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Youth Awareness and Consumption of Functional Foods in Nigeria: The Case of Plantain Flour

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Abstract

The rural-urban interface is creating life style changes such as the awareness and consumption of functional foods. This has the potential of generating sustainable income and reducing post-harvest losses for producers and processors but consumer attitude and response to such foods, hence the sustainability of the markets, needs to be examined. This study examined consumers' awareness and knowledge of plantain flour among youths in Ibadan. It also examined the factors which drive their decision to choose it as a main staple. A random sample of 150 consumers ranging between the ages of 18-31 was chosen and data collected with the aid of a structured questionnaire. The data were analysed using descriptive statistics and binary logistic regression. The results showed that young female adults were more inclined to try the product, but were not aware of its alternative uses. It also revealed that though plantain was regularly consumed in its fried form, the knowledge of its health benefits as flour was quite poor. The most prominent knowledge about it is its usefulness in controlling diabetes (by over 60 %). Logistic regression shows that the probability of consuming plantain flour is affected by the availability of other acceptable staples (cassava) and their relatively cheap prices. The results indicate the gap in knowledge implies that a large market for plantain flour is yet untapped. The gap can be filled by a broad based, consumer oriented marketing policy.

Introduction

Plantain is a major staple food crop in Nigeria. It ranks third after yam and cassava in consumption. It is very often consumed boiled, fried or roasted. Though the production level is high, it is a highly perishable crop and is not easily stored in its original form hence farmers experience a high percentage of post-harvest loss at maturity. To stem the loss and because of its usefulness, unripe plantain is often processed into flour. Apart from being a means of prolonging the shelf life of plantain, the flour is known to promote health and prevent or control diseases such as diabetes. However, plantain flour does not appear to be popular in the market as such farmers would rather still sell unprocessed form because there is no market for the flour. But the degree of loss is so high that farmers are willing to quit its production. On the other hand, there is a high rate of rural-urban migration the negative effects of which have been addressed in literature. But the positive aspect which is not usually focused on is the fact that migrants seek market opportunities for farmers back 'home' and as such could be agents of agricultural transformation if their strengths and dynamism as youths are harnessed. Education is a

major reason for rural urban migration and by studying in big towns and cities opportunities which were hither to hidden are exposed to such young people. If organized and harnessed, they hold a huge potential for market creation, enterprise development and the development the food system or value chain of underutilized functional foods like plantain flour. Also there is Increasing demand for convenient but nutritious food due to rapid urbanization and the emerging trend with plantain flour has the potential of creating jobs for young people as well as stemming the high level of post-harvest loss of plantain.

It is however expected that such young people should be aware of such opportunities, have the right perceptions and be favorably disposed towards it before taking a risk at harnessing the opportunity.

This study set out to

- Examine the level of awareness of plantain flour among consumers
- Examine the level of its consumption among youths
- Determine the factors that drive the decision to consume plantain flour; and
- Make policy recommendations based on the findings of the study.

Research Methodology

The study was carried out among undergraduate students of the University of Ibadan. A total of 150 students were randomly selected from 6 halls of residents out of 11. The 150 students were selected across study levels. The questionnaire focused on socio-economic, consumption expenditure, knowledge and consumption of plantain flour. The data collected were analyzed using descriptive statistics and logistic regression. The functional form of the model is given below:

$$Y = \beta_0 + \beta_i X_i + e_i$$

Where:

Y = dichotomous dependent variable which can be explained as; Y=1 if respondent is willing to consume plantain flour and 0 otherwise.

The independent variables include; X_1 = Sex of respondents (Male = 0, females = 1) X_2 = income

; X_3 = Price

X_4 = Garri; X_5 = Yam; X_6 = Fish; X_7 = Vegetable; X_8 = Fruits; X_9 = Yam flour; X_{10} = Cassava Flours;

X_{11} = Wheat flour; X_{12} = Utilization; X_{13} = Health Benefit awareness e_i = Error term

β_i stands for estimated parameters explaining the participatory variables respectively.

Results and Discussion

The respondents are young people who mainly depend on stipends given to them from home however some of them are involved in one form of secondary activity or the other in order to support themselves (Table 1). They consume mainly ripe plantain because of its sweet taste and preferably in the fired form. At least 51 percent of the male students and 60 percent of the female spend about 10 percent of their monthly stipend on it monthly. Consumption preferences are similar for both groups of students (Table 2). The level of awareness and knowledge of plantain flour is generally low but still higher among the female students the most common health benefit known to them is its use in the control of diabetes among elderly people (Table 3). This singular fact makes them associate plantain flour with the sick and elderly. As such when compared with other common staple meals such as 'garri' (cassava flakes) and 'amala' (cassava flour), it ranked low. The price of other staple flour and the knowledge of

its utilization are factors which drive the decision to consume it or not. It is generally perceived to be too expensive for them (Table 4).

Conclusion and Recommendations

The probability of consuming plantain flour is affected by the availability of other acceptable staples (cassava) and their relatively cheap prices. Young people consider it to be expensive and useful only for older and sick people. Positive life style changes may not be occurring among young educated people. A large market for plantain flour is yet untapped as such aggressive marketing is required to expand the sector; also a broad based, consumer oriented marketing policy.

Table 1: Socio-economic Characteristics of Respondents

	Male		Female		All	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Age						
17 - 22	40	67.8	53	70.7	93	69.4
23-28	19	32.2	21	28.0	40	29.9
29-35	0	0	1	1.3	1	0.01
Total	59	100	75	100	134	100
Other Activity						
Farming	2	3.4	0	0	2	1.5
Marketing	4	6.8	8	10.7	12	8.9
Teaching	5	8.4	3	4	8	6
Nothing	48	81.4	64	85.3	112	83.6
Total	59	100	75	100	134	100
Income**						
1000-6000	2	44.6	71	66	121	91
6001-12000	4	8.5	3	3.8	8	6.1
12001-18000	1	1.7	0.0	0.0	1	0.8

Source: Survey data 2012 ** Monthly income earned

Table 2: Consumer's Preference For Plantain

	Male		Female		All	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Reasons						
Nutritious	26	44.1	27	36	53	39.6
Sweet Taste	33	55.9	48	64	81	60.4
Total	59	100	75	100	134	100
Form Preferred						
Boiled	9	15.3	7	9.3	16	11.9
Fried	43	72.8	56	74.7	99	73.9
Chips	6	10.2	6	8	12	9
Others	1	1.7	6	8	7	5.2
Total	59	100	75	100	134	100
Mthly Expenditure						
100-600	51	86.4	60	80	111	82.8
601-1200	7	11.9	13	17.3	20	15
>1200	1	1.7	2	2.7	3	2.2
Total	59	100	75	100	134	100

Source: Survey data 2012

Table 3: Knowledge of Plantain Flour

	Male		Female		All	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Awareness						
Yes	40	67.8	51	68	91	67.9
No	19	32.2	24	32	43	32.1
Total	59	100	75	100	134	100
Knowledge of Plantain						
Nutritious	5	8.6	23	30.7	28	21.1
Made from plantain	20	34.5	11	14.7	31	23.3
Looks like 'amala'	15	24.1	7	9.3	22	15.8
Nothing	19	32.8	24	32	43	32.3
Total	59	44	75	56	134	100
Health Awareness						
Mucous Treatment	13	22	11	15	24	18
Kwashiorkor treatment	11	19	13	17	24	18
Tonsillitis Treatment	4	7	4	5	8	6
Diabetes Control	31	52.5	48	64	79	60
Sore Throat Treatment	4	7	5	7	9	7
Anti-oxidant	24	40	24	32	48	36

Source: Survey data 2012

Table 4: Factors Driving Consumer Preference

Variable	Coeff.	Std. Error	P> z
sex	.4996051	.4709083	0.289
monthly income	0.0002	.0000703	0.970
price	-.0012049	.0004317	0.987
garri	6.95e-06	.0007175	0.542
yam	-.0004377	.0008046	0.416
fish	.0006542	.000467	0.723
veg	.0001656	.0006639	0.615
fruits	.0006025	.0004991	0.227
yflour	.0008741	.0009492	0.357
cflour	-.0042369	.0020096	0.089***
wflour	.0058757	.0030811	0.057***
utilization	-.7432215	.2597415	0.008*
Health awareness	-.035531	.0550528	0.519
cons	7.1376	3.51354	0.042

$\chi^2(23) = 48.74$ Prob > $\chi^2 = 0.0013$ Pseudo $R^2 = 0.2745$

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