



PERCEPTION OF FARMERS ON THE CONTRIBUTION OF VEGETABLES TO LIVELIHOODS IN YAKURR LOCAL GOVERNMENT AREA, CROSS RIVER STATE, NIGERIA

EFFIONG, J. B., ABOH, C. L. AND AYA, C. F.

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ABSTRACT

This study assessed the perception of farmers on the contribution of vegetables to livelihoods in Yakurr Local Government Area of Cross River State, Nigeria. The study identified the socio-economic characteristics of farmers in the study area, perception of the contribution of vegetables to livelihoods and identified the factors affecting vegetable farming in the study area. Multi-stage sampling techniques were adopted in selecting 126 respondents for the study. Data were collected with the aid of a questionnaire and analyzed using descriptive statistics such as percentage, frequency, mean and ranks. The result of the study showed that majority (75.4%) of the respondents were females. Most of the farmers (41.3%) were aged between 36 and 45 years. Some (44.4%) were involved in the cultivation of only vegetables and had farm holdings of 1-2 hectares. Majority had monthly income of ₦71,000.00 to ₦90,000.00. The result of the type of vegetables grown by the respondents revealed that fluted pumpkin ranked 1st ($x=2.68$) while Utazi ranked 9th ($x=1.93$). Also the result of the perception of farmers on the contribution of vegetables to livelihoods of farmers showed that vegetables contributed to the income of respondents for training as fashion designers in the study area and were generally excellent. Factors affecting contribution of vegetables to livelihoods were inadequate land, inadequate finance, pests and diseases among others. Vegetables, therefore played a very important role in the livelihoods of farmers in the study area. The study concluded that vegetables are necessary for the improvement of livelihoods of farmers in Yakurr Local Government Area, Cross River State, Nigeria.

INTRODUCTION

There are many kinds of vegetables planted in African soil such as, fluted pumpkin, okra, waterleaf, pepper, bitter leaf, tomato among others. They are main sources of nutrients, vitamins, antioxidants, minerals, proteins among many others. Some vegetables are used for medicinal purposes and are sold locally, thus improving economic status of communities. These vegetables vary according to local and climatic conditions. Luchen and Mingchi (2015) stated that some wild plants are specific to areas and ethnic groups. The indication is that from a variety of wild leafy plants, a certain ethnic group may acknowledge and use only a few plants and regard others as weeds, while others acknowledge such species as major sources of food and nutrition.

Vegetables play important roles in human body especially those concerning essential vitamins and mineral elements, thus, resulting in the prevention of the problem of malnutrition. Effiong, Ijioma and Effiong (2016) and FAO (2010) pointed out that the problem of malnutrition is mostly escalated among children and pregnant women, and is responsible for high mortality rates of these groups. Insufficient consumption of vegetables annually cause about 2.1 million deaths worldwide, and is one of the top ten risk factors contributing to human mortality (Effiong, Effiong and Udo, 2015; Effiong and Aboh, 2019; Aboh and Effiong, 2019 and Prescott-Allen and Prescott-Allen, 2010). This necessitates the inclusion of vegetables (especially where exotic vegetables are not affordable) in diet to alleviate problem of hunger and malnutrition that are

Effiong, J. B., Department of Agricultural Extension and Rural Sociology, Faculty of Agriculture, Forestry and Wildlife Resources Management University of Calabar, Calabar.

Aboh, C. L., Department of Agricultural Extension and Rural Sociology, Faculty of Agriculture, Forestry and Wildlife Resources Management University of Calabar, Calabar.

Aya, C. F., Department of Agricultural Extension and Rural Sociology, Faculty of Agriculture, Forestry and Wildlife Resources Management University of Calabar, Calabar.

prevalent in Nigeria. Effiong and Asikong (2013) and Laker (2016) indicated that indigenous vegetables such as Moringa, sword bean (*lablab* spp.), country bean (*Dolichos* sp.), Luffa, aroids (*Colocasia*, *Amorphophallus*, *Alocasia*, *Xanthosoma*), Cucurbits, yam (*Dioscorea*), leafy vegetables supplemented are sources of foods and employment leading to improved livelihood and poverty alleviation. According to Effiong and Asikong (2003), these all important crops have essentially turned out to be a major source of livelihoods to vast majority of the people of Yakurr Local Government Area in Cross River State, Nigeria.

In Cross River State, vegetable consumption in diets augments nutritive values of staple foods like rice, beans, yam and maize due to their vitamins, minerals, protein, sugar and oils thereby controlling the incidence of hunger (Effiong and Aboh, 2018) and (Aboh and Effiong, 2019). For this reason, the World Health Organization (WHO) recommended daily intake of 400 – 800g/day of vegetables worldwide. However, in Nigeria, the daily intake of vegetable ranges from 200 – 450g/day. This is because of the current economic recession; consumers are more interested in the quantity of food they consume and not the quality (WHO, 2000), (Effiong, Effiong and Udo, 2015) and (Effiong and Aboh, 2019).

A person's livelihood refers to his/her "means of securing the basic necessities of life – food, water, shelter and clothing (Effiong, 2012). Livelihood is as a set of activities performed to live for a life span, involving securing food, water, medicine, clothing, shelter, and the capacity to acquire wealth by working either individually or as a group using endowments of both human and material resources for meeting the requirements of his/her household on a suitable basis with dignity (Effiong, 2013; FAO, 2000; Aboh and Effiong, 2019). The activities are usually carried out overtime and repeatedly. For instance, a fisherman's livelihood depends on the availability and accessibility of fish (Effiong, 2012) and (Chambers and Conway, 1992). Also, livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living (Effiong and Aboh, 2018). Livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future while not undermining the natural resource base of the beneficiary (WHO, 2000; Scoones, 2018; Effiong and Aboh, 2019). Despite the perceived usefulness and untapped potential of vegetables, it has been neglected

by farmers and rural dwellers. This may lead to negative effect on food security, socio-economic conditions and livelihood activities of rural people in Yakurr Local Government Area of Cross River State, Nigeria.

METHODOLOGY

This study was carried out in Yakurr Local Government Area of Cross River State. Yakurr was created from Obubra Local Government Area in 1987. It is located in longitude 5°79'73°N and latitude 8°17'76E of the equator. It has a large landmass with an area of 670 km². It has its boundary with Abi to the East, Obubra to the North, Biase to the East, and Akamkpa Local Government Area to the West. It comprise of 13 Wards and is inhabited by the people of Agoi Ibmai, Assiga, Mkpani, Ekor, Nko, Ugep and Idomi. The dominant language is Yakurr. The people of the area are largely farmers (Effiong and Asikong, 2013). The area produces Yam, Cocoyam, Cassava, Plantain, Beans, Maize and Pumpkin. Cash crops include: oil palm, cocoa, cashew, and rubber. The area is near the rainforest belts and so the vegetation is that of tropical rainforest. The area consists of small and medium scale farmers who predominantly cultivate cassava and yam. The intercrops are fluted pumpkin, melon, sweet yam, cocoa yam, and water yam. Apart from farming, they are also engaged in palm wine tapping, welding works, processing of wild palm fruits, tailoring, trading and processing of cassava into garri for sale and consumption (Effiong and Asikong, 2013; Effiong, Ijioma and Effiong, 2016).

Descriptive survey was adopted for this study. This design was considered appropriate since the study intended to use the information obtained through questionnaires in describing observed phenomena. Thus the information provided by vegetable farmers were used to describe the observations, deductions made and conclusions drawn.

The population of the study comprised all registered vegetable (fluted pumpkin, waterleaf, okra, lettuce (afang), bitter leaf, scent leaf) farmers in Yakurr Local Government Area of Cross River State., Nigeria.

A multi-stage random sampling technique was adopted in selecting respondents for the study. The first stage was a simple random selection of 9 (representing 80%) cells (units) out of the 13 cells (units) in Yakurr block. At the second stage, a random sampling of fourteen (14) vegetable farmers from each of the 9 cells were conducted in the study area. This gave a total of 126 respondents used for the study.

RESULTS AND DISCUSSION

Table 1: Distribution of respondents according to socio-economic characteristics

	Frequency	Percentage (%)
Gender		
Male	31	24.6
Female	95	75.4
Total	126	100
Age		
1 – 26	6	4.8
26 – 35	46	36.5
36 – 45	52	41.3
46 – 55	22	17.5
Total	126	100
Marital Status		
Single	32	25.4
Married	94	74.6
Total	126	100
Farm Size		
1 – 2	84	66.7
3 – 4	39	31.0
5 – 6	3	2.4
Total	126	100
Household Size		
1 – 2	84	66.7
3 – 4	39	31.0
5 – 6	3	2.4
Total	126	100
Social Organization		
Men/Women Religious Society	55	43.7
Young Farmers' Club	25	19.8
Agricultural Cooperative Society	17	13.5
Age-grade Society	29	23.0
Total	126	100
Systems of Land Ownership		
Inheritance	70	55.6
Leasehold	29	23.0
Purchase	12	9.5
Communal/free gift	15	11.9
Total	166	100
Education level		
No formal education	23	18.3
Primary level	36	28.6
Secondary level	32	25.4
Tertiary level	35	27.8
Total	126	100
Major occupation		
Farming	57	45.2
Civil servant	30	23.8
Trading	39	31.0
Total	126	100

Type of farming	56	44.4
Only vegetables	15	11.9
Vegetables and livelihood	24	19.0
Vegetables and aquaculture	31	24.6
Vegetable and other crops	126	100
Total		
Monthly income		
<71,000	39	31.0
<1,000-90,000	45	35.7
91,000-110,000	30	23.8
111,000-130,000	10	7.9
>130,000	2	1.6
Total	126	100
Farming Experience		
Below 1.5	38	30.2
6 – 10	70	55.6
11- 15	12	9.5
16 – 20	4	3.2
Above 20	2	1.6
Total	126	100

Source: Field Survey, 2019

SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

The results in Table 1 shows the distribution of respondents according to socio-economic characteristics. The results indicate that majority (75.4% of the vegetables farmers were females. The age bracket of majority (41.3%) of the farmers was 36 – 45 years with a large majority (74.6%) being married. About 45.2% had farming as their major occupation; 44.4% were involved in the cultivation of vegetables, having farm sizes ranging from 1 – 2 hectares as indicated by a high majority of 66.7% of the farmers; also, a majority (55.6%) owned land by inheritance. About 28.4% of the farmers had primary level of education, also 35.7% had monthly income of ₦71,000.00 to ₦90,000.00. About majority 55.6% had 6 – 10 years of farming experience in the study area.

This result corroborates that of Effiong, Ijeoma and Effiong (2016) whose result revealed that vegetable farmers were predominantly females (78%); 6% of

males cultivated the crop for commercial purposes while 16% of males supported their wives to cultivate for subsistence purposes. A study by Ayanwuyi, Ogunlade, and Oyetoro (2010) revealed that about 72.0% of vegetable farmers in Oyo State, Nigeria were females and 95.8% were between 31 and 51 years old. While 29.4% had no formal education, 70.6% had various levels of education. About 90% of the farmers had many years of farming experience ranging from 6 years to 21 years and above. The result of this study is also in line with a study by Effiong, Effiong and Udo (2015) who revealed that 66.7 percent of the respondents were aged between 31 – 50 years; 72.2 percent were married and 53.3 percent had farming experience of about 9 years. Also, the result is in contrast with the study by Oluwa and Oluwa (2016) which revealed that about 7% of vegetable farmers are land owners, 3% inherited land while 90% obtained their farmland on lease basis in Lagos State, Nigeria.

Table 2: Distribution of respondents according to type of vegetables grown

Vegetables	Always cultivated	Sometimes cultivated	Never cultivated	Mean	Rank
1 Fluted pumpkin	94 (282)	26 (52)	6	2.68*	1
2 Okra	68 (204)	48 (96)	10	2.46*	2
3 Water leaf	51 (153)	73 (146)	2	2.39*	3
4 Pepper	63(189)	50 (100)	13	2.39*	4
5 Tomato	36 (108)	70 (140)	20	2.13*	5
6 Bitter leaf	41 (123)	52 (104)	33	2.06*	6
7 Spinach (green leaf)	34 (102)	62 (124)	30	2.03*	7
8 Lettuce (afang/atama)	40 (120)	45 (90)	41	1.99	8
9 Utazi	43 (111)	43 (86)	46	1.93	9

Source: Field Survey, 2019

* = major vegetables grown in the area

The result in Table 2 showed the distribution of respondents according to the type of vegetables grown in the study area. From the result, Fluted pumpkin ranked 1st ($x=2.68$), Okra ranked 2nd ($x=2.46$), Water leaf ranked 3rd ($x=2.39$), Pepper ranked 4th ($x=2.39$), Tomato ranked 5th ($x=2.13$), Bitter leaf ranked 6th ($x=2.06$), while Spinach 7th ($x=2.03$) and were the major type of vegetables grown in the study area. According to Effiong (2013) vegetables grown by farmers in Nigeria include: Pumpkin, Water leaf, Bitter leaf, Scent leaf, Garden egg,

Green, Okro, Tomato, and Afang leaf. According to Effiong and Aboh (2018), some of the farmers grew traditional vegetables such as spider plant, Amaranthus species and pumpkin leaves. Findings by Effiong (2013), Aboh and Effiong (2019) indicate that vegetable production in Nigeria has been on the increase for leafy vegetables like Amaranthus, Water leaf, Bitter Leaf, Lettuce, Telfaira as well as non-leafy vegetables like tomato, watermelon, and okra.

Table 3: Distribution of respondents according to perception on the contribution of vegetables to livelihoods

Variables	Excellent	Very good	Good	Fair	Not fair	mean	rank
1 Fashion Design	100(50)	22(88)	3(9)	1	-	4.75*	1
2 Shoe making	32(160)	65(260)	22(66)	3(6)	4	4.65*	2
3 Nutrition advancement	88(440)	29(116)	6(18)	3(6)	-	4.60*	3
4 Education of children	38(190)	64(256)	18(54)	5(10)	1	4.06*	3
5 Farm financing	47(235)	39(156)	23(69)	10(20)	7	3.87*	5
6 Livestock keeping	29(145)	52(208)	24(72)	13(26)	8	3.64*	6
7 Health Education of farmers	28(140)	41(164)	39(117)	10(20)	8	3.56*	7
8 Processing of farm products	33(165)	39(156)	29(87)	13(26)	12	3.54	8
9 Transportation systems	37(185)	27(108)	40(120)	8(16)	14	3.52*	9
10 Storage services	30(150)	42(168)	31(93)	10(20)	13	3.52*	10
11 Assets renting	34(170)	38(152)	28(84)	12(24)	14	3.52*	11
12 Financial management	32(160)	36(144)	31(93)	13(26)	14	3.47*	12
13 Food vendor	26(130)	37(148)	40(120)	15(30)	8	3.46*	13
14 Crop productivity	32(160)	35(140)	26(78)	17(34)	16	3.39*	14
15 Membership of farming groups	28(140)	33(132)	37(111)	15(30)	13	3.38*	15
16 Community security service	29(145)	33(132)	35(105)	10(20)	19	3.34*	16
17 Farm input supplier	24(120)	43(172)	30(90)	11(22)	18	3.35*	17

Source: Field Survey, 2019

CONTRIBUTION OF VEGETABLES TO LIVELIHOODS

The result in Table 3 showed the distribution of respondents' perception on contribution of vegetable to livelihoods. The result revealed that vegetables contributed to income of farmers used in having training as fashion designers and ranked 1st ($x=4.75$), shoe making ranked 2nd ($x=4.65$), nutrition advancement ranked 3rd ($x=4.60$), education of children ranked 4th ($x=4.06$) among others and were generally excellent. Ngegba, Sesay and Bangura (2016) carried out a study and found that the livelihood status of vegetable farmers in terms of community security services (48.4%) was excellent, while crop productivity had (73.3%) and communication systems (63.3%), drinking water supply

(36.1%) and were very good. This study is in agreement with Effiong, Ijeoma and Effiong (2016) who asserted that vegetable production is a *sin-qua-non* to livelihoods. Access to farm inputs supply (44.4%), processing of farm products (43.3%), and food vendor (48.3%) were expressed as being good in the study. This finding is in accordance with what Ayodele (2005) observed in his study that food product processing is a livelihood activity derived from arable crop production. Also, the shoe making (80.0%), livestock keeping (77.8%), children's education status (70.0%), financial management activities (66.7%), health education of the farmers (55.5%), assets renting was 54.4% and were ascribed fair statuses.

Table 4: Distribution of respondents based on their perception of factors affecting vegetable production in the study area

S/N	Variables	SA	A	U	D	SD	Mean	Rank
1	Inadequate land	87(435)	24(96)	5(15)	8(16)	2	4.48*	1
2	Inadequate finances	25(125)	67(268)	21(63)	5(10)	8	3.76*	2
3	Chicken destroying vegetable	45(225)	29(116)	25(75)	18(36)	9	3.66*	3
4	Vegetable theft	40(200)	40(160)	21(63)	13(26)	12	3.66*	3
5	Heavy rainfall	29(145)	54(216)	20(60)	15(30)	8	3.64*	5
6	Insufficient market for selling vegetables	40(200)	39(156)	23(69)	14(28)	10	3.63*	6
7	Insufficient water	29(145)	41(164)	34(102)	11(22)	11	3.52*	7
8	Restrictive village policy	28(140)	43(172)	28(84)	15(30)	12	3.48*	8
9	Pests and diseases	23(115)	54(216)	16(48)	21(42)	12	3.44*	9
10	Poor transportation	23(115)	52(208)	22(66)	15(30)	14	3.44*	9

Source: Field survey, 2019

FACTORS AFFECTING THE CONTRIBUTION OF VEGETABLES TO LIVELIHOOD

The result in Table 4 shows the distribution of respondents base on factors affecting contribution of vegetables to livelihoods in the study area. The study revealed that inadequate land ($x=4.48$), inadequate finance ($x=3.76$), chicken destroying crops ($x=3.66$), among others were the major factors affecting the cultivation of vegetables in the study area. Others were pests, diseases and insufficient rainfall, while marketing constraints were; poor crop prices, exploitation by middlemen, post-harvest losses, inadequate market information, low consumer awareness and low demand. According to Effiong and Udo (2015), major constraints to production of vegetables includes; pests and disease infestation, inadequate extension services, high cost of labour and inadequate access to credit facilities. Low vegetable production was attributed to pests, diseases, seeds, land unavailability, inappropriate husbandry practices and lack of awareness on the crop's nutritional value.

SUMMARY

This study concludes that vegetables play important role in the livelihood of rural farmers. This is evidenced in its contribution to income, housing conditions, nutrition, education of children and general livelihood variables as perceived by farmers. Though other vegetables are produced, farmers mostly cultivated fluted pumpkin in large quantities; this is attributable to its high market demand in the study area. For increased and continued production of vegetables in Yakurr, an enabling environment should be created for the farmers who are the rural disadvantaged but produces the bulk of the vegetables consumed in the country.

Thus vegetable production in the study area is gender friendly though women driven and a serious business because it provides means of livelihoods for most Cross Riverians, Nigerians and their families. It plays an important role in the improvement of the health of citizens, safeguards environments and provides raw materials and food.

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