

Economic Analysis of OKRO Production by Farmers in Ayamelum Local Government Area of Anambra State, Nigeria



Udemezue JC*

National Root Crops Research Institute, Nigeria

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*Corresponding author: Udemezue JC, National Root Crops Research Institute, Umudike, PMB7006 Umudike Abia State, Nigeria,
Email: udemezuej@gmail.com

Abstract

Government Area in Anambra State, Nigeria. In this study, eight (8) communities that make up of Ayamelum were used. Thirteen (13) farmers each from a community were selected using random sampling techniques and this gave a total sample size of 104 farmers. Data were collected through a structured interview schedule. Data collected for this research were analyzed using frequency, percentage, mean scores and gross margin analysis. Out of the 104 question distributed, only 102 were used for data analysis. The result shows that majority (85.3%) of the respondents were female while 68% of the respondents were married. The mean age of the respondents was 39 years. The average farm size for okra production was 1.3ha while the farming experience was 12 years. Majority (73.6%) of the respondents intercropped maize with okra while 58.8% of the respondents intercropped cassava with okra respectively. Women were more actively involved in okra production activities than their men counterpart and therefore likely to produce more if efforts and investments were shifted in their favour. The percentage gross margin for the okra production was 149.2% which implies that okra production has higher profitability as a result of low variable cost attached to it. This paper therefore, recommends that training among farmers should be encouraged, regularized and implemented by the government just as to rekindle the minds of the farmers on okra farming. Extension agents should educate okra farmers on the alternative use of organic agriculture and soil management practices as to retain soil fertility

Keywords: Profit abilities; Okra production; Farmers

Introduction

Okra is one of the vegetable crops that produced beyond the consumption of the small scale farmers in Ayamelum Local Government. It is a vegetable crop that belongs to the ges of *Abelmoschus* and family of malvaceae. Okra is of two main species; *Abelmoschus esculentus* (L) moench and *Abelmoschus Caillei* [1]. Okra is a native of East Africa and today is widely dispersed in the temperate region [2]. According to Burkil [3] total production of okra vegetable worldwide is estimated at six million tonnes per year. In West Africa, it is estimated at 500,000 to 600,000 tonnes per year. However out of the total okra produced in West Africa, Nigeria alone produced 200,000 to 320,000 tonnes per year and this implies that Nigeria contributed to total okra production in West Africa.

There are two seasons for okra production in Nigeria, the peak and the lean seasons. At the lean season, okra fruits are produced in a small quantity and expensive to get while in the peak season, it is produced abundantly and much more than what the Local populace can consume [4]. However, it is at this stage that proper processing, preservation, marketing and utilization

of the fruit is necessary to arrest the wastage being experienced during the peak seasons. The nutritive values of okra fruit cannot be over looked, because it contains carbohydrate, proteins and vitamin c in large quantity [5]. It plays an essential role in human diet and can be consumed in various forms. They could be boiled, fried or cooked.

In Nigeria, according to schipper [6] okra is boiled in water to form slimy soups and sauces for consumption. Okra seed could be dried, the dried seed is a nutritious material that can be used to prepare vegetable curd, or roasted and ground to be used as coffee additive or substitute [1]. Okra mucilage is suitable for medicinal and industrial application. However, it has medically approved application as a plasma replacement or blood volume expender. Okra mucilage is also usually used to glaze certain papers and more so, can be useful in confectionary. In view of the economic importance of okra for improving the livelihoods of rural farmers in Ayamelum Area, its production has almost out shined other crops with exception of rice and cassava in the study Area. This study before designed to investigate the costs

and benefits analysis of okra production in Ayamelum Local government area of Anambra State, Nigeria.

Materials and Method

The study was conducted in Ayamelum Local government Area of Anambra State, Nigeria. In this study, eight (8) communities that make up of Ayamelum were used. Thirteen (13) farmers each from a community were selected using random sampling techniques and this gave a total sample size of 104 farmers. Data were collected through a structured interview schedule. Data collected for this research were analyzed using frequency, percentage, mean scores and gross margin analysis. Out of the 104 question distributed, only 102 were used for data analysis.

Results and Discussion

Table 1a: Percentage distribution of farmers according to socioeconomic characteristics.

Variables	Frequency	Percentage	Mean
		Sex	
Male	15	14.7	
Female	87	85.3	
Marital Status			
Single	20	19.6	
Married	70	68.6	
Widowed	4	3.9	
Divorced/Separated	8	7.8	
	Age		
21-30	60	58.8	
31-40	30	29.4	
41-50	9	8.8	
51 and above	3	2.9	
Household Size			
2-Jan	15	14.7	
4-Mar	65	63.7	
6-May	12	11.8	
7 and above	10	9.8	
Farm Size			
< 1ha	13	12.7	
1-2ha	80	78.4	1.3ha
3-4ha	6	5.9	
5 and above	3	2.9	
Occupation			
Full time farming	54	52.9	
Trading	23	22.5	
Civil servant	15	14.7	
Pensioners	10	9.8	
Source of Farm Land			
Inherited	10	9.8	

The profitability of okra production among farmers in the area was achieved by requesting all the variable cost of okra production by farmer per plot of Land (0.5ha) and the revenue generated per plot of 0.5h of each of the okra farmer. Profitability was measured using gross margin (GM) analysis. The GM analysis was carried out as follows:

$$GM = TR - TVC$$

Where GM =okra production gross margin,

TR=total revenue from sale of okra production per a plot (0.5h) of farm in naira.

TV=Total variable cost of the average operating inputs and Labour in naira per plot %

$$GM = GM / TRC \times 100 / 1$$

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Rented	70	68.6	
Inherited/rented	22	21.6	
Source of Labour			
Family	12	11.8	
Hired	90	88.2	

Source: Field Survey, 2016.

Table 1b:

Variables	Frequency	Percentage	Mean
Sex			
Male	15	14.7	
Female	87	85.3	
Marital Status			
Single	20	19.6	
Married	70	68.6	
Widowed	4	3.9	
Divorced/Separated	8	7.8	
Age			
21-30	60	58.8	39yrs
31-40	30	29.4	
41-50	9	8.8	
51 and above	3	2.9	
Household size			
2-Jan	15	14.7	
4-Mar	65	63.7	
6-May	12	11.8	
7 and above	10	9.8	
Farm Size			
< 1ha	13	12.7	
1-2ha	80	78.4	1.3ha
3-4ha	6	5.9	
5 and above	3	2.9	
Occupation			
Full time farming	54	52.9	
Trading	23	22.5	
Civil servant	15	14.7	
Pensioners	10	9.8	
Source of Farm Land			
Inherited	10	9.8	
Rented	70	68.6	
Inherited/rented	22	21.6	
Source of Labour			
Family	12	11.8	
Hired	90	88.2	

Results in Table 1a & 1b revealed that majority (85.3%) of the farmers were female while 14.7% of the respondents were male. This implies that females were actively involved in okra production than their male counterpart. The domination of female farmers in okra production could be as a result of some traditional beliefs that okra farming is muscularity and therefore should be grown alone by female. This finding disagreed with Farinde [1] who stated in their findings that male dominated okra farming in Egbedore local government area of Osun state Nigeria. About 68.6% of the farmers were married while 19.6% of them were single. Similarly, 58.8% of the farmers were between the ages of 21-30yrs while the average age of the farmers was 39yrs.

This implies that the majority (58.8%) of the farmers was between 21-30yrs and this could help them to use their stamina effectively to promote agricultural production in the study area. This finding is opposite to Harry & Ishikaku [7] who found farmers in Ahoada-East local government area, Rivers state to be above the productive years and this could undermine the growth of agricultural system, because farmers lacked the stamina to promote agriculture. The average household size of the farmers was 9 while the average farm size for okra production was 1.3ha. This is an indication that farmers in the study area were still small scale farmers.

However, majority (52.9%) of the farmers were full time farming while 68.6% of the farmers use rent as their source of land. About 88% of the farmers used hired labour while majority (58.8%) of the farmers used their fellow farmers as the source of agro input. Similarly, About 56.9% of the farmers completed primary school education while 12.7% of them did not have formal education. This high percentage of literacy among farmers could increase agricultural production as regards to adoption of innovations. The average years of farming experience were 12yrs. This implies that farmers had long farming experience and this could help them stating authoritatively the pros and cons associated with okra production. Majority (66.7%) of the farmers had access to credit while about 79.4% of them did not have access to extension service.

However, agricultural extension services did not reach majority of the farmers in the study area. About 20.6% of the farmers who claimed to have been received services might have not gotten adequate training needed for improved okra production. The implication of this is that production of okra will always remain stagnant and will not be improved since improved methods and practices taught by extension agents will not get to the farmers in the study area. Therefore, the farmers will not have access to improved technologies involved in okra production. About 60.8% of the farmers belonged to social organization while 39.2% of them did not belong to any social organization.

Their participation in social activities could enhance their opportunity to obtain loan from financial institutions and

this could be the major reactions majority of them had access to credit. More so, majority (81%) of the farmers use crude implement such as hoe and cutlass regularly for tillage system while 18.6% used modern implements such as tractor within their reach. This high percentage of the use of crude implements is one of the reason okra production in the study area is still under a subsistent level. This finding agreed with Farinde [1] who said that majority of the okra farmers in Egbedore local government area of Osun state, Nigeria used crude implements as their tillage system.

Table 2: Costs of inputs associated with okra production.

Variables	Cost (N)	Percentage	M
Land allocation	5500	14.1	
Seeds	3500	9	
Land clearing	3600	9.2	
Ridge marking	6000	15.4	39,000
Fertilizer application	12000	30.8	
Agro-chemical	1300	3.3	
Weeding	3900	10	
Pesticide/insecticide	1200	3.1	
Miscellaneous expenses	2000	5.1	
Total variable cost	39000	100	

Source: Field Survey, 2016.

Table 2 shows that about 30.8% of the farmers spent N12000 on fertilizer application, 14.1% of them spent N5500 on land allocation, 15.4% spent N6000 on ridge making and 3.3% of the farmers spent N1, 300 on agro-chemical respectively. However, majority (30.8%) of the farmers spent greater parts of their income on fertilizer application. The implication of this is that the farmers could have exhausted the fertilities of the land and therefore need to apply fertilizer in order to restore the virginity of the land. This result disagreed with Farinde [1] who found in their study that farmers in Egbedore local government area of Osun state, Nigeria rejected the use of fertilizer in okra production. The average amount spent on okra production was N39,000.

Figures in Table 3 show that majority (46%) of the farmers produced between 31-40kg of the okra, 19.6% of the farmers produced between 41-50kg and 14.7% produced between 51-60kg of okra. The average number of bags produced by a farmer was 58kg. However, majority (34.3%) of the farmers realized between N61000-70,000, 15.7% realized between N51000-60000 and 12.7% of the farmers realized less than N25000-50,000. The average income from okra production was N97, 200.5k.

Table 3: Percentage distribution of the quantity and income of okra produced per plot.

Variables	Frequency	Percentage	Mean
Quantity of Okra Produced (kg)			
>14-30kg	12	11.8	
31-40kg	47	46.1	
41-50kg	20	19.6	58.3
51-60kg	15	11.7	
61 and above.	8	7.8	
Income (N)			
25000-50000	13	12.7	
51000-60000	16	15.7	97,200.5k
61000-70,000	35	34.3	
71000-80,000	11	10.8	
81000-90,000	20	19.6	
91000 and above	7	6.9	

Source: Field survey, 2016.

Table 4: Percentage distribution of the farmers according to crops intercropped with okra.

Variables	Frequency	Percentage
Maize	75	73.6
Maize and yam	11	10.8
Yam and cassava	35	34.3
Maize and cassava	20	19.6
Yam	36	35.3
Cassava	60	58.8
Yam and pepper	12	11.8
Maize, yam and cassava	58	56.9

Multiple response.

Figures in Table 4 revealed that majority (73.6%) of the farmers intercropped maize with okra, 58.8% intercropped cassava with okra, 56.9% intercropped maize, yam and cassava with okra, 35.3% intercropped yam with okra, 34.3% intercropped yam and cassava with okra and 19.6% intercropped maize and cassava with okra respectively. However, majority of the farmers planted maize with okra in the study area and this could be deduced to the fact that maize has more economic values than other crops in the table and also easier to maintain when intercropped with okra as a result of its hospitality to many crops. This finding rejected the findings of Farinde [1] which disclosed in their studies that about 6% out of the 100% of the farmers intercropped maize with okra.

Conclusion and Recommendations

The findings revealed that 85.3% of the farmers were female while 68% of them were married. The mean age and the average

farm size were 39 years and 1.3ha respectively. About 12.7% of the farmers did not acquire formal education while 56.9% of them completed primary school. The mean years of farming experience was 12 years and this implies that they had long period of farming experience. Majority (58.8%) of farmer's sourced agro-input from fellow farmers while about 29.4% of them used market as their source. Majority of the farmers intercropped maize with okra while 58.8% of the farmers intercropped cassava with okra respectively. The average expenses on okra production was N39000 only while the income from okra business was 97,200.5k. The percentage gross margin for the okra production was 149.2% which implies that okra production has higher profitability as a result of low variable cost attached to it [8].

In view of the above, this study therefore, recommended that agricultural extension worker should work acidulously to educate farmers about okra farming as well as the coping strategies about the management. Training among farmers should be encouraged, regularized and implemented by the government just as to rekindle the minds of the farmers on okra farming. Extension agents should educate okra farmers on the alternative use of organic agriculture and soil management practices as to retain soil fertility. Composite use of okra production should be indoctrinated in the minds of the farmers just as to better the lives of the rural farmers. More remuneration should be approved to agricultural extension workers in order to discharge their duty effectively in their various locations and this will as well entice more people into agricultural extension profession.

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