

SECTION 2

ICT, TECHNOLOGY TRANSFER AND AGRICULTURAL EXTENSION SERVICES

SOURCES OF INFORMATION FOR RICE PRODUCTION TECHNOLOGIES IN LAVUN LOCAL GOVERNMENT AREA OF NIGER STATE.

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ABSTRACT

The study examined the sources of information for rice production technologies in Lavun Local Government Area of Niger State using a sample size of 76 respondents. The data were collected using interview schedule and documents obtained from Agricultural Development Project (ADP). The data was analyzed using descriptive statistics, chi square test and likert scale. The results showed that all the respondents (100%) were aware of improved rice varieties, fertilizer and milling/processing technologies. Friends were the major sources of interpersonal information as indicated by 86.84 percent of the respondents. The main source of information through the mass media was Radio/television as was reported by 90.79 percent respondents. On the group contact, cooperative societies were the major sources of information among the farmers as revealed by 36.84 percent of them. Overall, radio/television was the most popular source of information followed by friends, village heads and cooperative societies, which ranked 2nd, 3rd and 4th respectively. Village extension workers ranks 5th. On the frequency of extension contact, the study indicated that almost 65.80 percent of the respondents did not receive extension agent at all. Further analysis showed that there is a highly significant relationship between the adopted technologies and information sources. Majority of the respondents have favourable attitude towards the existing technologies. It is recommended that extension personnel's with the appropriate training should be made to disseminate agricultural information.

INTRODUCTION

Communication is significant to any teaching situation; it is vital tool for promoting knowledge flow, information dissemination and delivery of learning contents in extension services. Communication in extension is defined as a process of interaction to transmit information, ideas, technology and feelings etc from extension agent to the farmer which result in a charged situation. According to Okwu and Okwoche (1998) adoption of improved technologies to a greater extent depends on the intensity of communication. because improved Agricultural technologies in form of agro-chemical, improved variety, fertilizer etc need to reach the farmers while feed back in terms of the constraints facing the farmers need to get the research institutes for appropriate solution.

The main purpose of Agricultural extension services is to communicate relevant and useful technological innovations to the farmers and motivate them to adopt the innovations to facilitate increase in Agricultural output (Adedoyin 1989). To achieve this, the extension worker who is the major information sources must be adequate and have good communication skills to effectively communicate, teach and demonstrate new farm practices to farmer.

Several attempts have been made to increase rice production in Nigeria among which are the introductions of over fifty improved rice varieties in various ecological rice growing zones in the recent time by research institutes and more recently the release of Narica rice by West Africa Rice Development Association (Special Programme on Food Security, 2004). With this background, it becomes imperative that communication must be effective for any appreciable increase in rice production to take place. This study is therefore interested in identifying the sources of information for rice production technologies available to farmers in Lavun Local Government Area of Niger State, in order to determine the reliability, authenticity and usefulness of the information to farmers.

Objective of study

The main objective of this study is to determine the sources of information for rice production technologies in Lavun LGA, Niger State. The specific objectives are to:

- i. Determine the awareness of the technologies in the study area.
- ii. Determine the sources of information for rice production technologies variable to the farmers in the area.
- iii. Determine the regularity of extension contact
- iv. Determine the attitudes of farmers toward rice production technologies

Methodology

The Study Area

This study was conducted in Lavun Local Government Area of Niger State, Nigeria. Lavun Local Government is located in the Southern Guinea Savanna region of Nigeria with land area of about 4,707.50 square kilometer. The area falls within Latitude 8° - 10° N and Longitudes 3° - 8° East.

The study area experiences two distinct climate seasons in a year (rainy and dry season). Rainfall is steady and is evenly distributed falling usually between Mid April and November (1000 - 1,500mm/annual) peaking in August. Lowest temperature is recorded during the harmattan (November to March) period which is characterized by dry dust - laden winds. Average monthly temperature ranges from 23° C to 29° C.

Data Collection

The data for the study were obtained from a combination of primary and secondary sources but mainly through the former. The later was obtained from records and documents provided by the Niger State Agricultural Development Project (NSADP).

Additional secondary data came from official documents of the state Ministry of Agriculture and Natural Resources (MANR) as well as other publications on adoption of rice production technologies. The primary data were obtained from a cross-sectional survey of the farmers directly involved in rice production with the use of an interview schedule. Data were collected during 2004 cropping season with the assistance of the extension officers attached to each of the villages/localities sampled.

Measurement and Analysis of Data

Sources of Information was ensured using Ladele's (1990) format: Farmers were asked to indicate sources of information available to them from a list of selected sources including interpersonal, mass media and group contact. The data collected were analysed using descriptive statistics such as frequency and percentages while chi-square test was used to determine the relationship between the technologies and information sources.

Attitude toward rice production technologies: This was measured by providing the farmers with sets of statements (both positive and negative) on rice production technologies. From the list of options provided, respondents were asked to pick the option that best describe their feeling. The options are a 5 - point likert scale of Strongly Agree (SA), Agree (A), Undecided (U) Disagree (D) and Strongly Disagree (SD). Responses to positive statements were scored as SA=5, A =4, U=3, D=2 and SD=1. Responses to negative statements were scored as SA=1, A=2, U=3, D=4 and SD=5. (Oladele et al, 1999).

Result and Discussion

Awareness of Rice Production Technologies

The result of the data in Table 1 shows the distribution of respondents by rice production technologies communicated to the farmers. Hundred percent each of the respondents were aware of improved rice varieties, fertilizer and milling/processing technologies respectively. About 84.21 percent of the respondents were aware of the use of agro-chemicals (herbicide) in rice production while 67 percent were in the know of the use of tillage/land preparation technologies. Here the role of extension education becomes indispensable. Extension educationists need to step out to beef up the awareness level of the farmers in this regard as a first step towards enhancing adoption.

Table 1 Distribution of Respondents According to their Awareness on Rice Production Technologies

Rice Production Technologies	Frequency	Percentage
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Improved Rice Varieties	76	100.00
Fertilizer	76	100.00
Agro-chemical	64	84.21
Milling/Processing	76	100.00
Tillage/Land Preparation	51	67.00

Source:- Field Survey, 2004

Multiple response

Sources of information to farmers on Rice Production Technologies in Lavun LGA, Niger State. A close look at the findings in Table 2 reveals that the major interpersonal sources of information on rice production technologies available to farmers are friends and village heads who are non professionals in information dissemination. The danger in such situation is the likelihood of misrepresentation of the message. The village extension worker who is professionally trained for information dissemination to farmers is not a major source of information. For a successful and sustainable adoption of technologies, the farmers need to be adequately trained by the village extension worker on regular and continuous basis. This is necessary to save farmers from being misguided. Oladosu (2004) pointed out that adoption and utilization of appropriate technology is largely dependent on the effectiveness and relevance of information dissemination and the ability of agents to persuade the farmers.

It can be inferred from Table 2 also that the farmers rely more on radio and television as means of getting information through the mass media as was reported by 90.79 percent of the respondents, which implies that nearly all the respondents listened to radio programme indicating that agricultural programmes on radio have impact on farming families. This agrees with the report on the socio-economic impact study of NSADP (1994), which showed that farmers of all ages and literacy levels listen to farm programmes on radio.

Among group contact methods, cooperative societies were the major sources of information for rice production technologies. This points to the fact that cooperative societies could in addition to other means be an important way of disseminating information among farmers. Farm centres was next to cooperative societies with 15 percent response. This shows that farm centers in the area are not making significant impact.

A critical look at the whole sources of information in Table 2 reveals that village extension worker ranked 5th after Radio/TV, friends, village heads and cooperative society. The 5th ranking of the village extension worker is probably due to the use of friends, village heads and cooperative members as contact farmers. Therefore, extension agents come into contact with only few farmers.

Table 2: Distribution of Rice Farmers according to sources of Information on Rice Production Technologies.

Source of information	of Rice farmer (n = 76)	Percentage
a Interpersonal		
1. Friend	66	86.84 ²
2. Village head	38	50.00 ³
3. Village Ext. Worker	26	34.21 ⁵
4. Private Firm	15	19.74 ⁷
b Mass Media		
1. Radio/Television	69	90.79 ¹
2. Posters	4	5.26 ^{''}
3. Newspaper/Magazine	18	23.68 ^{''}
4. Ext. Bulletin/Leaflets	4	5.26 ^{''}

c	Group Contact		36.84 ¹
1.	Cooperative Society	28	15.79 ⁸
2.	Farm Centres	12	1.32 ¹¹
3.	Demonstration Plots	1	2.64 ¹⁰
4.	Experimental Station	2	

Source: Field Survey Data (2004)

Note: Superscripts 1 – 11 are rankings of sources of information

Frequency of Extension Contact

The results in Table 3 indicates that 14.47 percent of respondents claimed to receive extension workers fortnightly while 19.74 percent of the respondents received extension agents once in a month. Almost 65.80 percent indicated that they did not receive extension agent at all. The organization structure of the training and visit (T&V) extension system varies with countries and even within a country. The model provides for a ratio of one village extension agents (VEAs) to one thousand farming families (FF). But Niger State Agricultural Development Project widen the ratio to 1 VEA : 1550 FF. In the study area, there are two extension blocks with 16 cells. However, 2 cells remain vacant.

As observed, agricultural extension personnel who are trained in the act of agricultural information dissemination are grossly inadequate. This has led to the existence of an extension gap, which needs to be filled.

Table 3: Frequency of extension contact

Number of Visit	Frequency	Percentage
Fortnightly	11	14.47
Monthly	15	19.74
Not at all	50	65.79
Total	76	100

Source: Field Survey Data (2004)

Association between rice production technologies and sources of information

The chi-square test value of 20.575 infers a statistically significant association between adopted rice production technologies and sources of information at $P < 0.001$.

The chi-square test in Table 4 indicates a highly significant relationship between the technologies and sources of information. This is based on the fact that when there is an increase in the number of technologies adopted by the farmer, the need for more information regarding these technologies also increases. In other words an increase in one or both will increase adoption rate.

Table 4: Association between rice production technologies and information sources of farmers in Lavun L.G.A., Niger State

Rice production technologies	Source of information interpersonal	Mass Media	Group contact	Total
Improved Seed	57	48	14	
Fertilizer Use	66	51	22	119
Agrochemical Use	53	39	6	139
Milling/Processing	41	21	1	98
Tillage/Land Preparation	26	18		63
Total	243	177	43	44
Person Chi-square Value	20.575***			463
Likelihood Ratio	25.665			
Co-efficient of contingency Value	0.979			

Source: Field Survey Data (2004)

Note : *** Significant at $P < 0.001$

Attitude of Farmers Toward Rice Production Technologies in Lavun L.G.A., Niger State.

The results in Table 5 show that most of the farmers have favourable attitude towards the technologies with attitudinal score above 50 percent. The farmers showed high interest because they discovered that a technology saves time, energy and increase farm income. However 61 percent of the respondents have negative attitude toward land preparation (tillage) technology. This may not be unconnected to the fact that some respondents are not aware of the technology as shown in Table 1.

Table 5: Distribution of rice farmers according to attitudes toward each technology in Lavun L.G.A, Niger State, Nigeria.

Technologies	Unfavourable	Favourable
Improved Seed	41%	59%
Fertilizer Use	40%	60%
Agro-Chemical	48%	52%
Milling/Processing	42%	58%
Tillage/Land Preparation	61%	39%

Source: Field Survey Data (2004).

CONCLUSION

The study reveals positive attitude of farmers toward most rice production technologies, which is an indication that the farmers are willing to adopt more improved technologies. It is hoped that, the recommendations given in this study, if given careful consideration, will help in increasing the adoption of the technologies.

RECOMMENDATIONS

In order to expose the farmers and provide them with first hand information, extension agencies should periodically organize training workshops for farmers. Such workshops should be organized to address various aspects of rice production. It is important that these workshops are organized to address problems peculiar to the time/season it is held. This will enable the farmers to quickly put to practice what they have learnt on their farms. For maximum effectiveness, the airing of technology programmes through the Radio/TV should meet the following conditions namely simplicity of Language, broadcast must be practically demonstrated, the timing of broadcast must coincide target group prime time, the source of technologies must be clearly identify and there must be adequate input back up before airing begins.

There is the need to re-equip farm centers existing in the study area with adequate man power and demonstration plots, so that farmers can be trained in group of batches for them to see, hear, discuss, ask questions, get answers and practice the technology demonstrated. Similarly, National Cereal Research Institute (NCRI) should site demonstration plots at strategic locations in the area. On these plots, rice production technologies could be demonstrated to the farmers. It will provide means of learning together by farmers, researchers and the extensionist. It is important that extension personnel with the appropriate training and who are adequately equipped should be made to handle the act of Agricultural information dissemination based on this, government should lift ban on employment to enable ADP recruit more extension agents to fill the existing vacancies. The extension agents should provide more information and create more awareness to the farmers to sustain the present high interest shown by the farmers and for them to avoid the mistake of the non adopters or rejection of technologies.

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