



Original Article

Consumer Preferences for Leafy Vegetable among Rural and Urban Dwellers in Oyo State, Nigeria

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ARTICLE INFO

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How to cite this article:

Ajjjola, S., M.O. Ojebode and S.A. Yusuf. 2014. Consumer Preferences for Leafy Vegetable among Rural and Urban Dwellers in Oyo State, Nigeria. *The Journal of Agriculture and Natural Resources Sciences*.1(1):28-33.

Article History:

Received: 17 September 2014
Revised: 29 September 2014
Accepted: 1 October 2014

ABSTRACT

There is need to improve the nutritive value of both rural and urban dwellers through a potential utilization of food resources. This study therefore, analyzed the consumers' preferences for leafy vegetables in Ibadan metropolis. A purposive sampling technique was used to select markets based on their sizes and notable for vegetable patronage where buck purchases were carried out. A total of 120 marketers were randomly interviewed with the use of well-structured questionnaires from 6 selected markets located in five local government areas in Ibadan. Statistical tools used include descriptive statistics using percentages, means and frequencies. While Probit model was used on factors that determine preference for leafy vegetables. The findings revealed that Majority (62%) of the marketers were female. 41% and 39% have primary and secondary education respectively. Results of the individual preference for leafy vegetables indicated that *Amaranthus spp.* had the highest mean value (3.76) and were ranked first while other vegetables such as waterleaf, celosia, jute mallow, and fluted pumpkin have a mean value of 2.38, 2.53, 2.48, and 2.62 respectively. The Probit model result shows that education is with positive relationship at 10% level of significance. Accessibility, gender and age were significant at 1%, 1%, and 5% respectively and they were positively related with the dependent variable. Therefore, more training on the production of vegetables especially the use of Fadama (flood plain) area during the dry season should be intensified in order to have all year round production and individual be encouraged for backyard farming to improve their preferences.

Keywords: Leafy vegetables, Consumer Preference, Rural and Urban dwellers.

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INTRODUCTION

The world's population is rapidly becoming urbanised as the world's urban population increased from 30 percent in 1950 to 47 percent in 2002. The three fundamental components of food security availability, access and utilization differ in urban and rural contexts and across urban socio-economic groups. A greater diversity of both local and imported food products are available in cities although, most of the food is not produced within city boundaries (Kennedy, 2003). Nigerian cities is increasingly becoming an important economic

activity among a section of the urban dwellers given the increasing number of small garden and vegetable plots springing up in different parts of the country. This is because it serves both as a quick source of food thereby improving nutritional status as well as an employment opportunity for many urban dwellers. Besides, the potential for significant increase in food production can be exploited through the water resources that are available on the flood plains. Farming in Fadama areas is therefore, a major livelihood asset for urban dwellers.

In Nigeria, vegetable production has been on-going for decades, providing employment and income for the increasing population especially during the long dry season (Agusiobo, 1984). Urban agriculture is one such strategy that enhances food security, stimulates local economic development, and facilitates social inclusion and poverty alleviation (Hovorka and Keboneilwe, 2004). Vegetables are the edible parts of plants that are consumed wholly or in parts, raw or cooked as part of main dish or salad. Leafy vegetables are important items of diet in many Nigerian homes (Mephba&Eboh, 2007; Asaolu, 2012). Apart from the variety which they add to the menu, they are valuable sources of nutrients especially in rural areas where they contributes substantially to protein, minerals, vitamins, fibres and other nutrients which are usually in short supply in daily diets (Udosen, 1995; Singh and Mohammad, 2007).

The vegetable farming during the dry season is in the form of small-scale low cost irrigation system. However, it is noteworthy that under this system, farmers in Nigeria obtain very low yields compared to global yields (Sabo and Zira, 2009). The low yield situation is further aggravated by the decline in funding of extension activities, which has resulted into loss of extension information to many vegetable farmers (NAERLS, 2008). Low yield could be due to decline in the unit output from the various agricultural inputs. These are capital, land, and management. Other constraints would include factors such as soil fertility decline, soil borne pest and disease, inadequate planting materials, high cost of labour, labour intensive operations and marketing of the product (Yemisi and Mukhtar, 2009). However, Growing vegetable demand could be achieved through bringing additional area under cultivation crops, using hybrid crops, and adoption of improved agro-techniques (Rajasekaret al, 2013)

Vegetable (leafy and fruits) are widely cultivated in most parts of sub-Sahara Africa, as a cheap and reliable source of protein, vitamins, zinc and iron. They constitute between 30% and 50% of iron and vitamins A in resource poor diet. Vegetable production in Nigeria is characterized by use of crude implements, non-availability of inputs, illiteracy, expensive and complex technologies (Mofekee et al., 2003). Leafy vegetables are also widely cultivated as one of the features of Nigerian's diet that a traditional meal without it is assumed to be incomplete. The consumption of vegetables is generally lower than the FAO recommendation of 75kg per year inhabitant (206g per day per capita) (Badmus and Yekini, 2011). In many developing countries the supply of nutrient is inadequate to meet the mineral requirements of farm animals and rapidly growing population. Minerals cannot be synthesized by animals and must be provided from plants or mineral rich water (Muhammed and Sharif, 2011; Asaoluet al., 2012).

Therefore, this study thus analysed availability and the consumer preferences for leafy vegetable among rural and urban dwellers in Oyo State, Nigeria, identified the factors influencing consumption, perception of respondents to source of purchase and preferences for leafy vegetables in the study area.

MATERIALS AND METHODS

The study was conducted in Ibadan metropolis. It has a population of 2,550,593 people (National population Census, 2006), where majority are traders that involved both the rural and urban dwellers across the metropolis. A purposive sampling technique was used to select markets based on their sizes and notable for vegetable patronage where buck purchases were carried out. A total of 120 marketers were randomly interviewed with the use of well

structured questionnaires from 6 selected markets located in five local government areas in Ibadan. 20 respondents were interviewed per markets while 100 questionnaires were retrieved for analysis. The six markets selected for the study were; Apata markets, Scout camp market, Bodija market, Omi Adio market, Oja Oba market and Odo - Ori market. Data were collected on socio economic characteristics of the respondents, consumption rate of leafy vegetables in the study areas, availability and preference of leafy vegetables, factors influencing consumption and preference for leafy vegetables and possible suggestion in improving consumption of leafy vegetables.

The data collected was analysed using descriptive statistics which include frequency, percentage and cumulative frequency for the socio economic characteristics, availability of the produce, preferences and sources for vegetable while the probit model was used to obtain information on factors that determine preference for leafy vegetables. The model is specified as:

$Y = \alpha + \beta X_i + \epsilon_i$, where:

α = Intercept

β = Slope (co-efficient) of the independent variables

Y = Dichotomous variable which can assume a value of 0 if no preference and 1 if there is

Preference for Leafy Vegetables

X_i = A set of explanatory variables as follows:

X1 is education dummy (D=1 if the respondent has education, 0-if otherwise).

X2 is palatability of the leafy vegetables (1-if respondent like the taste of the leafy vegetable, 0-if otherwise);

X3 is the accessibility of the leafy vegetables (1-if the respondents have access to the leafy vegetables, 0-if otherwise).

X4 is the gender of the respondents (0-male, 1-female)

X5 is the age of the respondent in years.

X6 is the marital status of the respondents (0-single, 1-married)

X7 is trading dummy (D=1 if respondent is engaged primarily in trading, 0-if otherwise)

RESULTS AND DISCUSSION

Results in Table 1 shows that majority (62%) of the marketers are female while 38% were male.

Table1: Socio economic characteristics of respondents

Characteristics	Frequency	Percentage
Gender		
Male	38	38.0
Female	62	62.0
Marital status		
Single	39	39.0
Married	55	55.0
Divorced	5	5.0
Widow/widower	1	1.0
Education level		
No formal education	12	12.0
Adult education	8	8.0
Primary education	41	41.0
Secondary education	39	39.0
Occupation		
Civil servant	12	12.0
Trading	40	40.0
Farming	17	17.0
Unemployed	18	18.0
Student	13	13.0

Source: Field survey, 2013

This might not be unconnected to the fact that women are more engaged in processing and marketing of agricultural products (Busari *et al.*, 2012). About 55% were married while 39% were single. The result also revealed that the marketers were educated as 41% and 39% had primary and secondary education respectively. The percentage of respondents that prefer leafy vegetables is inversely proportional to the educational status, this is due to the number of years for which the respondents has been exposed to formal education. An individual with higher level of education prefers leafy vegetables because of its ease of consumption, availability and understanding its importance in terms of nutrients. The occupation of the marketers was mainly trading and few of them engaged in farming while some used their children to hawk after school hours.

Table 2 shows the preferences for leafy vegetables and ranking based on the demands for the leafy vegetables. The result revealed that amaranthus was ranked 1st with higher number of respondents (3.80) while waterleaf was ranked least with mean 3.07. The most preferred vegetable was amaranthus followed by jute mallow. The preference for amaranthus was higher which might be connected to its availability and nutrient as well as taste for the vegetable.

Table 2: Availability and Preference for Leafy Vegetables

Leafy Vegetables	Availability				mean	rank
	always	at times	scarce	not at all		
Amaranthus	86	8	6	-	3.80	1 st
Waterleaf	40	30	27	3	3.07	5 th
Celosia	47	31	16	6	3.19	4 th
Jute mallow	61	24	14	1	3.45	2 nd
Fluted pumpkin	46	37	12	5	3.24	3 rd

Leafy Vegetables	Preference					mean
	1 st	2 nd	3 rd	4 th	5 th	
Amaranthus	80	17	2	1	-	3.76
Waterleaf	25	26	23	14	12	2.38
Celosia	27	29	23	12	9	2.53
Jute mallow	31	20	27	11	11	2.89
Fluted pumpkin	48	14	7	14	17	2.62

Source: Field Survey 2013

Table 3 shows the perception of marketers to source of purchase. It shows that the buck purchase was from the central market (urban market). Some would gather them together for sale in the urban or peri urban market in order to attract more money and to avoid wastage.

Table 3: Perception of Marketers to Source of Purchase

Source of purchase	Yes	No
Village market	14	86
Central market	40	60
Wholesalers	1	99
Retailer using kiosk	19	81
Hawkers	24	76
Farmer (farm gate)	6	94

Note: The Total above 100 Shows Multiple Responses

Table 4 shows the result of probit model used to analyse the determinant of consumer preferences for leafy vegetables. The variables include education of respondents, accessibility of the leafy vegetables, sex of the respondents, and age of the respondents. Education is significant at 10% level of significance. It has a positive relationship with the preference for leafy vegetable (1.5595) which implies that an individual that has access to education is likely to prefer leafy vegetable. Accessibility is significant at 1% level. It has a positive relationship

with the preference for leafy vegetable (5.3342) while gender and age were significant at 1 and 5% respectively and they were positively related with the dependent variable.

Table 4: Probit Model Result

Variable	Coefficient	Standard error
Constant	2.8306*	1.5014
Education	1.5594*	0.8851
Palatability	1.1657	0.8004
Accessibility	5.3342***	1.3038
Gender	1.5681**	0.7067
Age	0.6463*	0.3885
Marital status	1.1137	0.7070
Trading	0.8154	0.6526

Diagnosis statistics $X^2=128.4487$, *, **, and ***, 10%, 5%, and 1% level of significance

CONCLUSION

The results of the study show that individual preference for leafy vegetables indicated that *Amaranthus spp.* had the highest mean value (3.76) and was ranked first, while other vegetables such as waterleaf, celosia, jute mallow and fluted pumpkin have a mean value of 2.38, 2.53, 2.48, and 2.62 respectively. Therefore, more training on the production of vegetables especially those that attract more demands should be extended to the respondents. Also, the use of Fadama area should be intensified in order to have all year round production. The preference for leafy vegetable is also found to be higher among females, government effort should however be geared towards sensitizing male individuals by funding seminars and talks that will address the relevance and the cheapness of these leafy vegetables.

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