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LEVERAGING YOUTHS TOWARDS INCREASING YAM PRODUCTION IN DELTA STATE, NIGERIA

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Abstract
The study investigates leveraging youths towards increasing yam production in Delta State, Nigeria. The study was carried out in Delta State, Nigeria. The population of the study consisted of all youth yam farmers. The study selected 200 respondents, using multistage sampling procedures. Primary and secondary data were collected. Analysis of data was done with descriptive and inferential statistics. The findings showed that there was a steady decrease in yam production in Delta State, Nigeria, between 2019 and 2023. Among the reasons were source of income (mean=3.61), self-reliance (mean=3.51) and increased family food supply (mean=3.44). production were Inadequate access to credit (mean=3.21), shortage of land and it high cost (mean=3.12), insecurity (mean=3.42), stealing (mean=3.35) and Labour-intensive activities of yam production (mean=3.22. Youth involved in yam production are in their agriculturally productive age, which should be capitalized on to boost yam production in the study area. The government and nongovernmental organizations should provide insensitive to the youth to be interested and fully involved in yam production.
***Keywords**: Leveraging, youths, yam, production, increasing.*

1.0 Introduction

It is estimated that the world will have 9.7 billion people by 2050, which puts a lot of pressure on the agricultural sector to supply the growing food demand (United Nations, 2019). At the same time, the agricultural labour force is aging, and a large number of farmers are approaching retirement because of old age. This population change, along with urbanization and the attraction of non-agricultural jobs, has led to an increasing generation gap in the agricultural industry (White, 2020). Root and tuber crops such as yam are the backbone of food security as they provide food and income to millions of people in developing countries (Mondo et al., 2024). Engaging and empowering youths in agricultural production is very imperative, especially yam production, not only for addressing the labour shortage in yam farming but also for increased food supply, fostering innovation, adoption of climate-smart agriculture and sustainable practices, as well as guarantee intergenerational transfer of traditional knowledge on yam production.

Leveraging youth towards increasing yam production and creating an enabling environment, could enable Delta State of Nigeria unlock the potential of their youth population, driving sustainable agricultural development, increasing food supply, fostering economic growth and agribusiness as well as contributing to global food security. However, numerous and challenges seen to discourage youth from pursuing careers in agriculture, such as negative perceptions, limited access to resources, lack of infrastructure and support services, limited opportunities for entrepreneurship and value addition (Engel, 2017: Ewobor (2024)).

The current state of youths' involvement in yam production and the whole agriculture is generally low in Africa. According to Food and Agriculture Organization (FAO, 2014), the average

age of farmers in the world was approximately 60 years, which means that young people are not interested in agriculture as a career (FAO, 2014). This is a worrying trend because yam is a significant staple crop in Nigeria and in certain other nations, In addition to the favourable conditions that have been given to yam production to thrive in Delta State, there are a lot of youths who abandon rural areas to go to urban areas in search of jobs in other sectors of the economy that are already saturated. The young people have energy and strength, which can be well used to produce meaningful yams and generate sources of income to the employed and unemployed youths. Yams is major staple crop, which is important source of dietary carbohydrates, proteins, vitamins and essential minerals (Mondo et al., 2024).

Yam production is facing a significant challenge in attracting and retaining young people, Yam being an important staple food is unable to meet the demands of the increasing population of Delta State, Nigeria due to young people increasingly opting for other economic activities perceived to be more lucrative and prestigious. This is a trend that endangers sustainability and productivity of yam in the long run. There were studies that had been conducted on youth in agriculture but none had been conducted on leveraging youths to boost production of yams. Therefore, the research was conducted with the primary aim of offering a significant chance to produce empirical evidence that can be used to inform and shape the development of more effective and evidence-based policies and interventions to increase youth engagement and interest in the production of yam.

2.0 Objectives of the study

The broad objective of this study was to investigate leveraging youths towards increasing yam production in Delta State, Nigeria. The specific objectives of the study were to:

i. ascertain the output of yam in the study area from 2019 to 2023;
ii. identify reasons for youth involvement in yam production in the study area;
iii. determine ways of increasing youth engagement in yam production in the study area; and
iv. identify constraints to youth participation in yam production in Delta State, Nigeria.

3.0 Methodology

The study was carried out in Delta State. The State is located between longitudes $5^0$00' and $6^0$45' East and the latitudes $5^0$00' and $6^0$30' North of the equator. The State possesses a broad coastal strip that was intersected by rivulets and streams, which were a part of the Niger Delta. Delta State is made up of twenty-five (25) Local Government Areas and classified into three (3) agricultural zones namely, Delta North, Delta Central and Delta South. The climate of the State is tropical with two seasons, dry and wet season. The dry season is between December and March and the wet season is between March and November. The rainfall in Delta Sate is approximately 266.5cm and 190cm in the coastal regions and Northern fringes of the State, respectively. The temperature is between 20^0C - 34^0C, with an average temperature of 30^0C (80^0F). Delta State is blessed with fertile soil which makes it an important producer of food and cash crops. Delta State is a producer of rubber, oil palm, yam, cassava, maize, plantain and citrus.

The population of the study consisted of all youth yam farmers in Delta State. The selection of 200 respondents was done through multistage sampling procedures. Delta North agricultural zone was purposively selected for the study became the yam production center of Delta State. There are nine (9) Local Government Areas (LGAs) in Delta North agricultural zone. Among the nine (9) LGAs five (5) LGAs that produce yams intensively were purposely chosen namely; Ika south, Ika north east, Aniocha south, Aniocha north and Ndokwa west. Subsequently, three (3) farming communities were randomly selected in each of the Five (5) LGAs that were selected, which made a total of Fifteen (15) communities. Afterwards, ten percent (10%) of youth yam farmers were picked at random in each of the Fifteen (15) communities, to form the sample size of 200.

Table 1: Sample Size Selection plan

Agricultural Zone	Local Government Areas	Rural Community	Sampling frame	Sample Size
Delta North	Ika South	Abavo	265	26
		Alihagu	98	10
		Emuhu.	108	10
	Ika North East	Mbiri	188	18
		Igbodo,	153	15
		Idumesah.	76	7
	Aniocha South	Ashama	195	19
		Ubuluku,	98	10
		Ogwashi-uku.	112	11
	Aniocha North	Obior	134	13
		Onicha-ugbo,	160	16
		Idumuje	109	10
	Ndokwa West	Ndemili,	156	15
		Isupe	98	10
		Oliogo.	103	10
		.	2053	200

Primary and secondary sources were used to generate data used in this study. Questionnaire was used to obtain the primary data. The test instrument was also subjected to the examination and acceptance of the experts in the field of Agriculture to determine the validity of the instrument through content and face validity of the instrument. Test retest was done on the test instrument to determine the reliability of the test instrument. This approach explained the extent of consistency of the test items on the test instrument. Amendments were made based on revisions that were necessary before full administration. Secondary data were generated on yam output from 2019 to 2023 in the study area from ministry of agriculture Asaba, Delta State.

4.0 Results and Discussion

4.1 Demographic characteristics of the respondents

Table 2 shows that majority (67%) of the respondents are male, while 33% were females. This is attributed to the fact that men are more involved in the labour-intensive tasks that are involved in the production of yams and cultural practices that tend to favour the participation of men. The outcome is consistent with Giweze et al (2024) who also found that there was male dominance in the production of yams in Delta State. The age of the respondents in the study area indicates that a significant number of the respondents were in their productive active years with a mean age of 49 years. Most of them, 64.5%, are in the age bracket of 41-50 and then 26.5% in the 31-40 age brackets. These indicate that younger farmers are engaged in the production of yams in the study area that is favorable to boost production of yams but their reliability is questionable because of youth rural urban migration. Most of the respondents (61.0%) are in the category of 5-8 persons per household and average household size of 5 persons. Younger farmers would find it easier to work on the yam production activities like planting, weeding and harvesting since they offer labour input. The results show that majority of the respondents 51.0% had secondary education and 19.0% had tertiary education. Young farmers who are educated can easily leave farming to other office jobs than the uneducated youth who may view farming as a source of livelihood. The young farmers lack massive indigenous knowledge on yam production as compared to the old

farmers. The more experienced youth have in yam production, the more they understand local climate conditions required in yam production. A larger percentage of the respondents (51.5%) have farm sizes of 1-5 hectares, with the mean size of the respondents being 3.7 hectares. Large scale yam production gives more yam output, more money and increase food supply. The respondents with higher percentage (37.0%) reported annual income of between ₦500,000 and ₦1,000,000 with an average income of ₦575,518.52. This amount is relatively low-income level that could discourage the youth from yam production and ability to invest into increase yam production as well as engage in other agricultural business. The finding supports the assertion of Ogbonna (2019) who said that access to credit and finance are key ways of empowering farmers to produce more.

Table 2: Demographic characteristics of the respondents (n=200)

Variable	Frequency	percent	Mean/Mode
Sex			
Male	134	67.0	Mode
Female	66	33.0	
Age (Years)			
Less than 21	4	3.0	
21 – 30	14	7.0	
31 – 40	53	26.5	
41 – 50	129	64.5	49 years
Household size (persons)			
1 – 4	70	35.0	
5 – 8	122	61.0	5 persons
9 – 12	8	4.0	
Educational level			
Non formal	6	3.0	
Primary	54	27.0	
Secondary	102	51.0	Mode
Tertiary	38	19.0	
Farming experience (years)			
Less than 10	82	41.0	
10 – 20	91	45.5	20 years
21 – 30	27	13.5	
Farm size (hectare)			
Less than 1	61	30.5	
1 – 5	103	51.5	3.7 hectares
6 – 10	27	13.5	
11 – 15	7	3.5	
Above 15	2	1.0	
Annual income (₦)			
Less than 100,000	5	2.5	
100,000 – 500,000	68	34.0	
500,001 – 1,000,001	74	37.0	₦575,518.52
1,000,002 – 1,500,002	27	13.5	
1,500,003 – 2,000,003	20	10.0	
Above 2,000,003	6	3.0	

Source: Field Survey (2024).

4.2 Output of yam in the study area from 2019 to 2023.

Table 3 shows the outcome of yam production in the study area between 2019 - 2023. The outcome shows that the production of yams in Delta State, Nigeria, has been steadily decreasing

since 2019. This can be blamed on the rise in the migration of youths out of the rural regions to the urban regions, environmental factors and inter alia. This downward trend of yam production in the research area is noteworthy and identification of the challenges caused by poor youth in yam production and this trend also jeopardizes the sustainability and productivity of yam in the long run. The finding is consistent with studies by Osuji et al. (2023), who found that climate change led to reduced crop production and salinity of the soil. The finding is consistent with the results of Ozioko et al. (2022) who emphasize the need to provide youth and extension agents with knowledge and tools to share agricultural production strategies with farmers. Youth possess energy and strength that can be leverage on for meaningful yam production, attracting and retaining youth in yam production will enhance yam output.

Table 3: Output of yam in the study area from 2019 – 2023 (n=200).

Year	Yam output (tonnes)	Differences
2019	402,214.30	
2020	391,148.80	11,065.50
2021	379,006.00	12,142.80
2022	368,205.40	10,800.60
2023	360,637.40	7,568.00

Source: Ministry of Agriculture, Asaba. (2024)

4.3 Reasons for yam production

Table 4 indicates that most of the youths have many reasons as to why they produce yams but few of the youths are in the production of yams because they have lost a job or business to earn a living. It implies that some youth did not have a choice of producing yams but circumstances forced them to produce yams which they can quit once they get the job of their choice. Therefore, loss of job/business does not solely form youth reasons for venturing into yam production. The result implies that youth have enormous reasons and also knew that yam production has huge potentials to alleviate poverty, food sovereignty and nutritious security as well as provides precious carbohydrates and essential minerals to citizens. The outcome is in line with Mondo et al. (2024) who wrote that post-cassava yams are the food security pillars in sub-Saharan African nations, which feed and earn millions of individuals in developing countries. Youth in the study area should be motivated, encouraged and supported to increase and sustained their yam production efforts to enhanced food security to nations and family food supplies.

Table 4: Reasons for yam production (n=200)

Reasons for yam production	Mean	Std. dev	Remark
Self reliance	3.51	0.63	Agreed
Inadequate preferred jobs/unemployment	3.42	0.61	Agreed
Parents motivation	3.43	0.74	Agreed
Increased family food supply	3.44	0.83	Agreed
Source of income	3.61	0.65	Agreed
Loss of job/ business	2.41	0.79	Disagreed

Source: Field Survey (2024).

4.4 Ways of increasing youth involvement in yam production

Table 5 shows that all the variables had their mean values above 2.5 cut off point, which entails that, the respondents agreed these were the ways in which youth can lured towards increased involvement in yam production. These approaches if inculcated in youth at early stage of life upbringing and they grow up with the mentality of agricultural production activities especially yam production, will enhance youth participation and sustainability in yam production and other agricultural ventures in the study area. The outcome supports Lan et al (2019) who discovered the

same outcome as the strategies of improving youth involvement in agricultural businesses in Benue State. The outcome is in support of Ewobor (2024) who wrote that among the methods of making the youth more involved in agriculture in Edo state is the need to appreciate the fact that the youth should be given the knowledge, access to resources like land, credit, techniques and entrepreneurial skills that will help them to have successful careers in the agricultural sector.

Table 5: Ways of increasing youths involvement in yam production (n=200)

Ways of increasing youth involvement	Mean	Std. Dev	Remark
Using indigenous knowledge and ICT to teach youth yam production	3.42	0.85	Agreed
Encouraging youth competition on yam production	3.35	0.74	Agreed
Training youth on yam value addition	3.22	0.68	Agreed
Youth mentoring on yam value addition	3.34	0.81	Agreed
Vocational guidance to youth	3.04	0.86	Agreed
Provision of amenities in villages to avoid rural- urban migration	2.74	0.87	Agreed
Educating youth that there is dignity in labour	2.69	0.87	Agreed
Organizing youth production shows	2.64	1.05	Agreed
Rewarding youth with highest yam produce	3.13	1.06	Agreed

Source: Field Survey (2024).

4.5 Constraints to youths involvement in yam production

Table 6 reveals constraints of youth towards yam production. The outcome indicates that the youth possess numerous limitations that must be overcome to effectively harness them to boost the production of yams in the study area since all the items commented agreed with the exception of Poor market system/ farmgate pricing that was only disagreed as a constraint. This means that regardless of the market system within the study area yam must sell and farmgate pricing is not limited to youth farming yam as long as they can see money in what they produce. The finding is consistent with Ewobor (2024) who identified similar constraints to agricultural youth in Edo State, Nigeria and said that one of the main approaches to addressing the barriers to youth agriculture is to address negative societal attitudes and stereotypes towards agriculture, to increase access to resources, including land, credit, modern technologies, to encourage youth entrepreneurship, to increase security and markets will help leverage youth more effectively.

Table 6: Constraints to youths involvement in yam production (n=200)

Constraints	Mean	Std. Dev	Remark
High cost of land	3.12	0.92	Agreed
Inadequate access to credit	3.21	0.94	Agreed
Shortage of labour	2.92	0.98	Agreed
Land tenure system	3.03	0.99	Agreed
Poor market system/ farmgate pricing	2.44	0.91	Disagreed
Shortage of land	3.32	0.76	Agreed
Inadequate motivation of youth from government	3.01	0.75	Agreed
High cost of improved yam varieties	3.31	0.75	Agreed
Insecurity	3.42	0.85	Agreed
Stealing of yams	3.35	0.74	Agreed
Labour intensive activities of yam production	3.22	0.68	Agreed

Source:Field Survey (2024).

5.0 Conclusion and Recommendations

5.1 Conclusion

Based on the results of the study, it was concluded that a lot of youths engaged in yam production are in their agriculturally active age that should be leveraged on to increase yam production in the study area. The study, however, discovered that the youths have many reasons to participate in production of yam and loss of job or business is not their reasons to produce yams. The study identified 9 ways of encouraging youth increase in yam production; this will unveil the opportunities that abound in yam production in the study area, reduce hunger threats and encourage food availability in the study area and Nigeria in general as well as reduce rural urban migration, social vices and stealing.

5.2 Recommendations

Based on the findings, these recommendations were made:

i The youth should be motivated, tutored and initiated into the production of yams through social media and indigenous knowledge.

ii Government and nongovernmental organizations should help youth get interested and be involved fully in yam production.

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