

Rural Households Perception of Cooking Banana (*Musa sp. ABB genome*) in the Niger Delta Region of Nigeria

A.C. Agumagu and O.M. Adesope

Department of Agricultural Economics and Extension, University of Port-Harcourt,
Choba, PMB. 5323, Port-Harcourt, Rivers State, Nigeria

Abstract: This study examined perceptions of rural households about cooking banana. A sample of 264 members from 93 households in the study area was used for the study. Data were collected by the use of structured questionnaire and interview and statistical tools used include frequencies, percentages and Pearson Correlation. Perception about Cooking banana was found to be unfavourable among most respondents. Findings of the study further revealed that the main source of information about cooking banana technology is interpersonal (friends, neighbours, relations). Most (53%) of the respondents have not eaten Cooking banana though they have heard of it. The study found that age of respondents ($r = 0.940$, $p = 0.000$), education ($r = 0.832$, $p = 0.000$), likeness for cooking banana ($r = 0.843$, $p = 0.000$) and source of information ($r = 0.568$, $p = 0.000$) were significantly related to their perception about Cooking banana. There is need for wider publicity about the Cooking banana crop, the use of farmer groups in the dissemination process should be given serious attention. Also, the Agricultural institutions in the area should live up to their responsibilities and ensure that the technology is reasonably adopted by inhabitants of the area.

Key words: Perceptions, agricultural, respondents (IITA), *ABB genome*

INTRODUCTION

The acceptance of a new idea is not as easy as it may seem. It takes time for people to adopt an idea. Williams, (1984) had pointed out that the acceptance of a new idea is a complex process. Adoption process is a gradual intent at considering the advantage that a new idea has over the existing ones. After being aware of an innovation an individual may get interested in it. If this happens he then evaluates it mentally before giving it a trial, after he must have been convinced of the efficacy (or otherwise) of the new idea he may then adopt or reject it.

Agricultural technologies have become useful to the Nigerian populace because improvement upon old and existing ideas have been achieved. Technologies like improved cassava varieties, improved yam varieties (yam minisett, seedyam), maize and many other crops exist that required shorter time to mature, Cooking banana (*Musa sp. ABB genome*), just like other innovations in agriculture is an improved technology. This technology was introduced and propagated by the International Institute of Tropical Agriculture (IITA) and was spread to the Niger Delta region. Other organizations that also played significant roles in the propagation of Cooking banana, especially in the Niger Delta include the Nigerian

Agip Oil Company (NAOC) through her Agricultural programme (Green River Project) and Shell Petroleum Development Company (SPDC). The technology was introduced to enable farmers/individuals (especially those who produce in large commercial quantities) to mass-produce for both household consumption and commercial purposes. Cooking banana (*Musa sp. ABB genome*) was introduced at a time when plantain and banana farmers were experiencing serious losses in their farms as a result of the devastating effect of the *Black Sigatoka* disease which greatly decimated the plantain and banana enterprises. Strains of plantain and banana were genetically combined to get what is known as Cooking banana. As such it is a banana-plantain hybrid, developed to fill the gap between banana and plantain. It is therefore resistant to the deadly *Black sigatoka* disease. IITA (1994) reported that banana and plantain constitute the most important food commodity in sub-Saharan Africa. A disease, the Black sigatoka, has been causing devastation to plantain throughout Africa. It was feared that the disease would eventually decimate plantain production. It has already done so in many parts of the world. The contribution of IITA to agricultural production and development cannot be over-emphasized. It has, through highly innovative research, been able to

produce resistant hybrids. It was also reported that because of IITA's research, one can now envisage a future for plantain and banana in Africa (IITA, 1994). A number of varieties of Cooking banana developed include *Muracho, Pelipita, Fougamou, Km 4* and *Cadarba*.

In every farming community, a farmer requires improved biological technologies from research especially now that the fight against food crisis is being taken more seriously than previous times. The importance of improved biological technologies among other things would be to improve their farm yields and hence the standard of living of the people which extension seeks to enhance. Cooking banana is one of such improved biological farm inputs from research. The fingers of Cooking banana are similar to those of plantain and those of banana, but in most cases Cooking banana fingers are blunt and big, sometimes, stout. This technology has some obvious benefits associated with it. It can be eaten raw when ripe just like banana and fried as chips both when ripe and unripe, just like plantain. The ripe fruit can be processed into juice and consumed as drinks. For diabetic patients the unripe fruits when dried can be processed into flour and cooked before eating.

The technology was diffused into the area of study by the Green River Project of the Nigeria Agip Oil Company (NAOC) in the mid-nineties. However, what is surprising, in spite of the importance of plantain/banana as staple crops to the people, is the slow rate of adoption of this technology. The diffusion and adoption of any new technology, we are aware, is a function of people's perceptions and adoptions related variables such as age, level of formal education, farming experience and ability to take risks, household size (number of dependents) etc. Obinne and Anyanwu (1991) noted knowledge of farmers' socio-economic status, age, level of education, etc., as preconditions for communication to be effective. This is however not unrelated to diffusion and adoption.

The adoption of cooking banana is likely to be influenced by these determining factors in the adoption process in Ogba Communities. The study is therefore aimed at investigating how perceptions are related to socio-demographic characteristics of respondents of households in the study area. The perception levels of respondents about cooking banana will be determined. Also, significant socio-demographic characteristics of respondents will be described.

MATERIALS AND METHODS

The population for this study comprised members of rural households in Niger Delta region of Nigeria. The Niger Delta covers an area of about 70, 000km² and

consists of a number of distinct ecological zones which are characteristic of a large river delta in a tropical region: coastal ridge barriers, mangroves, freshwater swamp forests and lowland rain forests. The climate ranges from humid to semi-hot equatorial climate. The Niger Delta region is a very significant part of Nigeria because of the volume of crude oil produced from the region. Agriculture is also a major activity in the area.

Rivers State was selected from the region and Ogba District in the Ogba-Egbema-Ndoni local government area of Rivers State was chosen because of the presence of change agencies like Nigerian Agip Oil Company and Shell Petroleum Development Company. These organizations are major sources of Cooking banana in the area. The Ogba district consists of three major clans which include *Egi, Usomini and Igburu*. These formed the sampling frame. From the three clans, systematic sampling technique was used to select 264 respondents who are aware of Cooking banana. The sample was taken from 93 identified households by selecting every two households (that is an interval of 2). In Egi district 88 respondents of forty households were selected, 89 respondents from 23 households were selected from Usomini, while in Igburu 97 members of thirty households were selected.

Data were collected by the use of interview schedule and structured questionnaires. Information was obtained on personal characteristics of respondents, perception about Cooking banana, source of information about Cooking banana. The section on perception consisted of seven statements related to the way respondents feel about Cooking banana. The statements were rated based on a four point Likert-Type scale of Strongly Agree (4), Agree (3), Disagree(2) and Strongly disagree (1). The perception scores ranged from a minimum of 7 to a maximum of 28, with a mean score of 18.18. For ease of interpretation, scores that range from 7 to 18.5, are categorized as unfavourable perception, while scores that range from 18.6 to 28 are categorized as favourable perception. Data were analyzed by using the Computer software, Statistical Package for Social Sciences (SPSS). The statistical tools used for analysis include frequencies, percentages and inferential statistic (Pearson Correlation).

RESULTS AND DISCUSSION

Table 1 shows that 21.2% of the respondents are below 25 years, 45.5% between 25 and 30 years, 25.7% are between 31 and 40 years while only 7.8% are above 40 years. It can be inferred that most members of the households (45.5%) are between 25 and 30 years. This is in consonance with previous studies that found young

Table 1: Personal characteristics of respondents

Age (years)	f	(%)
Below 25	56	21.2
25-30	120	45.5
31-35	42	15.9
36- 40	26	9.8
Above 40	20	7.6
Educational attainment		
Didn't finish primary school	39	14.8
Finished primary school	26	9.8
Didn't finish secondary school	09	3.4
Finished secondary school	56	21.2
Received higher education	134	50.8
Source of information		
Radio	0	0.0
Television	14	5.3
Newspaper	0	0.0
Interpersonal	240	90.9
Others (Market)	10	3.8
Likeness since hearing of it		
Like it more	100	37.9
Like it less	78	29.5
Don't like it as all	70	26.5
No Comment	16	6.1

Source: Field survey 1996

people (1-30 years) to predominate (Agbamu, 1993; Mohammed and Wanaso, 1993) in their study area. It is possible that age has a positive influence on technology adoption. Younger people seem to respond more to adoption. This is related to what Savile, (1965) said about young people being more receptive to change.

Of the 264 respondents involved in the study, 52% received higher education, 21% finished secondary school and 15% finished primary school. It can be concluded therefore that majority of the respondents had formal education. Most of the respondents are educated in one formal way or the other. It is possible that the community is growing as a result of the proliferation of development agencies like the presence of a tertiary institution, Nigeria Agip Oil Company etc., which have made useful contributions in agricultural development in the area thus enhancing the progress of the area: education is an important tool for nation building. This is possibly influencing people's attitude and perceptions towards agricultural technology.

From the study 90.9% of the respondents heard about Cooking banana from friends, neighbours and relations (that is, interpersonal source). Mohammed and Wanaso, (1993) had reported that farmers (in their study area) still utilize and prefer interpersonal source of information. From Table 1, it can be seen that radio and newspaper have not played any role in disseminating information about cooking banana. It can be concluded that the mass media have not played satisfactory role in information dissemination in this regard. It is not surprising however to note that Agumagu, (1988) in a study on Agricultural news reportage in newspapers

summarized his findings by suggesting that agriculture has not been given the necessary and adequate publicity it deserves. According to him, news and reports on agriculture account for 1-2% of total available newspaper space. Dare (1990) cited in Olowu and Yahaya (1993) observed that mass media could serve as vehicles of non-formal education and help rural framers see opportunities they may not otherwise see. But this does not seem to be the case with the present study area. It could probably be because Cooking banana is more concentrated in areas within the Shell/IITA area from where the technology was diffused. The Eleme and Onne areas are good examples. People living outside these areas may not have realized the importance of Cooking banana. However, the Green River Project may have to do more work in this regard because they are the main agricultural information agency in the area.

The majority of the respondents have not eaten Cooking banana (53%) though they have heard about it, while 47% have eaten it. However, 17.5% (28) of the respondents who have not eaten cooking banana stated that it is because it looks too unreal. Also 32.5% (62) indicated that they feel Cooking banana will taste like raw plantain or may be gummy in the mouth. The negative response however could possibly be due to apathy in the respondents in accepting the idea since it may conflict with an existing and age-old one.

The majority of respondents (37.9%) indicated they like cooking banana more since time they heard of it. Also, 29.5% of the respondents say they like it less, while 26.5% indicated that they do not like it at all. Though most respondents like it more, those who like it less and do not like at all have their personal reasons. It could be that since banana on the one hand and plantain on the other hand have been in existence separately cooking banana is interference which is not yet fully known by the populace. Diffusion has not been adequately effected. This gives credence to Williams (1984) assertion that adoption is a complex phenomenon. It is also possible that because of inadequate publicity about Cooking banana people find it less convincing. However, it can be said that most people like Cooking banana after tasting it. This is in consonance with Akele and Isirimah's (1990) assertion when they carried out a palatability test and found positive response among respondents. According to them the verdict for acceptability was unanimous and positive.

Table 2 shows that majority (65.9%) of the respondents have unfavourable perception about Cooking banana, while a relatively low percentage of the respondents have favourable perception about Cooking banana. The high level of unfavourable perception has

Table 2: Perception about cooking banana

Perception levels	f	(%)
Favourable	90	34.1
Unfavourable	174	65.9
Total	264	100.0

Table 3: Correlation analysis

Variables	R-values	P-values	Relationship
Age	0.940**	0.000	Significant
Education	0.832**	0.000	Significant
Likeness	0.843**	0.000	Significant
Source of Information	0.568**	0.000	Significant

** Significant at 0.01 level

implication for agricultural development and adoption process. This may suggest that agricultural innovations stand the risk of not being adopted if the perception about them is unfavourable. It could be that the innovation is conflicting with existing ones, which is so in this case, or that diffusion has not been widespread. Studies have reported that certain characteristics such as socio-cultural obstacles (Sofranko, 1984), habit, fear of disruption (Williams, 1984; Ekong, 1988) are obvious reasons why people may resist a technology or change.

From Table 3, the correlation analysis shows that age, education, likeness and source of information are positively and significantly related with perception about Cooking banana. The relationship between age and perception implies that older respondents are more likely to have more favourable perception about Cooking banana, while the younger respondents are likely to have less favourable perception. This is expected giving the nutritional and medicinal properties of the *Musa* crops of which Cooking banana belongs, the older respondents need the crop more considering their age. Ajayi (2000) had reported that plantain and banana promote health.

Education showed positive and significant relationship with perceptions of rural households about cooking banana. This suggests that the higher the education, the more favourable the perception about Cooking banana and vice versa. Okoye (1989) in a study on adoption process found Education to be significantly related to adoption. From Table 3, likeness for cooking banana correlated positively and significantly with perception implying that favourable perception will likely influence likeness and vice versa. Source of information also correlated positively and significantly with perception suggesting that the channel through which respondents got information on cooking banana influenced their perception favourably. Findings of this study revealed that interpersonal source of information such as friends, neighbours and relations are important channels of information for respondents. This confirms the study of Mohammed and Wanaso, (1993).

CONCLUSION

Cooking banana is a recent innovation in the realm of agricultural research. It is eaten either as banana or as plantain or both. This study found that the perception of households about the technology is unfavourable and that age, education source of information and likeness are positively and significantly related to perceptions about Cooking banana. It is therefore suggested as follows:

- Wider publicity should be given to cooking banana through the mass media. Agricultural agencies should endeavour to do this.
- Agricultural Development Programmes through their extension agents, should diffuse the technology to all zones covered by them. Apart from that, awareness programmes should be organized for people to use cooking banana for various purposes. This can be done by giving them sample to use as trials in a demonstration session.
- The Agricultural organizations in the area (e.g., Green River Project) need to do more awareness campaign on the importance of Cooking banana and to make their presence felt in the area by ensuring that households use the crop effectively. There is need to enlighten households on the many uses and potentials of the crop.
- The various groups at the grassroots should be adequately involved in the process of disseminating information on the use and importance of Cooking banana.
- Students in the various schools offering Agriculture as a subject or course should be made to know more about Cooking banana. The Agricultural department of the tertiary institution in the area needs to live up to its name in this regard. New technologies like the cooking banana should be included in the school curriculum as soon as they are introduced to a system. This will make students aware of the innovations and also interested to a level that they may want to try and use the innovation and possibly after appreciating it, convince others to do the same.

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