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FARMERS' USE OF EXTENSION GUIDE AS A MEDIUM OF AGRICULTURAL INFORMATION IN OGUN STATE, NIGERIA

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ABSTRACT

This study assessed the use of extension guide as a medium of agricultural information among farmers in Ogun State. A multistage sampling technique was used to select three hundred and twenty farmers from thirty two villages in the four agricultural zones of Ogun State. Both descriptive and inferential statistics were used in analyzing the data collected. Sixty nine point seven percent (69.7%) of the farmers are within the age bracket 41-60 years. 74.3% of them are not educated while 25.7% could read and write in Yoruba dialect. Eighty percent of the farmers are men, 56.3% are Christians, 41.3% Muslims while 2.5% practiced traditional religion. It was found that more farmers (59.0%) are not aware of the extension guides, and that 20.0% of farmers that are aware rated the extension guides as of high quality. Result further shows that out of the 25.7 percent literate farmers only 6.9 percent used extension guide as a medium of agricultural information. The use of extension guide was related to farmer's age ($r = -0.16$; $P < 0.05$), and education (X^2 cal 6.23; $P < 0.05$). The constraints to farmers use of extension guide were ranked according to their severity as follows: illiteracy, irregular supply by extension agents, lack of fund and bad eye sight. It was however recommended that literate farmers should be encouraged to read and utilize the content of extension guides and that the guides should be distributed to such farmers without change. Illiterate farmers should be encouraged to attend out-of-school adult education programmes and use other means of agricultural information like radio and television. It was also recommended that the content of the extension guides should address the felt needs of the farmers.

Keywords: Extension guide, Agricultural Information, Media, encoding.

INTRODUCTION

Delivery of appropriate agricultural information is the most crucial among the various functions of agricultural extension (Adebayo, 1997). The ability to disseminate this information does not only depend primarily on the content of the information, but also the manner of its encoding and presentation as well as the media used. Extension guide is one of the print media through which agricultural information is disseminated to farmers. Its use bears considerable implications for the actual practice of learning and training of farmers. Extension guides are being employed as a support medium to complement the efforts

of the various Agricultural Development Programmes (ADPs) field staff at reaching the small scale farmers. The guides provide specialized information on specific subject maters in agriculture as well as various topics to guide farmers in their farming operations (Oyekunle, 2006).

The low level of food production in Nigeria can be attributed to many factors among which is the lack of adequate and explicit agricultural information that can assist farmers in improving their level of agricultural production sustainably. Since extension guide is one of the print media through which such information is passed, it is important to investigate the extent to which farmers are making use of this print medium as a source of agricultural information. Kuponiyi (2002) reported 56.3 percent literate farmers in Oyo State while Ajayi (2002) found that 13.3 percent of farmers in Egbeda Local Government Area of Oyo State read agricultural leaflets and pamphlets. It is therefore pertinent to find out reasons why farmers are not using extension guides. The low level of use of extension guides has contributed to lack of adequate agricultural information among the farmers.

Therefore, the study sought to investigate farmers use of extension guides as a medium of agricultural information through the following specific objectives which are to:

(i) Determine farmers socio-economic characteristics in the study area,
(ii) Assess farmers awareness of extension guides as media of agricultural information,
(iii) Determine farmers access to extension guides,
(iv) Assess farmers use of extension guides in the study area,
(v) Carry out farmers assessment of the quality of the content of the extension guides,
(vi) Identify the constraints associated with the use of extension guides as a medium of agricultural information.

In order to elicit more information on the farmers use of extension guides, the following hypothesis stated in the null form was tested:

H_{o1}:There is no significant relationship between the socio-economic characteristics of farmers and their use of extension guides as a medium of agricultural information. Based on the findings of this study, appropriate conclusions were drawn and recommendations made.

METHODOLOGY

The study area

The study was carried out in Ogun State, which is located in the South Western part of Nigeria and neighboured by Oyo, Ondo, Lagos, Edo and Delta States. It is situated within the tropics and derives its name from big "river Ogun". The state lies between longitude $2^{o}2^{l}$ and $3^{o}55^{l}$ and Latitude $7^{o}01^{l}$ and $7^{o}18^{l}$. It has a tropical climate with rainforest vegetation on its southern part and a derived savannah on its northern end. Ogun state is inhabited mainly by Yoruba speaking people but with subgroups of dialects such as Egba, Yewa, Ijebu, Remo, Awori and Egun. Agriculture is the major occupation of the people of Ogun State. Among the crops grown are cassava, maize, yam, rice, co-

coyam and vegetables. Others are tree crops like cocoa, coffee, kolanut, rubber and oil palm. Most of the farmers are resource poor and operate at subsistence level. The topography of the state is hilly in the central part but most rural communities where farmers are located occupy fairly plain and leveled grounds. Ogun State has twenty (20) Local Government Areas (LGAs) and is divided into four (4) major agricultural zones (Abeokuta, Ikenne, Ijebu-Ode and Ilaro), by the Ogun State Agricultural Development Programme (OGADEP).

Population of the study

The population of the study are farmers from the four agricultural zones of Ogun State.

Sampling technique and sample size

A multistage sampling technique was used to select 320 respondents for the study. Sampling was based on the four agricultural zones in the state; Abeokuta, Ilaro, Ijebu-Ode and Ikenne. From each of these zones, 2 Local Government Areas were randomly selected making a total of 8 Local Government Areas and four villages were selected randomly from each of the Local Government Areas making a total of 32 villages. From each village, 10 farmers were randomly interviewed to make a total of 320 respondents.

Method of data collection

Primary data were obtained using a pretested interview guide to elicit information from the respondents while secondary data were obtained from journals of agriculture, past research works from libraries of various institutions, in-house publications of various agricultural organizations and universities.

Validation and reliability of the instrument

Validation of the instrument was carried out as well as the reliability test using the test-retest method, at an interval of two weeks. The r-value obtained was 0.86.

Measurement of variables

Variables such as sex, marital status and education were measured at nominal level while age of the farmers was measured at interval level. Other variables like access to and use of extension guides by the farmers, awareness of extension guides, farmers assessment of the quality of the content of the guides, relevance of the guides to farmers' production information needs and constraints to the use of extension guides were measured through appropriate and relevant questions. The constraints were ranked to determine their severity.

Data analysis

Data collected were analysed using descriptive statistics such as frequency counts and percentages. Hypothesis was tested using the Pearson Product Moment Correlation (PPMC) and the Chi-square analysis.

RESULTS AND DISCUSSION

Socio economic characteristics of farmers

The result of analysis in Table 1 shows that 69.7 percent of the farmers representing the age bracket 41-60 years are more involved in agricultural production. This category of farmers according Food and Agricultural Organization (FAO, 1997) constitute majority of farmers in developing countries in Africa. Nineteen point four percent (19.4%) of the farmers are above 60 years of age. This result agrees with the report of

Oladoja and Adisa (2006), which stated that most Nigerian farmers are between 41 -50 years of age and are still active. Eighty percent (80%) of the farmers sampled are men while 20 percent are women. The reason that can be attributed to this kind of observation is that majority of the respondents are men who are mainly involved in pre-planting and planting stages of crop production and not post-planting activities carried out mostly by women, and majority of the extension guides are on the activities of pre-planting and planting stages of crop production. Majority (96.3%) of the farmers are married while 56.3% of the respondents are Christians and 41.3% are Muslims with 2.5% practicing traditional religion. Seventy four point four percent (74.4%) are not educated, 24.1% had primary education while only 1.6% had secondary education. Twenty five point six percent (25.6%) of the respondents could read and write in Yoruba dialect. This is in consonance with the findings of Yahaya (2002) who noted that the educational level of farmers affected their preference for printed materials. Farmers interviewed had varying sizes of farmlands, 44.4% cultivated farm size ranging from 1-1.5 hectares, 31.6% cultivate less than 1hectare, while 1.3% cultivate over 5.0 hectares of land. This shows that majority of the farmers cultivate small farms which they operate at subsistence level.

Table 1: Distribution of farmers according to their socio-economic characteristics (n = 320)

Selected socio economic characteristics	Frequency	Percentage
Age (years)		
20-30	3	0.9
31-40	32	10.0
41-50	120	37.5
51-60	103	32.2
>60	62	19.4
Sex		
Male	256	80.0
Female	64	20.0
Marital Status		
Single	5	1.6
Married	208	96.3
Widowed	7	2.2
Religion		
Christianity	180	56.3
Islam	132	41.3
Traditional	8	2.5
Educational Status		
Not educated	238	74.4
Primary education	77	24.1
Secondary education	5	1.6
Farm size		
<1.00ha	101	31.6
1-1.5ha	142	44.4
1.51-3.0ha	63	19.7
3.01-5.0ha	10	3.1
>5.0ha	4	1.3

Source: Field Survey Oct. 2004 – Feb. 2005

Relevance of Extension guides to farmers production information needs

As shown in Table 2, the farming activities of the farmers interviewed cut across crops and livestock. They cultivated cereals like maize and rice, legume like cowpea and tuber crops like yam and cassava. Other crops cultivated include mellon, pepper, tomato, okro and other vegetables. The farmers also keep livestock like sheep, goats and poultry. The titles of the extension guides produced are in line with the farmers production information needs. The reason for this might be due to the fact that the felt needs of the farmers were first identified by the Agricultural Development Programmes (ADPs) before producing the extension guides. The contents of the extension guides range from land preparation, planting of crops, seed production, cultural farm operations, harvesting and utilization of farm produce, to different methods of farm animal production.

Farmers awareness of extension guides as a medium of agricultural information

Figure 1 shows that 41.0% of the farmers are aware of extension guides while 59.0% are not aware. The unawareness of more farmers has a negative implication for agricultural technology delivery since the extension guides contain information that will enhance the farmers agricultural production and improve their standard of living. The unawareness could be due to inadequate publicity and distribution by the agencies producing the extension guides.

Farmers Access to extension guide

Table 3 shows that 12.21% of the farmers who are aware of the extension guides received them from the extension agents without charge while 4.58% purchased with money ranging from N10 to N20 per copy. The low level of farmers use of extension guide could be attributed to high level of illiteracy and the price attached to it since most farmers believe that the extension guide is produced by the government agency and should be distributed free of charge.

Farmers use of extension guides as a medium of agricultural information

Figure 2 shows that out of the 41% that are aware of the extension guides only 6.9% of them used it as a medium of agricultural information. The extension guides used by the farmers are on different crops and livestock as indicated in Table 2. This result varies from the findings of Ajayi (2002), who found that 13.3% of farmers in Egbeda Local Government area of Oyo State read leaflets and pamphlets.

Farmers' assessment of the quality of information in extension guide

Result of analysis on Table 4 shows that 5.3% of the farmers rated extension guide messages as of high quality, while 0.9% assessed it to have very high quality. Zero point six percent (0.6%) called for improvement in the quality of the content of the extension guides and make it farmer oriented and practicable for farmers' use.

Constraints to the use of extension guide as a medium of agricultural information

Respondents identified illiteracy (73.4%), irregular supply of guide (27.8%), lack of fund (10.0%) and bad eye sight (2.8%) as the major constraints they face in using extension guide as a source of agricultural information. They ranked illiteracy as the

most severe problem, followed by irregular supply, lack of fund and bad eye sight in that order.

Test of relationship between the use of extension guides and selected socio economic characteristics of farmers

The correlation coefficient obtained shows that there is a significant relationship (strong negative relationship) between farmers' use of extension guides and age ($r = -0.162$). This implies that as age increases, the use of extension guide reduces. In other words, the higher the age of farmer, the less he uses extension guides as a medium of agricultural information. Chi square analysis shows a significant relationship between farmers sex and their use of extension guides (χ^2 cal 6.88, χ^2 tab. 5.99, $P < 0.05$). More male farmers use extension guide than female farmers. This might be as a result of the production of more extension guides on crop production related activities in which more male farmers are engaged. There is no significant relationship between marital status and farmers' use of extension guide, (χ^2 cal 7.14, χ^2 tab 7.82, $P < 0.05$). The analysis further shows that there is a significant relationship between farmers level of education and their use of extension guide. The higher the level of education the more the farmers use extension guide as a medium of agricultural information ($\chi^2 = 6.23$, $P < 0.05$).

CONCLUSION

The study found that 69.7% of the farmers are within the age bracket 41-60 years, 74.3% are not educated while 25.7% could read and write in Yoruba dialect. Eighty percent of the farmers are male with 96.3% married. They cultivate farms ranging from less than one hectare to five hectares. The study further found that 41 percent of the farmers are aware of extension guides. A total of 6.9 percent have access to and use extension guides as a medium of agricultural information. Five point three percent (5.3%) rated the quality of the content of the extension guide as of high quality while 0.9 percent rated it as of very high quality. Farmers were constrained by illiteracy which was ranked as the most severe problem, followed by irregular supply of extension guides, lack of fund and bad eye sight in that order.

RECOMMENDATIONS

Based on the conclusion of the study, it is recommended that:

* Extension guides should be complemented with other media of agricultural information.
* Production of extension guides should be planned with a view to solving farmers' identified problems.
* The contents of the extension guides should address the felt needs of the farmers.
* Illiterate farmers should be encouraged to attend out-of-school adult literacy programmes so that they can benefit from the information on the printed materials.
- Extension guides should be distributed to literate farmers without charge, and such farmers should be encouraged to utilize the package of recommendations contained in the extension guides in their farm operations.

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Table 2: Relevance of extension guides to farmers production information needs

Crops and livestock	Extension guides	Relevance to farmers' information needs	Not relevant to farmers' information needs
Maize	* Production of maize	Relevant	
	* Weed control in maize	"	
Cassava	* Maize/cassava intercrop	"	
Yam	* Rapid multiplication of seed yam	"	
Cowpea	* Production of cowpea	"	
	* Weed control in cowpea	"	
Rice	* Production of upland rice	"	
	* Weed control in rice	"	
Soyabean	* Production of soyabean	"	
	* Utilization of soyabean	"	
Melon	* Production of melon	"	
Okro, tomato, pepper	* Production of okra, tomato and pepper	"	
Vegetables	* Production of tete, soko, ewedu and Igbo vegetables	"	
Sheep, goat	* Sheep and goat rearing	"	
Rabbit	* Rabbit rearing	"	
Cattle	* Control of worms in cattle, sheep and goats	"	
Poultry	* Poultry production	"	

Source: Field Survey, Oct. 2004 – Feb. 2005

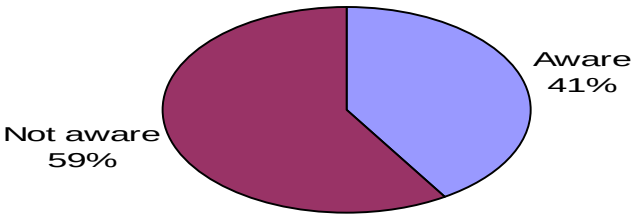

Figure 1: Distribution of farmers according to their awareness of extension guide as a medium of agricultural information (n=320)

Source: Field Survey Oct. 2004 - Feb. 2005

Table 3: Distribution of respondents according to their access to extension guide

Access to extension guide	Freq.	%	Cum. %
Purchased from extension agents	6	4.58	4.58
Received free from extension agents	16	12.21	16.79
Aware but do not use	109	83.21	100.0

Source: Field Survey, Oct. 2004 – Feb. 2005

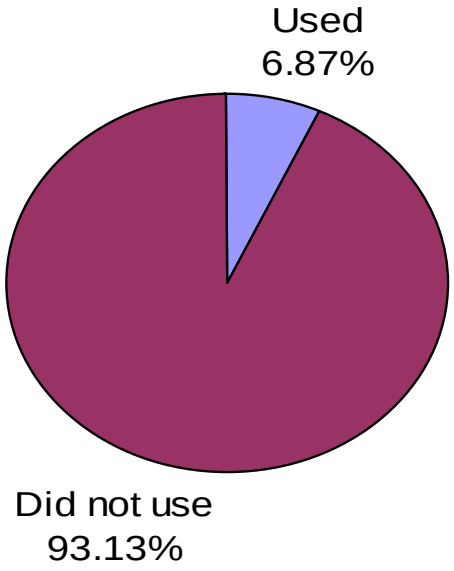

Figure 2: Distribution of respondents according to their use of extension guides

Source: Field Survey, Oct. 2004 - Feb. 2005

Table 4: Distribution of respondents according to their assessment of quality of messages in extension guide

Assessment of Quality of message	Freq.	%	Cum. %
Very high quality	3	0.9	0.9
High quality	17	5.3	6.2
Needs improvement	2	0.6	6.8
Aware but do not use	109	34.1	40.9
Not aware	189	59.1	100.0

Source: Field Survey, Oct. 2004 – Feb. 2005

Table 5: Distribution of respondents according to their constraints to the use of extension guide

Constraints	Freq.	%	Rank
Lack of fund	16	10.0	3rd
Irregular supply	89	27.8	2nd
Illiteracy	235	73.4	1st
Bad eye sight	9	2.8	4th

Table 6: Summary of Chi-square and PPMC Analyses

		χ^2 (Chi-square)		
Variable	χ^2 value	Df	P Value	Decision
Sex	6.88	2	0.014	S
Marital Status	7.14	3	0.152	NS
Education	6.23	4	0.012	S
		r (PPMC)		
Variable	R value		P value	
Age	-0.162**		0.04	S

Source: Field Survey, Oct. 2004 – Feb. 2005