

ASSESSMENT OF THE UTILIZATION OF LABOUR AMONG YAM FARMERS IN OGOJA LOCAL GOVERNMENT AREA, CROSS RIVER STATE.

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Abstract

The study assessed the utilization of labour among yam farmers in Ogoja Local Government Area, Cross River State, Nigeria. A multi-stage sampling procedure was used to obtain data from 126 respondents and analyzed using descriptive and inferential statistics. Results revealed that majority (66.7%) were males, 40.5% were above 50 years, majority (64.3%) were married, 46.3% had secondary education with household size of above 6 persons and farm size of between 1-2 plots. The most utilized labour was family labour, with mean score [$\bar{X}$] of 3.39). The farming operations in which family labour was mostly utilized were planting and fertilizer application with percentage representation of 69.9% and 69% respectively. However, hired labour was mostly used in staking and mound making. The findings also showed that the factor that most influenced labour utilization was rural urban migration with $\bar{X}$ of 3.58. The chi-square statistics reveal statistically significant association between type of labour used and yam farming operation as $t_{cal} (206.4) > P \text{ value } (1.55 \times 10^{-37})$ at 0.05 significant level. It was therefore recommended that the government should supplement manual labour with mechanised labour so as to address the need of yam farming operation such as moulding that requires specialized skills and is physically demanding.

Keywords: Labour, utilization and yam farmers

Introduction

Yam (*Dioscorea spp*) is an annual root tuber and climbing plants which according to International Institute of Tropical Agriculture (IITA), 2009) has over 600 species. Based on data from the Food and Agriculture Organisation (FAO) of the United Nations and a comparison with 44 countries in 2022, Nigeria is ranked as one of the highest yam producer in the world and contribute about 64 -69% to the global production of the product (FAO, 2025). The importance of this plant is not only as a source of food and income; for instance, Ayanwuyi et al., (2011) observed that yam also has the potential for livestock feed and industrial starch production. In many farm communities in Nigeria, as observed by Izekor and Olumese (2010), it was reported that the size of the yam enterprise that one has, reflects the person's social stature. Yam could also be cultivated for the purpose of producing certain drugs and pharmaceutically active compounds; these compounds include tannins, anthocyanins, and browning substances, etc.

Labour is a primary factor of production and a key asset in Nigeria, driving the activation of other production inputs, especially among farmers where human labour is mostly utilized (Nmadu and Akinola, 2015). The inadequacy of labour in the production of crops, as opined by Kar et al., (2020), has been linked to an ageing farmer population, rural-urban migration, and the persistent drift of rural labour to non-farm and other off-farm activities which potentially offer higher wages. This has denied the farmers the much-needed human labour, weakened the production capacity and reduced income (Ogwumike and Aromolaran, 2000). Recent research shows that small-scale farmers face declining access to labour, rising wage rates and migration, especially during peak seasons when labour is needed most (Elemi et al., 2018). The scarcity and timeliness of labour, according to Oluyole

et al., (2011), has also impacted negatively on planting precision, weed control, timely harvesting, and crop processing. Although studies have been carried out on labour utilization, none has empirically been established on which labour is mostly utilised and on what yam farming operations; therefore, this study seeks to **assess** the utilization of labour among yam farmers in Ogoja Local Government Area, Cross River State, Nigeria.

Methodology

Study area: This study was carried out in Ogoja Local Government Area of Cross River State, Nigeria. Geographically, the area lies approximately between latitude; 6° 39' 17.4132" N and longitude; 8° 47' 51.6984" E. Ogoja Local Government Area is located in the northern agro-ecological zone of Cross River State. It shares boundary with Bekwarra LGA in the southeast, Yala L.G.A in the west, Ikom L.G.A in the south and Obudu L.G.A in the East. The Local Government Areas comprises ten wards, namely: Ekajuk I, Ekajuk II, Mbube East I, Mbube East II, Mbube West I, Mbube West II, Nkum Iborr, Nkum Irede, Ogoja Urban I and Ogoja Urban II. This area is characterized by fertile soils and favorable climatic condition suitable for the production of cassava, maize, plantain and yam among others. The area is rich in cultural heritage with traditional festivals playing an important role in the lives of the people (National Population Commission [NPC], 2006).

Sample Size and Sampling Procedure

This study adopted the multi-stage sampling procedure to select respondents in the study area. In stage one a purposive sampling technique was used to select five (5) wards where yams are produced in large quantity. These wards include; Ekajuk I, Ekajuk II, Mbube East I, Mbube East II and Nkum. In the second stage two communities were randomly selected from each of the ward thus a total of ten communities were randomly selected. These communities include Egbung, Mfom, Ekpugrinya, Esham, Nkim, Ojerim, Ntara, Benkpe, Ukpe and Aburumbede. In the third stage 10 % was used to proportionately select farmers in each community involved in yam farming. Thus, a total of 126 respondents were used for the study.

Data were obtained from structured questionnaires and analysed using descriptive and inferential statistics.

Results and Discussion

Distribution of Respondents based on Socio-economic Characteristics

Table 1 shows the distribution of respondents based on their socio- economic characteristics. The findings showed that most (66.7%) were males within the age of 51 years and above, majority (64.3%) were married, a larger proportion (46.3%) had secondary education with 53.9% having household size of above 6 persons, 46% had farm size of between 1-2 hectares. These findings show that yam farming in the study area is dominated by males who are also married and not in their youthful age, a larger number amongst them can read and write with a sizeable family labour available to be used. The implication of this result is that most of the young ones are not involved in yam farming may be as a result of migrating to urban areas to seek for greener pastures thereby resulting to the dwindling availability of active labour to be utilized in rural areas.

Table 1: Socio-Economic Characteristics of Respondents (n=126)

Variables	Category	Frequency	Percentage(%)
Sex	Male	84	66.7
	Female	42	33.3
Age(years)	21-30	20	15.9
	31-40	22	17.5
	41-50	33	26.1
	>51	51	40.5
Marital status	Single	17	13.5
	Married	81	64.5
	Divorced	7	5.6
	Widowed	21	16.7
Educational qualification	Non-formal education	23	18.3
	Primary education	27	21.4
	Secondary education	59	46.3
	Tertiary education	17	13.5
Household size	1-3	11	8.7
	4-6	47	37.3
	>6	68	53.9
Farm size(plot)	1-2	58	46.0
	3-4	37	29.4
	>4	31	24.6

Field survey, 2024

The results in Table 2 reveal that family and hired labour were the most common types of labour utilized in the study area for yam production with mean score of 3.39 and 3.19 respectively. The least utilized type of labour was exchanging labour with mean score of 2.63. This indicates that family labour plays a central role in yam cultivation. These findings align with Takane (2018), who, in his study on labour use among smallholder farmers reported that family and hired labour were the predominant sources of labour, with family labour being the primary one. The author further emphasized the importance of family labour stating that with the lack of mechanization in agricultural production especially in the rural area, the availability of family labour though not encouraged is a prerequisite for households aiming to expand their farm size.

Table 2: Distribution of respondent according to type of labour used

Types of labour	Total sore	Mean score	Rank
Family labour	428	3.39	1 st
Hired labour	403	3.19	2 nd
Exchange labour	332	2.63	3 rd

Field survey, 2024

The results in Table 3a show the various farming operations associated with yam production and the types of labour used in performing each of the operation. The results reveal that the main (41.3%) type of labour used in the study area for land clearing was family labour. About 63.5% used hired labour for mound making, for planting and fertilizer application, family labour was mostly used with a percentage representation of 69.9% and 69.0% respectively, a larger proportion (37.3%) employed hired labour for weeding, majority

(65.1%) used hired labour for staking, a larger proportion (45.2%) used family labour for harvesting. Only a few respondents used exchange labour for the following farm operations: land clearing (23%), mound making (23%), weeding (30.1%) and harvesting (14.3%), the implication of this result as can be observed from the table is that respondent in the study area utilized different types of labour in performing a given farming operation. The general trend in the results shows that the most widely used labour was family labour followed by hired labour. This could be associated with the fact that majority of the respondents were peasant farmers who cultivated small area of land where family labour can be effectively used. It could also be assumed that different farmers use different types of labour to perform different farming operations depending on what was obtainable and the farmer's economics situation. This result agrees with Oluyole (2011), which reported that yam production involves a range of operations with varying labour requirements, but farmers generally utilize labour that suits their economics ability, cost of the labour and its availability.

Table 3a: Distribution of respondents based on labour type utilized across different yam farming operations

Variables	Family Labour		Hired Labour		Exchange Labour		Row Total	
	F	%	F	%	F	%	F	%
Farming Operations								
Land clearing	52	41.3	45	35.7	29	23.0	126	100
Mound making	17	13.5	80	63.5	29	23.0	126	100
Planting	88	69.9	38	30.2	0	0.00	126	100
Weeding	41	32.5	47	37.3	38	30.1	126	100
Staking	44	34.9	82	65.1	0	0.00	126	100
Fertilizing	87	69.0	39	30.9	0	0.00	126	100
Harvesting	57	45.2	51	40.5	18	14.3	126	100
Column Total	386		382		114		882	

Field survey, 2024

Table 3b is a summary of the result of chi square test of association between farming operation and labour type utilized. From the table, the chi square value calculated (206.40) with degree of freedom (12) at 0.05 significant level is greater than the P-value (1.55×10^{-37}) this shows that there is a statistically significant association between farming operation and labour type. This imply that choice of farm labour by respondent in the study area is not at random across yam farming operation but varies significantly depending on the farming operation. The implication of this result as can be observed from Table 3a where hired labour was employed for staking and mound making is that, the farming operation is physically demanding when compared to planting and fertilizing where family labour was used, as such physical strength and specialized skill for the previous is needed for efficiency.

The results seem to be in line with the study carried out by Adejobi et al., (2021) which reported that labour utilization varies by tasks, with hired labour primarily engaged when physical strength and specialized skills are required.

Table 3b: Summary table of chi square (X^2) test of association between farming operation and labour type utilized

Statistics	Value
Chi square (X^2)	206.40
Degree of freedom(df)	12
P-value	1.55×10^{-37}
Significance level(α)	0.05
Decision	Reject H_0

Source: Result from data analysis

The results in Table 4 show the distribution of respondents according to factors influencing labour utilization in the study area. From the results, it was found that labour availability in the area was influenced by high cost of labour (3.34), household size (3.04), small farm size (2.75) and rural urban migration (3.58). The implications of this results is that labour availability for yam production is majorly influenced by rural urban migration as it ranked 1st with mean score of 3.58 followed by high cost of labour with mean score of 3.34 amongst other variables, the high cost of labour for yam farming operation could be as a result of limited labour supply especially at the peak of the season when most of the youth migrate to urban areas to seek for white collar jobs. This result is similar with the study carried out by Adesiyen et al., (2024) which reported that increase in demand for farm labour especially peak season result to high cost due to law of demand and supply ceteris paribus.

Table 4: Mean distribution of factors influencing labour utilization in yam farming (Mean score ≥ 2.5 benchmark)

Factors	Total score	Mean score	Rank
High cost of labour	421	3.34	2 nd
Household size	383	3.04	3 rd
Farm size	346	2.75	4 th
Rural urban migration	451	3.58	1 st

Field survey, 2024

Conclusion

The study showed that yam farming in the study area was dominated by males who were not in their youthful age as well as involved in small scale farming. Most of the farming operations used family labour and less of hired labour. This could have a serious implication on yam production as some tasks may be too tedious to execute by the older ones, as well as not able to hire labour because of cost due to the law of demand and supply. The result of the hypothesis showed a statistically significant association between yam farming operation and labour type utilized in the study area. It therefore concludes that choice of labour type in yam farming operation is not at random but varies significantly depending on the operation involved.

Recommendations

Since rural urban migration and high cost of labour were the major factors influencing labour utilization in the study area, government should supplement manual labour by distributing tractors to rural farming communities especially those involved in yam production and engaging the service of tractor operators so as to address the need of yam farming operation such as moulding that is physically demanding thereby, making yam farming a lucrative enterprise to help farmers expand production as well as discourage the migration of the young ones from rural to urban areas.

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