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## Youth Involvement in Sweet Potato Production in Abia State, Nigeria

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## Abstract

*The study investigated youth involvement in sweet potato production in Abia State, Nigeria. The study made use of a multi-stage procedure in selecting 120 youth. Primary data were collected with a structured questionnaire and analysed with frequency, mean count, standard deviation and multiple regression. The results revealed that the average yield produced was 117.42kg of potato tubers which is equivalent to N46,968.00. A grand mean of 3.20 affirmed that the youths were highly involved in sweet potato production. Some of the constraints militating against youth involvement in potato production were poor motivation (100.0%), poor access to credit (100.0%), and poor access to information from extension agents (100.0%), amongst others. Education (5%), house size (5%), farming experience (5%), and income (5%) significantly influenced the level of youth involvement in sweet potato*

*production. Youth were highly involved in potato production. The government through the Central Bank of Nigeria should ensure youths have access to credits and grants for arable crop production.*

## **Introduction**

Nigeria, farming population is aging. It is practically impossible for this aged generation dominating agricultural sector to deliver the expected productivity to meet food needs of the ever-growing population. The reliance on agriculture for food production and food security at domestic, regional and global level depend on youth productive force. Youth have vital role to play in agricultural enterprises and rural development” (Odhiambo, 2012). According to Muthee, (2012), outh are not largely involved in agricultural enterprises due to the fact that agriculture as a career choice is burdened with misperceptions and a lack of information and awareness. Agriculture has huge and diverse opportunities potentials that cannot only transform the national economy but also tremendously impact the personal lives of the farmers particularly the youth. Nigeria, farming population is aging. It is practically impossible for this aged generation dominating agricultural sector to deliver the expected productivity to meet ood needs of the ever-growing population.

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The observed global increase in youth population and unemployment has become a source of concern and currently attracts considerable attention in many discussions on international development (ILO, 2020). The National Youth Policy (2019) defines youth as Nigerian citizens between 18 and 35 years old. With a national population of about 200 million, Nigeria is the most populated country in Africa and has a high proportion of young people and an increasing rate of youth underemployment and unemployment (Kanu et al 2019).

Available evidence suggests an ageing farming population in Nigeria, with an average age of 47 years and a life expectancy of 47-50 years in 2018 (NBS 2018). In

2019, the national unemployment rate was 33.7 percent with the youth accounting for more than 75 percent (NBS, 2020). Increased involvement of youth in agricultural activities will help reduce the problems of the ageing farm population and increasing youth unemployment

Due to limited jobs, youth unemployment continues to be one of the main challenges affecting Nigeria politically, economically, and socially. The NBS (2020) reported that a substantial proportion of the young people who graduate annually and who are unemployed usually go for jobs that intensify their likelihood of being underemployed. Consequently, to find a lasting solution to this problem, youth unemployment has become a vital component of the recent agricultural policy agenda of the Federal Government of Nigeria. The several ongoing debates about youth unemployment target agriculture as the primary sector to count on to resolve these issues.

Nigerian farming population is ageing and the participation of youths in agriculture is indispensable in delivering the expected productivity to meet the food security needs of the ever-growing population (Yusuf, 2018). However, the problem with this is that the younger generation is not interested in farming. The age and low level of education of average Nigerian farmers correlate with their aversion to risks associated with the adoption of innovations and hence the very low productive capacity. In the opinion of many, getting youths to take up farming seems a possible panacea to the problem.

Youths represent the most active segment of the population and the engine that does the most productive work of society (Kanu et. al., 2019). The youths have also been identified as constituting the major resource base for any country which wants to embark on any meaningful agricultural and rural development projects (Onuekwusi, 2019). Youths have been part of the overall agricultural development process in Nigeria because of the immense contribution of agriculture to the economy. The active participation of youths in various agricultural activities like vegetable production, livestock husbandry, arable farming and crop processing and marketing in different parts of the country has been reported by Onuekwusi (2019). The participation of youths in agriculture correlates to their rural background which makes them well suited for professional and technical work in agriculture.

Sweet Potato is an important food and feed crop in Sub-Sahara Africa and ranks fourth after maize, bananas and cassava. Sweet potato is one of the most staple carbohydrate foods in Sub-Africa (FAOSTAT, 2018). It is highly adaptable to relatively marginal soils and erratic rainfall, has high productivity per unit of land and labour, and guarantees some yield even under the most adverse conditions. Specifically, sweet potatoes can be grown two to three times a year with supplementary irrigation.

Despite the youth's rich rural life, farming background and experience, rural youths are yet to fully and productively participate in the development of the nation's agricultural sector. This is related to the dearth of viable institutional frameworks for mobilizing, developing and channelling the unique abilities, experiences and aspirations of rural youths towards agriculture. In the same vein, because traditional agriculture is based on hoe and cutlass, subsistence agriculture holds no interest or

appeal for young people wanting to look on neither the land nor do they have any intention of following their parents into poverty.

The scenario was worsened by the emergence of petroleum as a foreign exchange earner, thereby igniting a chain of reaction that led to the total neglect of the development of agriculture at the grassroots level. The consequential effect of the neglect of the agricultural sector is the high rate of rural-urban drift of able-bodied young men and women and unemployment, youths' restiveness and hooliganism. The trend is that of an obscured participation of youths in agricultural productive activities especially in sweet potato production. Although sweet potato as a crop is consumed in all parts of the country, there seems to be a dearth of information on youth involvement in sweet potato production in Abia State, Nigeria.

The broad objective of this study was to assess youth involvement in sweet potato production in Abia State, Nigeria. The specific objectives were to:

1. ascertain the level of youth involvement in sweet potato production;
2. estimate the quantity of sweet potato produced by the youth;
3. identify constraints to youth involvement in sweet potato production

### **Hypothesis**

There is no significant relationship between socio-economic characteristics of the youths and their level of involvement in sweet potato production.

### **Methodology**

The study was conducted in Abia State. Abia State lies within Longitude 7° 23'E and 8° 2'E and Latitude 4° 47'N and 6° 12'N. Abia State is made up of 17 local government areas and three agricultural zones namely, Aba, Ohafia and Umuahia zones.

The study made use of a multi-stage, random sampling procedure in selecting 120 respondents. In the first stage, the three agricultural zones of the state were selected for the study. In the second stage, the study made use of random sampling techniques to select (two) local government areas each from the three agricultural zones of the state making a total of six LGAs. In the third stage, a simple random sampling technique was used to select three (3) autonomous communities each from the six LGAs making a total of twelve (12) autonomous communities. Finally, the fourth stage involved a random selection of ten (10) youths each, from the twelve (12) autonomous communities, making a total of one hundred and twenty (120) respondents as the sample size for the study.

Primary data for the study were collected through the use of a questionnaire. The data collected for the study were analysed with percentage, mean count and standard deviation multiple regression

The quantity of sweet potato output was estimated in kilograms. To ascertain the level of youth involvement in sweet potato production, a 4-point Likert-type rating scale of very often (4), often (3), rarely (2) and never (1) with a benchmark mean of 2.50. The formula to compute the mean count to be used in this study is specified below. Constraints to youth involvement in sweet potato production were measured using frequency and percentages.

The hypothesis of the study was tested using a multiple regression model. This is expressed implicitly thus;

$$Y = f(X_1 X_2 X_3 X_4 X_5 X_6 X_7, X_8 X_9 X_{10} X_{11} X_{12}, X_{13}, e_i) \dots\dots\dots (1)$$

Where,

Y = Level of youth involvement in sweet potato production (mean scores)

X<sub>1</sub> = Age (years)

X<sub>2</sub> = Education level (Number of years spent in school)

X<sub>3</sub> = farm size (ha)

X<sub>4</sub> = farmers experience (years)

X<sub>5</sub> = household size (number of persons)

X<sub>6</sub> = farm output (km)

X<sub>7</sub> = cost of labour (₦)

X<sub>8</sub> = farm income (₦)

e = error term

## Results and Discussion

### Quantity of Sweet Potato Output Produced

Table 1 shows the average quantity of potatoes produced by youth farmers. The average the youth produced 117.42kg of potato tubers which is equivalent to N46,968.00 in the last planting season. The result implies that the youth output from sweet potato production seems to be relatively low. This finding is plausible in that the youth have limited access to land for farming, and credit for inputs and are usually indifferent to agricultural activities. Limited access to land/small farm size decreases agricultural productivity and hamper farmer's technical, allocative and resource use efficiency as well as reduces access to credit and other farm inputs. According to Sakketa, and Gerber, (2020), youth farmers in developing countries are predominantly rural peasant farmers whose farm size is small.

**Table 1: Average quantity of sweet potatoes produced by youth farmers**

Parameters	Average Quantity (kg)	Unit price	Sales (Naira)
Sweet potato tubers	117.42	400	46,968.00
<b>Total</b>	<b>117.42</b>		<b>46,968.00</b>

**Source:** *Field Survey, 2023*

### Level of Youth Involvement in Sweet Potato Production

Table 2 shows the grand mean of 3.20 which confirmed that the youths were highly involved in sweet potato production in the study area. This implies that the youth in the study area were involved in the various agronomic practices of sweet potato production. The study is in tandem with the findings of Nwaobiala, et al (2020) that youth highly participated in sweet potato production in Abia State Nigeria.

**Table 2: Level of youth involvement in sweet potato production**

<b>Production practices</b>	<b><math>\bar{x}</math></b>	<b>Std. D</b>
Sight selection	3.29	0.481
Bush clearing	3.28	0.519
Land preparation	3.27	0.455
Land Tilling	3.33	0.505
Planting	3.00	0.490
Weeding	3.38	0.526
Fertilizer application	3.21	0.477
Harvesting	2.93	0.401
Storage	3.08	0.511
Total mean	<b>28.77</b>	
Grand mean	<b>3.20</b>	
Sample size	<b>120</b>	

**Source:** *Field Survey, 2023*

### **Constraints to Youth Involvement in Sweet Potato Production**

Table 3 shows that the constraints militating against youth involvement in potato production were poor of motivation (100.0%), poor of access to credit (100.0%), poor access to information from extension agents (100.0%), poor attendance to workshops and seminars (97.50%), incompetence in handling ICT gadgets (86.60%), poor access to information from experienced contact farmers (85.00%), small farm size (80.83%), difficulty in applying technology (78.33%), inadequate government commitment in providing appropriate agricultural policies to enhance youth involvement (75.00%) amongst others. The frequency of the constraint scores for the farmers in sweet potato farming practices indicated they encountered several constraints. Tewe et al., (2022) posited that the majority of these constraint factors outlined affected sweet potato farming in Africa. Nwaobiala et al (2020) equally found several similar constraints militating against youth participation in sweet potato production.

**Table 3: Constraints to youth Involvement in sweet potato production**

<b>Constraints</b>	<b>Percentage (n =120)</b>
Poor access to information from extension agents	100.00
Incompetence in handling ICT gadgets	86.60
Poor functioning ADP in your locality	55.80
Poor financial status	50.80
Poor access to information from experienced contact farmers	85.00
Poor attendance to workshops and seminars	97.50
Poor educational background	75.00
Poor of access to credit	100.00
Farm size is small	80.83
Difficulty in applying technology	78.33
Poor of technical support	50.00
You were afraid of taking risk	58.33
Poor of access to land	72.50
Poor of motivation	100.00
Inadequate government commitment in providing appropriate agricultural policies to enhance youth involvement	75.00
Inadequate finance/grant/loan	82.50

**Source:** *Field Survey, 2023*

**\*Multiple responses recorded**

#### **Determinants of Youth Involvement in Sweet Potato Production**

Table 4 shows the four functional forms of multiple regression tried and Double-log functional form was selected based on the magnitude of the  $R^2$  value, number of significant variables and F- ratio. The  $R^2$  (coefficient of multiple determination) value was 0.765 which implied that 76.5% of the total observed variations in the dependent variable (Y) were accounted for while 23.5% of the variation were due to error. F– statistics was significant at 1% indicating the fitness of the model used for the analysis.

The coefficient of age was statistically significant at 5% and negatively related to youth involvement in sweet potato production. The result is in agreement with Maduka, Onu, & Nwago (2021) who found age to be negatively related to output indicating that the farmer's output decreases as the farmer's age increases.

The coefficient of education was positively related and statistically significant at 5%. The result implied that an increase in the level of education of the respondents will lead to a corresponding increase in the level of involvement in sweet potato production. The result conforms to the *a priori* expectation that education enhances farmers' awareness, and access to information as well as enhances technical and managerial know-how.

The coefficient of house size was positively related and statistically significant. This result implies that an increase in household size will result in a corresponding increase in the level of involvement in sweet potato production in the study area. The increase in household size suggests that more family labour would be readily available since relatively large household size is an obvious advantage in terms of labour supply, where the wage rate is relatively costly (Onu, et al., (2022)

The coefficient of farming experience was significant and positively related to the level of involvement in sweet potato production. The result implied that a unit increase in the years of farming will lead to an increase in the level of involvement in sweet potato production of the respondents. In agreement with this result, Norita et al., (2022) also found that farming experience was one of the determinants of farmers engagement in sweet potato production in Uganda.

The coefficient of income was statistically significant and positively related to the level of involvement in sweet potato production. This implies that a unit increase in income will lead to an increase in the level of involvement in sweet potato production. This may be attributed to the fact that an increase in income will enable the farmers to adopt new marketing strategies, buy new equipment, ease transportation and improves investment into the enterprise. This is in tandem with the findings of Ayodeji et al., (2019) that income influences farmers' involvement in sweet potato production.

**Table 4: Influence of socioeconomic characteristics on level of involvement in sweet potato production**

<b>Variables</b>	<b>Linear</b>	<b>Exponentia l</b>	<b>Semi-Log</b>	<b>+ Double Log</b>
(Constant)	-2338.142 (-0.032)	8.980 (9.566)***	103387.027 (4.714)***	11.173 (4.507)***
Age	-194.886 (-0.255)	0.007 (0.681)	-37351.323 (-0.972)	-.773 (-1.779)*
Education	3244.229 (1.805)*	0.064 (2.501)**	-34888.386 (1.151)	1.149 (3.355)***
Household size	-302.356 (-0.122)	0.005 (0.172)	1376.132 (0.106)	.068 (3.461)***
Farming experience	1950.902 (1.983)**	0.010 (0.832)	14972.501 (4.160)***	.089 (3.767)***
Monthly income	0.422 (2.071)	1.823E-6 (0.705)	474.305 (2.037)**	.113 (5.768)***
Farm size	945.149 (0.252)	.025 (-0.048)	-22358.072 (-1.090)	0.195 (-0.907)
Farm output	246.548 (0.152)	0.011 (1.537)	1613.220 (0.055)	0.188 (1.611)
Cost of labour	9.592 (8.690)***	0.002 (3.570)***	420.526 (1.662)	0.003 (0.033)
<b>R-Square</b>	<b>0.685</b>	<b>0.655</b>	<b>0.616</b>	<b>0.765</b>
<b>R Adjusted</b>	<b>0.618</b>	<b>0.609</b>	<b>0.597</b>	<b>0.733</b>
<b>F – ratio</b>	<b>14.710***</b>	<b>11.711***</b>	<b>12.27***</b>	<b>16.144***</b>

Field Survey, 2023 Key: \* Significance at 10%, \*\* Significance at 5%, \*\*\* Significance at 1% \*\*\*, + = Lead Equation and the values in bracket are the t-value

### Conclusion and Recommendations

The youths were highly involved in sweet potato production even though their output was relatively low. The level of youth involvement in sweet potato production was positively influenced by education, household size, farming experience and income. Constraints such as Poor motivation, Poor access to credit, poor access to information from extension agents, and poor attendance to workshops and seminars inhibited youth involvement in sweet potato production.

Government should adequately implement policies that encourage youth involvement in agriculture. Inadequate government commitment to providing

appropriate agricultural policies to enhance youth involvement remains one of the major factors limiting youth involvement in potato production.

Extension agents should provide the necessary information, technical support and advisory services to youth farmers. Poor access to information from extension agents weakens the participation of youths in sweet potato production.

Government at all levels should enhance the functional capacity of agricultural development programmes. This will enhance their capacity to provide the necessary services to farmers especially the youth in the study area.

Government through the Central Bank of Nigeria should ensure youths access to credits and grants for arable crop production. Inadequate capital and poor access to credit from credit institutions are major reasons why farmers still operate at subsistence level access to credit have positive influence on adoption of technologies.

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