

RESEARCH PREFERENCES AND EXTENSION NEEDS OF BREADFRUIT GROWERS IN TWO SELECTED LGAs OF OSUN STATE, NIGERIA.



BAKARE, K. A.*, OLORUNFEMI, O. D., ADEBAYO, S. A. AND OGUNLADE, I.

Department of Agricultural Extension and Rural Development, Faculty of Agriculture, University of Ilorin, P.M.B. 1515, Ilorin, Nigeria.

*Corresponding Author: kudiratabiola2015@gmail.com Article received: 11th May, 2015; Article accepted: 5th July, 2015.

ABSTRACT

This paper focuses on the research preferences and extension needs of breadfruit growers in Osun State, Nigeria in order to remove breadfruit from the list of under – utilized crops. Structured questionnaire was used to elicit information using a multi staged sampling technique from one hundred and fifty-six (156) breadfruit growers in Atakumosa East and Atakumosa West local government areas of Osun state (purposive sampling technique for selection of two local government areas; random sampling technique for selection of 12 villages from the list obtained and; On - The - Spot Assessment technique for final selection of 156 respondents). The findings revealed that more than two-third (69.7%) of breadfruit growers operated on a mean acreage of 3.97 hectares, majority (80.7%) of the breadfruit growers had about 50 breadfruit trees with a mean of 49 trees each. About 80.9% of the respondents got their trees through inheritance with a mean of 19.44 years as their length of tree ownership and an average of 266 fruits per tree per season. Major areas of research preference and extension needs as indicated by breadfruit growers among others are the "provision of a breadfruit variety with its fruits having longer shelf life" (84%) and "making breadfruit a priority crop" (99.4%) respectively. This paper therefore recommends that researchers and extension agencies should look deeply inward to finding lasting solution to the problem of preservation and storage so as to keep the fruits more viable for longer period and to produce more such that the livelihood of growers would be improved.

Keywords: Breadfruit growers, Extension needs, Research preference, Osun state, Nigeria.

INTRODUCTION

Breadfruit, Artocarpus altilis, is a multipurpose tree crop which improves soil conditions and protects watersheds while providing food, timber, and animal feed (Lucas & Ragone, 2013). Quality breadfruit varieties can be used in tree planting projects which are used for food and reforestation around the world. Planting of varieties of breadfruits can help alleviate and support sustainable agriculture, agro-forestry, and income generation (Ragone, 2010).Breadfruit is cultivated in many West African countries where rain forest is an endowment (Marck, 2013). In West Africa (Ghana, Cote d'Ivorie, Senegal, Guinea, Republic of Benin, Liberia, Sierra Leone, Burkina Faso, Mali, Niger and Chad) total yield derived from cultivation of breadfruit in the year 1950 and 2000 was 67, 386 and 244, 518 respectively with Nigeria alone having a total production of 29, 790 and 113, 862 in year 1950 and 2000 respectively. Thus, production of breadfruit is greater in Nigeria (South East and South West) where it is consumed in a variety of forms than other countries of Africa (Marck, 2013).

Breadfruit and some of its by-products are useful for livestock feeds (Ragone, 2007). It was reported that the economic potential for an alternative livestock feed such as breadfruit is substantial (Tenenbaum, 2008).Although breadfruit has been identified as one of the neglected fruit crops in Nigeria, it has never been considered as a crop of research priority even though it is consumed by large population in the South East and South West of Nigeria. The potential of this crop to ameliorate food insecurity calls for research and extension education. According to Taylor & Tuia (2007), breadfruit is a major staple and a key food security crop in some countries, whereas in others, it is a significant potential for trade. In view of these, this study therefore tends to analyze the research preferences and extension needs of breadfruit growers in Atakumosa East and Atakumosa West Local Government Areas of Osun State, Nigeria. Specifically, it described the farm-related characteristics of breadfruit growers, determined the research preferences and identified the extension needs of the breadfruit growers in the study areas.

MATERIALS AND METHODS

Study Area

This study was carried out in Osun state with an appellation "the State of the Living Spring". The State is located in south west zone of Nigeria and it is bounded by Oyo State in the west, Ondo and Ekiti States in the East, Kwara State in the north and Ogun State in south. Osun State is carved out of Oyo State in 1991 and it has a land mass of 10, 456 square kilometers with a population of 3, 423, 535 persons (NBS, 2010). It is made up of Yoruba as the only ethnic group with many sub-ethnic groups like Ife, Ijesha, Oyo, Ibolo and Igbomina and as such, Yoruba and English are the widely spoken languages of the people.

Sampling Procedure

The population for this study comprises of all breadfruit growers in Osun State. A purposive sampling procedure was used to select two local government areas due to their active involvement in breadfruit production. These are Atakumosa East and Atakumosa West. The list of breadfruit producing villages in the local government areas was obtained from the farmers due to dearth of information at the Agricultural Development Project (ADP). There were 48 villages that were actively involved in the production of breadfruits. This list was used as the sampling frame out of which 25% (12 villages) of the villages were randomly selected and sampled to obtain a total sample size of 156 (Table 1) respondents using On –The –Spot Assessment technique.

1	Table 1.	Summary	of	Sampling	P	Proce	edure	

Local	Names of	Number of	Total	
Government	Villages	Respondents		
Area (LGA)				
Atakumosa	Erinburo	21		
East	Olorunsogo	27		
	Araromi	10		
	Toba	9		
	Oke-Odo	7		
	Ita-Merin	5	79	
Atakumosa	Ifewara	40		
West	Ita-Agba	8		
	Atorin	7		
	Jagun	6		
	Oke-Aja	10		
	Oguro	6	77	
	č		156	

Note: Final selection of respondents was based on On-The-Spot-Assessment (farmers met on their farms).

Data Collection

In this study, a structured questionnaire was used to elicit information from one hundred and fifty-six (156) breadfruit growers. Data collected include the farm-related characteristics of breadfruit growers, research preferences and the extension needs of breadfruit growers in Atakumosa Local Government Area.

Research Preferences of breadfruit growers

Various research preferences were listed for the growers which ranged from the variety they want most to the period of harvest they preferred all of which were placed on a 4 point-Liker type scale of preference that is, most preferred (4), more preferred (3), less preferred (2) and least preferred (1). These were analyzed using descriptive statistics like frequency counts, simple percentages and the mean.

Extension needs of breadfruit growers

A few questions were put across to the breadfruit growers in which they responded with a Yes or No answer and these were analyzed using descriptive statistics such as the frequency counts and simple percentages.

RESULTS AND DISCUSSION

Farm-related characteristics of breadfruit growers

Table 2 indicates that majority (80.7%) of the respondents have about 50 trees and below and a few (1.9%) of them have above 351 breadfruit trees with an average of 48.99 trees (approximately, 49 trees). More than half (56.7%) of the respondents planted breadfruit trees on their own while only a few (6.4%) respondents said the trees emanated from the farm on its own. This result also reveals that about onethird (41.1\%) of the respondents owned their breadfruit trees for about 11 to 20 years and very few (2.6\%) respondents had owned their breadfruits trees for about 41 to 50 years with a mean ownership of about 19 years.

Furthermore, the result reveals that many (42.3%) respondents have up to 200 breadfruits on each of their

trees every season with a mean of 266 breadfruits per tree every season. This implies that much income could be obtained from breadfruit trees if all of the fruits were to be sold which will in turn improve the livelihood of the growers in the study area as well as the welfare of their households. This result supports the findings of Siler, (2011) which stated that, breadfruit is one of the highest yielding food plants, with a single tree producing up to 200 or more fruits per season although productivity varies between wet and dry areas.

Research Preferences of breadfruit growers

Table 3 reveals the research preference of breadfruit growers in the study areas. Nine (9) items were presented to the respondents and the result shows that their levels of preferences are not the same. Research preference as indicated by the respondents shows statements that researchers should provide 'a variety with its fruits having a longer shelf life' (MR = 3.83), 'a shorter variety for planting' (MR = 3.81) and 'a variety that fruits throughout the year' (MR =3.71). Majority (66%) of the growers preferred to go into commercial production of breadfruit (MR = 3.64), most (52.6%) respondents preferred to consume the excess breadfruits (after sales and preservation) (MR = 3.49) and most breadfruit growers preferred 'harvesting for daily sales' (MR = 3.40). Majority (80.8%) of the growers preferred 'Harvesting of breadfruits during the dry season' (MR = 3.19) and as such request that varieties suitable for such period be provided by researchers, 'breadfruit varieties suitable for harvesting during raining season' (MR = 3.05) should be provided for the growers since it is more preferred by many of them and 'the use of preservatives for the fruits' (MR = 2.95), are also preferred by the growers in the study areas.

Extension needs of breadfruit growers

The results presented in Table 4 reveals that almost all (99.4%) the respondent growers want breadfruits to be made a priority crop as a result of the potential benefits of the crop as well as the economic and welfare improvement they derived from its sales and consumption. About 0.6 percent of the growers said it should not be made a priority crop due to the fact that they are into production of other valuable cash crops which bring them a lot of fortune and probably because they lack knowledge about the prospects of this crop, they want to leave it as it is and do what they know how to do best.

Virtually all (99.4%) respondents want to get timely information from the extension agency because they believe that such information would help them improve on their production and sales of the crop while only 0.6% said to get the information is not necessary because of their believe that they would want to do things their own way and as such found the assistance of the extension agents irrelevant to their need.

Furthermore, majority (98.7%) of the respondent farmers want the extension agency to find partnership for them such that production of breadfruits would be a profitable one. This could be as a result of lower market potentials of the crop and its perishable nature in the study area. Meanwhile, only a few (1.3%) of the respondents do not want because they don't like to

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Characteristics	Frequency	Percentages	Mean
Number of Trees/Farmer			
\leq 50	126	80.7	
51 - 150	21	13.5	49 trees
151 - 250	4	2.6	
251 - 350	2	1.3	
≥ 351	3	1.9	
*Source of Trees			
Planted	89	56.7	
Inherited	127	80.9	
Grew on its own	10	6.4	
Length of Ownership (years)			
1-10	42	26.9	
11 - 20	64	41.1	19.44years
21 - 30	29	18.5	
31 - 40	17	10.9	
41 - 50	04	2.6	
Number of fruits/tree/season			
≤ 200	66	42.3	
201 - 400	66	42.3	266 fruits
401 - 600	12	7.7	
≥ 601	12	7.7	
Source: Field Survey, 2014	N=156	*Multiple Response	

TABLE 3: Research Preferences of Breadfruit Growers.

RESEARCH REFERENCES	MP	MP	LP	LP	MEAN	RANK
Provide a variety with longer shelf life	131	24	1	0	3.83	1 st
	(84.0)	(15.4)	(0.6)	(0)		
A short variety for planting	130	24	1	1	3.81	2 nd
	(83.3)	(15.4)	(0.6)	(0.6)		
A variety that is available throughout the year	112	42	2	0	3.71	3 rd
	(71.8)	(26.9)	(1.3)	(0)		
Venturing in to commercial production	103	50	3	0	3.64	4 th
	(66.0)	(32.1)	(1.9)	(0)		
Consumption of excess	82	69	5	0	3.49	5 th
	(52.6)	(44.2)	(3.2)	(0)		
Harvesting for daily sales	95	40	10	11	3.40	6 th
	(60.9)	(25.6)	(6.4)	(7.1)		
Harvesting in dry season	30	126	0	0	3.19	7 th
	(19.2)	(80.8)	(0)	(0)		
Harvesting in raining season	78	7	71	0	3.05	8 th
	(50.0)	(4.5)	(45.5)	(0)		
Use of preservative	64	42	28	22	2.95	9 th
*	(41.0)	(26.9)	(17.9)	(14.1)		

Source: Field Survey, 2014. MP-most preferred=4, MP-more preferred=3, LP-less preferred=2, LP-least preferred=1.

waste their time in producing a crop that spoil so easily without storage and preservative methods that would increase their income.

Also, the result indicates that more than three- quarter (87.8%) of the respondent growers were willing to pay for a variety that fruits throughout the year (if actually there is).This could be as a result of the fact that these respondents do have knowledge about the potential use of breadfruits and so, took it to be one of the valuable crops that bring much return to them but a few (12.2%) are not willing to pay for it even though it exit due to their ignorance of its potentials.

Table 4: Extension needs of breadfruit growers in **Osun State.**

Extension Needs	Frequenc	Percentages
	У	
Make breadfruit a		
priority crop		
Should be made	155	99.4
Should not be made	01	0.6
Timely information		
from extension		
Get information from	155	99.4
extension		
Information is not	01	0.6
necessary		
Find partnership for		
profitability		
Yes, Find partners	153	98.7
No, Never mind	13	1.3
Willingness to pay for		
all year round variety		
Yes	137	87.8
No	19	12.2
Source: Field Survey Data, 20	14. Total = 15	6

CONCLUSION AND RECOMMENDATION

This study shows that research institutions needs to set their priorities in solving the problems on breadfruit production and, extension agencies also need to have firsthand information on the farmers' needs for planning a viable program which would promote the production and

utilization of breadfruit in the study area. It is however recommended that the research institutes should work hand in hand with the government in order to assist the growers to obtain varieties of breadfruit that are more profitable especially in terms of shortness, fruitiness, seasonality among others such that production of breadfruit would be more profitable to the farmers.

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