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Appraisal of rural youth participation in arable crop production in Ogba/Egbema/Ndoni Local Government Area, Rivers State

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Abstract

The study aims to assess the involvement of rural youths in arable crop production in Ogba/Egbema/Ndoni Local Government Area of Rivers State. To achieve this, the following specific objectives were stated: to examine the socio-economic characteristics of the respondents, determine the level of participation of rural youths in arable crop production, and identify the constraints that hinder their effective participation in arable crop production. The data used for this study were collected using an interview schedule administered to 120 respondents who were selected through a multi-stage sampling procedure. Descriptive statistics such as frequency, percentages, and means were used to analyse the data. The result of the study was that 58% of respondents were male, while 42% were female, indicating a predominance of male participants. The majority of respondents (63%) fell within the 21–30-year age bracket. Marital status of participants indicated that a significant proportion (64%) were single, while 24% were married. Educational attainment varied significantly among respondents, with 14% lacking formal education and 29% having completed the First School Leaving Certificate (FSLC). Occupationally, a significant majority (66%) were engaged in farming. Christians were 65%, while 32% practiced Traditional beliefs. Regarding monthly income, the majority of respondents earn between ₦10,000 and ₦40,000 monthly. Household size varied significantly among respondents, with 46% having 3-5 members. The study further revealed a mixed level of involvement among rural youths in arable crop production activities, with significant participation in certain areas like land clearing, harvesting, and pest control, while other critical areas, such as nursery preparation and fertilizer application, show low engagement levels. The findings indicate that poor yield from marginal land (M = 3.8) and lack of credit facilities (M = 3.8) were the most significant constraints to rural youth participation in arable crop farming. Additionally, inadequate government support (M=3.67) and high costs of planting materials (M=3.6) further hinder engagement. Thus, the study recommended, among others, the need for targeted intervention programs to enhance rural youth participation in all aspects of agricultural production by the government and other agricultural service providers.

Keywords: Rural youths, involvement, arable-crops, production

Introduction

Rural youth play a crucial role in agricultural development, particularly in regions where agriculture serves as the backbone of the economy. In Rivers State, Nigeria, the involvement of young people in arable crop production is vital for enhancing food security, improving livelihoods, and fostering sustainable agricultural practices. Despite the potential benefits of engaging rural youths in farming activities, their participation remains inconsistent and often limited by various socio-economic factors (Adeyemo *et al*., 2020; Ojo and Ajayi, 2021) [2, 22].

The significance of youth engagement in agriculture cannot be overstated. According to the Food and Agriculture Organization (FAO, 2022) [10], young farmers are essential for driving innovation and adopting new technologies that can increase productivity and efficiency in farming systems. In Nigeria, where a significant portion of the population is under 30 years old, tapping into this demographic's potential could lead to transformative changes in agricultural outputs (National Bureau of Statistics [NBS], 2021) [16]. However, barriers such as limited access to land, credit facilities, and modern farming techniques often hinder their participation (Okunlola and Adebayo, 2020) [27].

Research indicates that understanding the motivations and challenges faced by rural youths is critical for developing effective policies and programs aimed at enhancing their involvement in agriculture. For instance, a study by Eze *et al*. (2021) [7] highlighted that socio-cultural factors, educational background, and economic conditions significantly influence young people's decisions to engage in arable farming. Additionally, the role of local governments and non-governmental organizations in providing support services and training programs is vital in empowering these youths to take an active role in agricultural production (Ibrahim and Bello, 2022) [12]. Despite the critical roles of rural youth in driving agricultural development and ensuring food security in Rivers State, Nigeria, it seems their participation in arable crop production remains alarmingly low. Various factors contribute to this limited engagement, including socio-economic challenges, lack of access to resources such as land and credit, insufficient training and education, and prevailing socio-cultural attitudes towards farming as a viable career option. Similarly, research by Nwankwo *et al*. (2022) [20] highlights that the perception of agriculture as an

unprofitable venture significantly affects the willingness of rural youth to engage in farming activities. Many young individuals view farming as a last resort rather than a viable career option, which leads to a decline in interest in agricultural practices (Chukwu and Adebayo, 2023) [5]. This negative perception is compounded by the challenges of inadequate infrastructure, such as poor road networks and a lack of access to markets, which further discourage youth from participating in arable crop production (Okwu and Okwu, 2021) [28]. Furthermore, while there is a growing recognition of the need to involve youth in agriculture, existing policies and programs often fail to address the specific barriers that hinder their active participation. This gap in understanding the motivations and challenges faced by rural youths leads to ineffective strategies that fail to resonate with their needs and aspirations.

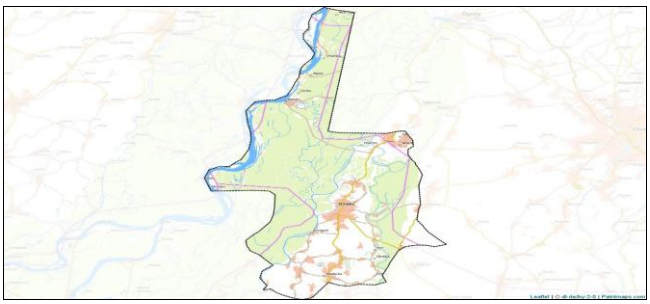
As a result, there is a pressing need to systematically appraise the current level of involvement of rural youths in arable crop production in Rivers State.

Purpose of Study

The study aims to appraise the level of involvement of rural youths in arable crop production in Rivers State, Nigeria. To achieve this goal, the study seeks to achieve the following specific objectives:

1. to examine the demographic information of the respondents
2. to determine the level of involvement of rural youths in arable crop production
3. to identify the constraining factors affecting rural youths' involvement in arable crop production

Methodology of the Study



Source: Google Maps

Fig 1: Map of Ogba/Egbema/Ndoni Local Government Area

Ogba/Egbema/Ndoni Local Government Area, with its headquarters at Omoku is located in the South-South region of Nigeria, specifically within Rivers State. It is bordered to the north by the Ahoada East LGA, to the south by Imo State, and to the west by the Emohua LGA. The LGA is characterized by its riverine terrain, with several waterways that are significant for transportation and fishing activities. According to the 2006 Population Census conducted by the National Population Commission of Nigeria, Ogba/Egbema/Ndoni LGA had a population of approximately 144,000 people. This census data provides a foundational understanding of the demographic structure within the area. The population is diverse, comprising various ethnic groups, with the Ogba, Egbema and Ndoni being the predominant tribes.

The population density and distribution are influenced by factors such as migration, urbanization, and the availability of resources. Subsequent estimates may indicate changes in population figures due to natural growth and migration patterns, but the 2006 census remains a critical reference point for understanding the demographic landscape of the LGA (National Population Commission, 2006) [17].

The primary occupations in Ogba/Egbema/Ndoni LGA revolve around agriculture, fishing, and oil-related activities. The fertile land in the area supports various agricultural practices, with crops such as cassava, yams, and plantain being commonly cultivated. Fishing is also a vital occupation due to the proximity to rivers and streams, providing a source of livelihood for many residents. In recent years, oil exploration and production have become increasingly significant to the local economy. The presence of oil companies has led to job creation and infrastructural development, but has also raised concerns regarding environmental degradation and social impacts on local communities (Nwankwo *et al*., 2022) [19].

Multi-stage sampling procedure was adopted to select respondents for this study. Three (3) wards were purposively selected due to the high number of youths. They were: ward 4 (Omoku), ward 11 (Egbema) and ward 13 (Ndoni). Four (4) communities were randomly selected from each Ward, totalling twelve (12) communities. A proportionate sample of respondents was selected randomly using balloting systems (Issa et. al., 2014) [14]. In all, one hundred and twenty (120) respondents were selected for the study. A structured interview schedule was used to elicit relevant information from the respondents. Secondary data was obtained from literature such as textbooks, the internet, journals, and other published items related to agricultural production. Data collected was analysed using descriptive statistics such as frequency distribution, percentages, and mean.

Results and Discussion

Socio-economic characteristics of the respondents

The demographic data presented in Table 1 reveal important insights into the characteristics of the study participants. A notable finding is that 58% of respondents were male, while 42% were female, indicating a predominance of male participants. This gender distribution aligns with findings from similar studies, such as those conducted by Smith *et al*. (2020) [30], who reported a male-to-female ratio of approximately 60:40 in their research on agricultural communities. In terms of age distribution, the majority of respondents (63%) fell within the 21–30-year age bracket, followed by 25% aged 20 years and younger. Only 10% were in the 41–50-year range, and a mere 2% were aged 51 and above. This trend is consistent with the findings of Johnson and Lee (2019) [30], who noted that younger individuals are often more engaged in agricultural activities due to physical demands and adaptability to new technologies. The marital status of participants indicated that a significant proportion (64%) were single, while 24% were married. The percentages of separated (3%), widowed (7%), and widower (2%) respondents were relatively low. This high percentage of single individuals may reflect the socio-economic conditions and cultural norms prevalent in the region, similar to observations made by Ojo (2021) [24], who found that singlehood is common among young adults in rural areas due to economic constraints. Educational attainment varied significantly among respondents, with 14% lacking formal education and 29% having completed the First School Leaving Certificate (FSLC). Those with higher qualifications included 20% with Senior Secondary

Certificate Examination (SSCE/WAEC), 17% with National Certificate in Education (NCE) or Ordinary National Diploma (OND), and only a small percentage holding advanced degrees (1.7% with Master's and 0.8% with Ph.D.). These findings echo the work of Adeyemi and Olatunji (2022) [1], who highlighted the challenges faced by rural populations in accessing higher education, which often limits their economic opportunities. Occupationally, a significant majority (66%) were engaged in farming, followed by smaller percentages involved in trading (9%), civil service (5%), and other occupations. This finding is consistent with the research conducted by Nwankwo *et al*. (2020) [21], which indicated that agriculture remains the primary source of livelihood in rural settings, emphasizing its importance for economic stability. Religiously, the data showed that 66% of respondents identified as Christians, while 32% practiced Traditional beliefs, and only 2% were Muslims. This distribution reflects the cultural landscape of the region, as noted by Okeke (2018) [26], who emphasized the predominance of Christianity and traditional beliefs in rural communities. Regarding monthly income, the results indicated that 17% earned less than ₦10,000, while 55% earned between ₦10,000 and ₦40,000. Only 3% reported incomes above ₦81,000. This income distribution highlights the economic challenges faced by many respondents, which is supported by findings from Eze *et al*. (2021) [9], who reported similar income levels among rural households. Lastly, household size varied significantly among respondents. Only 2% lived in households with 1-2 members, while 46% had 3-5 members, and larger households of 6-8 members constituted 28%. Households with 9-11 members accounted for 17%, and those with 12 or more members made up 7%. This pattern resonates with findings from Uche and Ijeoma (2019) [32], who noted that larger household sizes are common in rural areas due to cultural norms favouring extended families.

Table 1: Socio-economic characteristics of the respondents

Variables	Number of respondents	Percentage (%)
Sex		
Male	70	58%
Female	50	42%
Age		
20 years	30	25%
21-30 years	76	63%
41-50 years	12	10%
51-above	2	2%
Marital Status		
Single	77	64%
Married	29	24%
Separated	4	3%
Widow	8	7%
Widower	2	2%
Level of Education Attained		
No Formal Education	17	14%
FSLC	35	29%
SSCE/WAEC	24	20%
NCE/OND	20	17%
HND	9	7.5%
B.Sc/B.Ed	12	10%
Masters	2	1.7%
Ph.D	1	0.8%
Major Occupation		
Farming	80	6.7%
Trading	11	9%
Civil Servant	6	5%
Students	10	8%
Self Employed	8	7%
Applicant	5	4%
Religion		
Christianity	79	66%
Islam	3	2%
Traditional	38	32%
Monthly Income		
<10,000	20	17%
10,000 – 40,000	66	55%
41,000 – 80,000	30	25%
81,000 and above	4	3%
Household Size		
1 – 2	2	2%
3 – 5	55	46%
6 – 8	34	28%
9 – 11	20	11%
12 and above	9	7%

Source: Field Survey 2025

Level of rural youth involvement in arable crop production

The results presented in Table 2 indicate varying levels of involvement among rural youths in arable crop production across three different wards of Ogba/Egbema/Ndoni Local Government Area of Rivers State: Omoku (Ward 4), Egbema (Ward 11), and Ndoni (Ward 13). The mean scores for each activity are categorized using a Likert-type rating scale of Very low (1), Low (2), High (3), and very high (4) based on a midpoint of 2.5, with scores below this threshold indicating low involvement and those at or above indicating high involvement. Response on pre-planting operations, as indicated in Table 2, shows that all the wards scored a mean of 2.00, indicating low involvement. This finding aligns with the observations of Adeyemo *et al*. (2020) [3], who noted that limited access to resources and training contributes to low participation in nursery activities among rural youths. Decision-making on site location: mean scores ranged from 1.80 to 1.85, also reflecting low involvement. This suggests a lack of agency among youths in agricultural decision-making, as corroborated by Akintola (2019) [4], who emphasized the importance of youth engagement in decision-making processes for sustainable agricultural practices. Responding to land clearing, Table 2 revealed a higher mean score of (2.60 to 2.65) across all wards, indicating a significant level of involvement. This is consistent with findings by Ojo and Olayide (2021) [23], who reported that land preparation is often a primary responsibility for rural youths, reflecting their physical contribution to farming. Ploughing and harrowing; both activities received low mean scores (1.00 to 1.80), indicating minimal involvement. This is supported by the work of Nwankwo *et al*. (2022) [20], which highlighted that the lack of mechanization and reliance on older farmers have reduced youth participation in these labour-intensive tasks. Table 2 further revealed that in ridge making, all wards recorded high mean scores (M=2.70), suggesting that this practice is well adopted among youths, possibly due to its simplicity and importance in crop production, as noted by Eze *et al*. (2021) [8]. Responding on planting operations, Table 2 revealed that transplanting and sowing scored low (1.80 to 2.00). This aligns with the findings of Uche *et al*. (2023) [31], who found that many youths prefer simpler tasks and may lack training in more complex planting techniques. A high mean score of (2.60 to 2.65) was recorded on thinning/supplying, indicating significant involvement. Responding to monitoring/field observations, it was observed from Table 2 that mean scores were notably high (3.45 to 3.80), suggesting active engagement in observing crop health, which is vital for timely interventions, as highlighted by Chukwu *et al*. (2021) [6]. Weeding and fertilizer application recorded mean scores of 1.00 to 2.00, reflecting low involvement. These findings support the research of Ibeawuchi *et al*. (2019) [11], which indicated that many youths lack knowledge about effective weeding techniques and fertilizer use. Table 2 further revealed high mean scores of 2.70, indicating a positive trend towards soil conservation practices among youths, which is crucial for sustainable agriculture as discussed by Okeke *et al*. (2020) [25]. Responding to post planting operations, Table 2 shows mean scores of 2.90 to 3.50 reflect high involvement, which is consistent with the findings of Nwachukwu *et al*. (2018) [18] that harvesting is often seen as a communal activity where youths play a significant role. Control of pests and diseases also attracted high mean scores of 2.60 to 2.65. This suggests that rural youths are actively involved in pest management, corroborating the work of Okwu *et al*. (2021) [28], which emphasized the importance of youth in integrated pest management strategies. With a high mean score of 2.70 across all wards, as indicated in Table 2, this result shows that youths are increasingly involved in marketing their produce. These findings corroborate the findings of Igbokwe *et al*. (2022) [13], who noted that marketing skills are essential for economic sustainability among young farmers.

Table 2: Mean response on the level of involvement of rural youth in arable crop production

Activities	Omoku (Ward 4) Mean	Remarks	Egbema (Ward 11) Mean	Remarks	Ndoni (Ward 13) Mean	Remarks
Pre-planting operations						
Nursery preparation	2.00	Low	2.00	Low	2.00	Low
Decision-making on site Location	1.80	Low	1.85	Low	1.80	Low
Land clearing	2.60	High	2.65	High	2.60	High
Stumping	2.65	High	2.75	High	2.65	High
Ploughing	1.80	low	1.80	Low	1.80	Low
Harrowing	1.00	low	1.00	Low	1.00	Low
Ridge making	2.70	High	2.70	High	2.70	High
Planting operations						
Transplanting	2.00	Low	2.00	Low	2.00	Low
Sowing directly to the soil)	1.80	Low	1.85	Low	1.80	Low
Thinning /suppling	2.60	High	2.65	High	2.60	High
Weeding	2.00	Low	1.95	low	2.35	Low
Monitoring/observation	3.60	High	3.45	High	3.80	High
Fertilizer application	1.00	Low	1.00	Low	1.00	Low
Mulching	2.70	High	2.70	High	2.70	High
Irrigation practices	1.80	Low	1.85	Low	1.80	Low
Post-planting operations						
Flood mitigation practices	2					
Harvesting	3.00	High	2.90	High	3.50	High
Storage	1.80	Low	1.85	Low	1.80	Low
Control of pests and diseases	2.60	High	2.65	High	2.60	High
Processing	2.65	High	2.75	High	2.65	High
Packaging	1.80	Low	1.80	Low	1.80	Low
Distribution	1.00	Low	1.00	Low	1.00	Low
Marketing	2.70	High	2.70	High	2.70	High

Source: Field Survey 2025

*Midpoint 2.5 (any mean < 2.5 = Low; ≥ 2.50 = High)

Constraining factors of rural youths' involvement in arable crop production

The results of Table3 identifies various constraints affecting rural youth participation in arable crop farming, with a midpoint score of 2.5 used to evaluate the severity of these constraints. The factors are ranked based on their weighted mean scores, which reflect the degree of impact on participation. Table 3 revealed that poor yield as a result of the use of marginal land recorded a weighted mean of 3.80. This factor ranks first, indicating it is a significant constraint for rural youth, likely due to the challenges associated with farming on less productive land. Lack of credit facilities (Weighted Mean: 3.80), lack of interest in farming (Weighted Mean: 3.70) - Ranking second, this suggests that engagement and motivation among rural youth are key issues that need addressing to enhance participation. Lack of government support (Weighted Mean: 3.67). This factor ranks third, emphasizing the need for more robust policies and support systems from the government to encourage youth involvement in agriculture. High cost of planting materials (Weighted Mean: 3.60) - Ranking fourth, this indicates that financial barriers related to purchasing necessary inputs are a significant concern. Inadequate agricultural extension services (Weighted Mean: 3.42) - This constraint, ranked sixth, points to the necessity for better access to information and resources that can aid young farmers. Lack of technical know-how (Weighted Mean: 2.75) - Although it ranks lower, this factor still indicates that knowledge and skills development are important for enhancing participation. Seasonal flooding (Weighted Mean: 2.67) - This environmental challenge ranks eighth, suggesting that while it is a concern, it may not be as impactful as other factors. Lack of basic amenities (Weighted Mean: 3.70) - Also ranking second, this reflects the need for essential services and infrastructure in rural areas to support farming activities.

Table 3: Distribution of mean scores based on constraints militating rural youth involvement in arable crop production (n=120)

Factors	Major 4	Moderate 3	Minor 2	Non 1	Weighted Sum	Weighted Mean	Rank
Rural-urban migration	90 (360)	20 (60)	10 (20)	0(0)	420	3.50	5th
Poor yield as a result of use of marginal land	94 (376)	26 (78)	0(0)	0(0)	454	3.80	1st
Lack of interest in farming	85 (340)	35(105)	0(0)	0(0)	445	3.70	2nd
Seasonal flooding	50 (200)	40 (120)	20(40)	10(10)	320	2.67	8th
Lack of government support	95(380)	20 (60)	5 (10)	0(0)	440	3.67	3rd
Lack of credit facilities	95 (380)	25(75)	0(0)	0(0)	455	3.80	1st
High cost of planting materials	85 (340)	30 (90)	5(10)	0(0)	430	3.60	4th
Lack of technical know-how	30 (120)	70(210)	20(40)	0(0)	330	2.75	7th
Lack of basic amenities	85 (340)	35(105)	0(0)	0(0)	445	3.70	2nd
Inadequate agricultural extension services	65 (260)	50(150)	5(10)	0(0)	410	3.42	6th

Source: Field survey (2025)

*Midpoint 2.5 (any mean < 2.5 = Minor; ≥ 2.50 = major constraint)

Conclusion and Recommendations

The demographic analysis of the study participants provided a comprehensive overview of their socio-economic characteristics, revealing a predominance of male respondents (58%) and a youthful demographic, with 63% of the participants aged between 21 and 30 years. The high percentage of single individuals (64%) suggests socio-economic influences that resonate with regional cultural norms, while educational attainment reflects significant challenges, with only a small fraction achieving higher degrees. The occupational landscape is dominated by farming (66%), underscoring its critical role in rural livelihoods, which aligns with existing literature on economic stability in such communities. The religious affiliation predominantly leans towards Christianity (66%), reflecting the local cultural context. Furthermore, the income distribution indicates economic hardships, as a majority earn between ₦10,000 and ₦40,000 monthly. Lastly, household sizes vary, with larger families being common due to cultural preferences for extended kinship structures. The study further concludes that there was a mixed level of involvement among rural youths in arable crop production activities, with significant participation in certain areas like land clearing, harvesting, and pest control, while other critical areas, such as nursery preparation and fertilizer application, show low engagement levels. The findings indicate that poor yield from marginal land and lack of credit facilities are the most significant constraints to rural youth participation in arable crop farming. Additionally, inadequate government support and high costs of planting materials further hinder engagement.

Based on these findings, the study suggests the following recommendations

- Targeted intervention programs to enhance rural youth participation in all aspects of agricultural production should be prioritized by the government and other agricultural service providers.
- Collaborating with financial institutions to create youth-friendly credit facilities can help alleviate the financial barriers that currently hinder rural youth participation in farming activities
- Providing access to quality planting materials and other emerging technologies, such as drones, at subsidized rates can also encourage greater involvement of rural youth in all aspects of arable crop production.

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