigeria, it has been regarded as a crop of significant importance (NAERLS, 2010). Sesame both benefits from a high price and a domestic/international market. Japan is the largest importer of sesame seeds while Nigeria is the largest exporter to Japan (NEPC, 2010). About 300,000 tonnes of sesame seeds were produced from about 26 States with largest producing States being Jigawa, Nasarawa, Benue and Taraba States. Other States producing sesame include; Kano, Kebbi, Bauchi, Kogi, Plateau, Adamawa, Kwara, Cross-River, Ebonyi, Niger, Gombe, Katsina, Yobe and Borno States Agro Nigeria, 2016). Regardless of these potentials, Nigeria's cash crop production subsector remained poor due to its dependence on small scale farmers who use unimproved technologies that generate only small income (World Bank, 2014). However, despite their unique and pivotal position, the small holder farmers belong to the poorest segment of the population and therefore, cannot invest much on their farms.

The survey report by NBS (2012) and World Bank (2014) showed that 69% of the population in Nigeria live in relative poverty and 61.2% on less than One US dollar ($) per day. The survey also revealed that poverty is especially higher in rural areas where majority of the population are resident and derive their livelihoods from agriculture.

Nigeria was considered one of the poorest countries in the world as it ranked 177th out of 186 poor countries of the world, with over 70% of its population being poor. Omonona, 2010, Oyekale, Adepoju and Balogun (2012), reported that poverty in Nigeria is a rural and regional phenomenon. Similarly, the World Bank report of 2014 stressed that poverty incidence in Nigeria was more in

rural areas and is characterized by poor basic facilities, food insecurity, poor electric power supply, inadequate clothing materials and obsolete farming practices and technologies (World Bank, 2014).

High poverty level is prevalent in a country where about 90% of the working adult population are engaged in agricultural activities as means of livelihood (Makama, Murtala & Abdu, 2011). The poorest groups eke out a subsistence living, but often go short of food, particularly during the pre-harvest period. The productivity of the rural population is also hindered by ill health, particularly HIV/AIDS, tuberculosis and malaria (IFAD 2012; Ogwimike & Akinnibosun, 2013). Generally, the poor are deprived, depressed and diseased social groups. The international community's determination to overcome poverty has been highlighted by the sustainable activities of the international development donors such as the United Nations (UN), the World Bank and the International Monetary Fund (IMF). Consequently, Series of poverty alleviation programmes have been initiated by past governments in Nigeria but in vain. The federal government of Nigeria has recognized that there is increasing level of poverty in the country, in spite of all the programmes implemented (Imevbore, 2012). Poverty exerts deleterious effect on the people's life and living (Falola, 2017). Sesame being a high value crop is suitable for production in Sudan savanna, Nigeria. The crop is widely cultivated and has an opportunity to boost rural incomes.

Problem Statement

Unaddressed poverty and crushing economic hardship experienced by citizens provoke reactions that can threaten social equilibrium and even disrupt the democratic experimentation in the country at large. Poverty is complex and has corrosive effects on humanity (Schiller, 2000; Sen, 1999; Harrison and Huntington, 2000). Also, the international community, the United Nation, the World Bank and the United States has set a target of reaching global zero poverty by the end of 2030 through alleviating poverty in every region of the world.

In Nigeria, poverty is especially severe in rural areas, where up to 80% of the population live below the poverty line, and social services and infrastructure are limited, in spite of the fact that the bulk of agricultural production takes place in rural areas. Rural poverty in Nigeria increased from 28.3% in 1980 to 69% in 2010 (Bolarin, 2010; Oladimeji, Damisa & Omokore, 2010). However, Poverty manifest in greater proportion of small-scale farmers in the form of low income and living standard, poor nutrition, poor housing and health (Oladimeji *et al.*, 2014).

The poor are often trapped in a vicious cycle of poverty in which without external intervention, the cycle will continue for generations and it is a trap that is very difficult to get out of. In Sudan savanna, there is comparative advantage of sesame seed production which has high-income generating potential; being a high value cash crop suitable for production in the region. The crop is widely cultivated, has an opportunity to boost rural incomes and receives widespread donor support as well. It is usually regarded as poverty alleviation crop (OLAM, 2006).

Sesame producers in Sudan savanna region of northern Nigeria are mostly small-scale farmers and often faced with the problem of low productivity as reported by (Usman, Ahmed & Omelehin, 2010) that sesame yields in Jigawa State can be increased by 48% with better management practices giving the existing technology. Although, poverty has no boundary, the incidence of poverty is much higher in the rural areas than in urban areas**.** In Nigeria, about 70% of the population live on less than $1.25 per day and poverty is mostly severe in the Northern part of the country (World Bank, 1997). Sesame producers are often not exploiting the full potentials of the enterprise where the export sector is being dominated by only few major exporters. However, studies conducted on sesame enterprise in the region was mostly concentrated in Jigawa State and focused mainly on productivity and profitability (Usman, Ahmed & Omolehin, 2010; Makama, Murtala & Abdu, 2011) with little emphasis and linkage with the poverty status of the producers.

As the federal government of Nigeria has recognized, there is increasing level of poverty in the country, despite all the programmes implemented to fight poverty (Imevbore, 2012). Information on the contribution of each region to total poverty can be used as a yardstick for allocating public resources to each region through training, capacity building, empowerment and institutional development so as to reduce or eradicate poverty. It is in view of the importance of the crop that this study seeks to provide information on the poverty status of sesame producers in Sudan savanna region of Nigeria.

Methodology

The study was conducted in Sudan savanna region of Nigeria and specifically in Kano, Jigawa and Katsina States of Nigeria. Kano State has a total projected population of 12, 198,682 inhabitants as at 2018; who are mostly Hausa and Fulani, with an annual growth rate of 3.3%. The climate of the study area is tropical dry climate with rainfall average of 600mm and average temperature of 29^0 c, giving a comparative advantage for the production of sesame. Crops like sorghum, millet, maize, rice, wheat, groundnut, cowpea, sesame, cassava and sweet potato flourish well (KNARDA, 2006). Air humidity is high during the wet season and very low during the dry season. Average temperature is 29^0C with minimum temperature occurring from November to February and highest temperature occurring in March and April (Olofin and Tanko, 2000). Over 50% of the inhabitants are farmers cultivating cereals, legumes and vegetables.

Jigawa State has a land mass of 22,210km^2 or 2.2 million hectares and lies between latitude10^0 57$^{'}$ and 13^0 03$^{'}$N and longitude 8^0 08$^{'}$ and 10^0 37$^{'}$E. It shares a common boundary to the North by Katsina State, Niger republic and Yobe State. To the East and South, the State is bounded by Bauchi State and to the west by Kano State. Jigawa has an average of about 700mm annual rainfall. Temperature of about 40^0C is common especially in the month of March to September and could be as low as 18^0C during the harmattan season (JARDA, 2006). The State has a projected population of 6,984,580 with an average growth rate of 3% (NPC, 2006). The state is considered to be an agricultural state as more than 90 percent of the working adults are engaged in agriculture as a means of livelihood. Major crops are millet, sorghum, maize, sesame, beans and rice. Crop production during rainy season is mainly for subsistence with farmers averagely cultivating about 2.5 hectares (JARDA, 2006).

Katsina State lies between latitudes 12^0 $47^1$to 13^0N and longitudes 8^0 $4^1$to $7^0$$4^1$E. It covers a total land area of about 24,971.215 square kilometers with estimated population of 5, 801,584 people as at 2006 national census (NPC, 2006) with a projected population of 7,251,980 as at 2018 at an annual growth rate of 3.34%. The State is bordered with Kaduna State to the South, Niger Republic to the North, Zamfara State to the West, Kano and Jigawa States to the East. The mean maximum temperature ranges from 27^{o}C in the rainy season to 37^{o}C in April/May. (NIMET, 2012). The average annual rainfall ranges between 550 mm in the north to 1000 mm in the southern part of the State and the pattern of rainfall is highly variable (Abaje, Sawa and Ati, 2014). Agriculture is one of the major occupations in the area. Farming and petty trading are the main pre-occupation of the people where the major crops grown in the State includes millet, sorghum, soybean, cowpea, sesame, maize and rice.

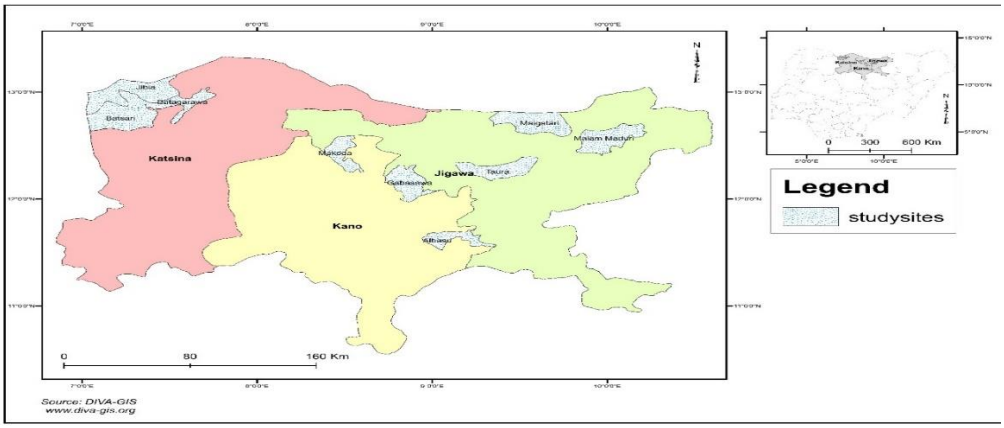

Fig. 1: Map of Nigeria showing study locations.

Sampling Technique and Sample Size

Multistage sampling technique was used for the study where 3 States; Kano, Katsina and Jigawa States within the Sudan Savanna region were selected purposively. This is due to the fact that they are the prominent and major sesame producing areas in Northern Nigeria. Based on the prevalence of sesame production enterprises, major producing locations were identified where three locations were selected purposively. In Kano State, Makoda, Gabasawa and Albasu were selected purposively as locations for the study while in Jigawa State, Mallam-madori, Maigatari and Taura were selected purposively. In Katsina State, the purposively selected locations were Batagarawa, Batsari and Jibia. a simple census was conducted in all the locations where about 2,700 sesame producers were identified and a total of 270 sesame producers were randomly selected across the locations as respondents for the study.

Data Collection

Data for the study was generated from primary source. The primary data were collected through the use of questionnaire which was administered to the selected respondents with the help of trained enumerators. Data collected from the sesame producers included information on the socio-economic characteristics of sesame producers such as age, sex, educational status, household size, marital status, years of experience and so on. Other forms of data collected include annual income of the respondents so as to ascertain their poverty status were also solicited. The data was analyzed using descriptive statistics and the FGT poverty model.

Foster, Greer and Thorbecke (FGT) Poverty Model

The general formula for the FGT Model is expressed as follows:

$$P\alpha = \frac{1}{n}\sum_{i=1}^{q}\left(\frac{z-yi}{z}\right)\alpha \quad \text{---------- (1)}$$

Where:

P = Poverty Index of sesame farmers.

n= Population under study.

q= Number of sesame farmers who are below the poverty line.

Z = Poverty line

yi= Income of sesame farmers

α = the parameter of poverty estimated which takes the value of 0, 1 and 2.

Poverty Gap Index (Foster, Greer and Thorbecke, 1984).

$$PG = \sum_{i=1}^{p}\left(\frac{z-yi}{pz}\right) = \frac{pz}{pz} - \frac{yp}{pz} = 1 - \frac{yp}{z} \quad \text{--------- (2)}$$

Where,

PG = Poverty Gap Index

Z = Poverty line (₦)

Y_i = Income of the sesame farmer (₦)

P = Number of poor sesame farmers (Number)

Y = Average income of the sesame farmers (₦)

Results and Discussion

The quantitative socio-economic characteristics of sesame producers examined and discussed here include age, gender, household size, marital status, years of experience, farm size and total annual income. The results are hereby presented in table 1.

Table 1: Quantitative Socio-economic Characteristics of Sesame Producers in Sudan savanna

State	Variables	Min	Max	Mean	SE
Kano					
	Age	23	70	43	1.08
	Household Size	1	32	8	0.56
	Farm Size	1	5	2.69	0.14
	Years of experience	1	22	5.08	0.40
	Total Annual Income from Sesame production (₦)	30,000.00	800,000.0	152,277.0	4.09
Katsina					
	Age	22	75	41	1.23
	Household size	2	34	8	0.62
	Farm Size	1	5	2.42	0.15
	Years of experience	1	21	7	0.46
	Total Annual Income from Sesame production (₦)	32,000.00	896,000.0	272,596.16	4.32
Jigawa					
	Age	20	88	46	1.18
	Household size	2	31	9	0.58
	Farm Size	1	5	3.19	0.15
	Years of experience	2	40	13	0.78
	Total Annual Income from Sesame production (₦)	28,000.00	560,000.00	147,618.33	4.06
Pooled Result					
	Age	20	88	43	0.68
	Household size	1	34	8	0.33
	Farm Size	1	5	2.77	0.09
	Years of experience	1	40	9	0.40
	Total Annual Income from Sesame production (₦)	28,000	896,000.00	190,829.50	3.40

Source: Field Survey, 2015

The results indicated that mean age of the sesame producers in the studied locations was 43 years in Kano State, 41 years in Katsina State, 46 years in Jigawa State and 43years for the region as shown in Table I. The results indicated that majority of the sesame producers were middle age which implies that sesame producers were in their active and productive ages. This is due to the fact that the ages of the sesame producers fall within the age bracket defined by FAO, 2003 as economically productive in a society. This has an implication on sustainability of the enterprise as experience is passed on from generation to generation having the ability to carry out farming activities. This agrees with the findings of Tiamiyu *et. al.*, 2014 who found mean age of sesame producers to be 42 years indicating strong potential for labour required for sesame production.

Results presented in Table I revealed that the mean household size was 8 in the region while in Kano, Katsina and Jigawa states, the mean household sizes were 8, 8 and 9, respectively indicating a higher household size in Jigawa state. Household size may have a positive effect on sustainability of sesame production in the studied location. On the other hand, large household size may reduce the economic welfare of the household especially when the proportion of the dependents is high, the small size of their farm may limit productivity. The large household size of 8 found in this study was relatively higher than the international standard of 1-5 persons per household. Tiamiyu *et al.* (2013) also found a large mean household size of 10 stating that need for hired labour is minimized.

Farm size plays a vital role of determining land utilization in farming community. From the results in Table I, sesame farmers in Sudan savanna owned land holdings of various sizes ranging between 1-5 hectares with a mean of 2.77 hectares. Similarly, sesame farmers in Kano, Katsina and Jigawa States have mean farm sizes of 2.69 hectares, 2.42 hectares and 3.19 hectares implying that sesame production in the study locations was on small scale and that more land area was dedicated to sesame production in Jigawa State than Kano and Katsina States; but with little variation in the farm sizes of the respondents in the study area. This is because sesame production was started in Jigawa State much earlier than Kano and Katsina States due to the activities of OLAM Nigeria limited where most of the sesame produced were purchased by OLAM. The result is in line with the findings of Tanko and Kpange, 2014 who also found that majority of sesame producers in Niger State had farm size ranging between 0.1-5.0 ha in scattered in different locations indicating that most of the sesame farmers are producing on a small-scale basis. This may be probably due to the limited access to land because land for farming was mostly acquired through inheritance.

Result presented in Table 1 showed that the mean years of experience was 8 years with some respondents having up to 40 years' experience. The results further revealed that mean years of experience in Kano, Katsina and Jigawa States are 5, 7 and 13 years, respectively showing more years of experience in Jigawa State because sesame was introduced to Jigawa State before Kano and Katsina States. This indicates that majority of the respondents have adequate years of experience in sesame production which implies that there will be sustainability of the enterprise through transfer of farming skills to younger generation. This agrees with findings of Abu, Aba and Opachu, 2011 who found a high average year of experience up to 13 years.

The results in Table I revealed that the mean total annual income of the producers from sesame production in Sudan savanna was ₦190,829.50 In Kano, Katsina and Jigawa States, while the mean total annual income from sesame production was ₦152,277.0, ₦272,596.16 and ₦147,618.33 respectively. This indicates that production figures for sesame in terms of quantity was relatively low in the region which ultimately translate into the low income obtained.

The qualitative socio-economic characteristics of sesame producers examined and discussed here include gender, marital status, level of education, source of finance and membership of cooperative association. The results are hereby presented in Table 2. Sesame production in the study area was found to be male dominated showing 91.5% of the sesame producers were males with only 8.5% being females in the region. In Kano, Katsina and Jigawa States, 80%, 95.6% and 100% were males while 20% and 4.4% in Kano and Katsina States were females with no female participation in Jigawa State. This may be due to the fact that Kano State is a centre of commerce where both males and females participate in income generating activities to sustain themselves. Traditionally, farming enterprise is dominated by men all over the Sudan savanna probably due to the nature of the activities; involving moving out of the house to perform rigorous farming activities which is not suitable for women. Also, culture and tradition in the area usually restricts women from undertaking activities outside their homes of which sesame production is one. This also agrees with findings of Tiamiyu et. al., 2014 and Umar,

Okoye and Agwale, 2011. Results of the study presented in Table 2 revealed a high proportion of the respondents being married. From the pooled results, 98.9% were married while in Kano, Katsina and Jigawa States, 98.9%, 97.8% and 100% of sesame producers were married. This indicates the importance of marriage in the study area and implies that majority of the respondents were responsible men and women, can take technical decisions on their own and put more effort to sustain family demand. This agrees with the findings of Abu, Abah and Opachu, (2011) and Rahman, Alamu and Haruna, (2011).

The results of this study indicated that sources of finance for majority of the respondents was personal savings. From the pooled results, it was shown in Table 2 that 97.4% had personal savings as their source of financing sesame production while 34.2% sourced capital from relatives/friends and about 7.4% sourced capital from banks. Similarly, results from Kano, Katsina and Jigawa States showed the same scenario with personal savings being the source of finance for 93.3% of the sesame producers in Kano State, 100% in Katsina State and 98.9% in Jigawa State. This implies that personal savings was the predominant source of finance where access to finance from formal financial institutions like banks are very limited to the sesame producers. This is because of the weak performance of the cooperative associations in these locations where the sourcing of funds as a group was practiced. This agrees with the findings of Sidi *et. al.,* 2014 who stated that 70% of the farmers had no access to formal credit. Also, Oladimeji *et. al.,* 2014 reports that access to formal credit is a major constraint to farmers in Nigeria. This situation ultimately results in low level of sesame production in the area since capital was not adequate to enhance sesame production.

Table 2: Qualitative Socio-economic Characteristics of Sesame Producers in Sudan savanna

Variables	Kano	Katsina	Jigawa	Pooled
Sex				
Male	72(80.0)	86(95.6)	89(98.9)	247(91.5)
Female	18(20.0)	4(4.4)	1(1.1)	23(8.5)
Marital Status				
Married	89(98.9)	88(97.8)	90(100)	267(98.9)
Single	1(1.1)	1(1.1)	_	2(0.7)
Widowed	_	1(1.1)	_	1(0.4)
Sources of Finance				
Personal Savings	84(93.3)	90(100)	89(98.9)	263(97.4)
Relatives and Friends	13(14.6)	43(47.8)	36(40.0)	92(34.2)
Bank	16(18.0)	2(2.2)	2(2.2)	20(7.4)
Traditional Money Lenders	2(2.2)	1(1.1)	90(100)	3(1.1)
Cooperative	9(10)	6(6.7)	3(3.3)	9(3.3)
Association Membership				
Member				
Non-Member	79(87.8)	63(70)	79(87.8)	221(81.9)
Educational Level	11(2.2)	27(30)	11(2.2)	49(18.1)
Quranic	70(77.8)	60(66.7)	78(85.7)	208(77.0)
Primary	12(13.3)	12(13.3)	4(4.4)	28(10.4)
Secondary	4(4.4)	9(10.0)	5(5.5)	17(6.3)
Tertiary	1(1.1)	9(10.0)	4(4.4)	16(5.9)

Source: Field Survey, 2015

Percentages more than 100 due to multiple response.

Results in table 2 showed that majority of the producers belong to cooperative organization. From the results, 97.4% were members of cooperative organizations in the region while only 2.6% were not. However, results from Kano, Katsina and Jigawa States indicated that 93.3%,

70% and 87.8% were members of cooperative organizations. This implies that majority of the sesame producers belong to one agricultural cooperative organization or the other and there were more members of cooperative organizations in Kano State followed by Jigawa State and least in Katsina State. Household heads who take farming as their primary occupation usually participate in indigenous savings and micro credit financing to as to boost their farming. This agrees with the view of Sidi *et. al.,* 2014 who reported that despite belonging to cooperative organizations, the cooperatives are not strategized to assist farmers in input procurement and sales of output.

Table 2 showed that majority (77%) of the sesame producers had obtained Quranic education only, 10.4% had obtained primary education, and 6.3% had obtained secondary education while 5.9% had obtained tertiary education in Sudan savanna. Result from Kano State indicated that 77.8% of sesame producers had obtained Quranic education only, 13.3% had obtained primary education, and 4.4% had obtained secondary education while 3.3% had obtained tertiary education. In Katsina State, 66.7% had obtained Qur'anic education only, 13.3% had obtained primary education, 10% had obtained secondary education and 9(10%) had obtained tertiary education. In Jigawa State, 85.7% had obtained Qur'anic education only, 4.4% had obtained primary education, and 5.5% had obtained secondary education while 4.4% had obtained tertiary education. This shows that there was some level of formal education among sesame producers in the region but with higher level in Katsina State with up to 10% each of the sesame producers attaining secondary and tertiary level of education. This implies that although level of formal education was low, sesame producers in Sudan savanna were literate and had obtained one form of education or the other.

The low level of formal education is very common among rural farmers in the north due to inadequate awareness on the importance of formal education. On the other hand, poverty which is widely prevalent in the rural areas of northern Nigeria might have contributed to poor educational status of rural inhabitants to inability to finance formal education. However, this low level of formal education in the region could influence effective and efficient utilization of credit facilities, adoption of improved production technology and improved marketing system. This agrees with the findings of Nyiatagher and Ocholi, (2015) who stated that majority of farmers are educated in one way or the other but with low level of formal education.

Table 3: Poverty Status of Sesame Producers in Sudan savanna

Variables	Kano State		Katsina State		Jigawa State		Pooled Result	
	Poor	Non-Poor	Poor	Non-Poor	Poor	Non-Poor	Poor	Non-Poor
Poverty Incidence (P_0)	78	12	73	17	87	3	246	24
Percentage	86.67	13.33	81.11	18.89	96.67	3.33	91.11	8.9
Poverty Depth (P1)	0.66	0.528	0.577	0.957	0.751	0.279	0.74	0.565
Poverty Severity (P2	0.512	0.655	0.408	2.225	0.607	0.083	0.594	0.879
Poverty Gap	2,067.32		1,690.89		2,405.84		2,054.69	

Source: Field Survey, 2015

The sesame farmers' poverty status in the three States were analyzed using the three indicators; prevalence of poverty (P0), poverty depth (P1) and severity of poverty (P2). As shown in Table 3, the prevalence of poverty among the sesame farmers was 86.67 in Kano State, 81.11% in Katsina State and 96.67% in Jigawa State with income level below the poverty line. For the pooled result, the poverty incidence was 91.11% of the sesame farmers having income below the poverty line. The poverty depth was 0.66 for those whose average income was below the poverty line in Kano State, 0.577 in Katsina State and 0.751 in Jigawa State. For the pooled result, the poverty depth was 0.74 for the sesame farmers in the region. This depth represents the percentage of income required to bring poor households below the poverty line up to the poverty line. Even for the non-poor, they are not far above the poverty line with non-poor sesame farmers in the region as can be seen from the table having a depth of 0.279.

The poverty depth allows the analysis of the inequality among the poor sesame farmers whereby it shows when the poor are getting poorer or better off. The severity of poverty index was 0.512 in Kano State, 0.408 in Katsina State and 0.607 in Jigawa State respectively, while for the pooled results, the severity was 0.594. This implies that poverty is really severe in Sudan savanna as a region but more severe in Jigawa State. The severity of poverty index represents the poorest among the poor farm households who require the attention of policy makers in the provision of health care services, clean water and income generating activities. The incidence of poverty also agrees with the geography of poverty whereby it was stated that most of the Nigeria poor live in the Northern part of the country with Jigawa State having the highest incidence and that this rising trend is likely to continue (NBS, 2012).

Comparing these statistics, it shows that the poverty incidence obtained for sesame farmers sampled for this study is highest in Jigawa State (96.67%) with the pooled result indicating 91.11% which was much higher than the national statistics. The result is also in agreement with the findings of National Living Standard Survey (NLSS) in 2006 about states with the highest poverty incidence; where it was reported that Jigawa State was identified as the state with the highest poverty incidence (P0) of 95.7%. Policy makers need to know what is happening so that policies and programmes for poverty alleviation can be tracked and targeted appropriately. Other researchers also reported high levels of prevalence, depth and severity of poverty in their studied locations (Odion, 2009; Omonona, 2010 and Adekoya, 2014).

Conclusion and Recommendations

There was high level of poverty in the region as indicated by the high poverty incidence and gap with Jigawa State having the highest incidence and gap. The poverty gap which gives the aggregate amount of money needed to bring the poor sesame producers out of poverty per household per day was found to be ₦2,054.69 in Sudan savanna, Nigeria. The study recommends that there should be more investment in the sesame production enterprise by the sesame farmers to increase output and profit and consequently improving their poverty status. Effective extension services should be put in place to educate sesame farmers on improved production techniques and management practices for increased output. Also, external intervention should be provided by governments, philanthropists and charity organizations (health, feeding, shelter and basic education) and by getting the youth and other household members to be engaged in some kind of economic activity to generate some income. International development donors should intensify efforts of poverty eradicating by using the target approach.

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