

Agricultural Information Utilization Pattern Among Rural Women Farmers: A Community Level Study in Ebonyi State, Nigeria

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Abstract: *This study was to investigate the pattern of agricultural information utilization among the rural women farmers in Effium community of Ebony State. Three research questions and null hypothesis were developed to guide the study. A structured questionnaire was also developed, validated and used for eliciting information from 540 rural women farmers. Data were analyzed with mean and standard deviation to answer the research questions; and analysis of variance (ANOVA) was used to test the hypothesis at 0.05 level of significance. From the findings, rural women farmers are mostly within middle age for active use of agricultural information; but have small farm holdings, and depend to great extent on inter-personal communication for agricultural information. The findings also revealed that most of rural women farmers have low education. The respondents agreed that women farmers use information on fertilizer, herbicides, improved seeds, labour sources and market locations. But, women rarely use information on livestock management, record keeping, farm planning, sources of credit and farm mechanization. It was then recommended that government should deploy extension agents into rural areas to educate farmers on the need and how to use new agricultural information technologies. Again farmers should be encouraged to form co-operative societies to enable them secure greater inputs to improve their income.*

Keywords: agricultural information utilization pattern, rural women farmers, community level study, Ebonyi state, Nigeria

INTRODUCTION

Ebonyi is a state with multicultural and ethnic groups which are grouped into communities: Development of urban areas of the state does not imply overall development of the state as majority of the communities are in the rural areas where agriculture is the bases of the economy (Aboh 2007), Effium is one of the rural communities in Ebonyi state and is often addressed as a mini Nigeria because people from different ethnic groups reside in it for agricultural activities. Like in every rural community, women farmers in the Effium are less

informative than male farmers within the area due to certain socioeconomic variables and cultural constraints. This is in keeping with the views of Njoku (1994) that rural women farmers are less informative because of their cultural barriers. Fie stated further that most rural farmers in developing countries operate at subsistence level which gives low incomes. Again, Quisumbing and Meinzen-Dick (2001) commented that many rural farmers in sub-Saharan Africa have low education which affect their reception and adoption of agricultural information services. But a comment by United Nations (1995) has it that social and economic development of rural communities in developing countries begins with agriculture, and to develop agriculture, women farmers need reliable and quick agricultural information. Rural women farmers are one of the key players in agricultural sector and a force to reckon with in terms of food production in rural communities (Adisa and Okunde 2005). This statement is in consonant with the agricultural activities of women in the Effium who contribute immensely in production of vegetables cassava, yam, rice, maize, groundnut and many other crops. They as well engage in livestock management, crop processing and marketing. To improve upon these farm operations, the women need accurate agricultural information.

Information is explained by Hornby (2010) as a collection of facts or data on events, situations, techniques or activities. Agricultural information refers to data on agricultural matters which indicate communication among farmers (Ajayi 2003). In the context of this study, agricultural information means having knowledge about agricultural data or facts such as farm inputs, techniques of production, farm, management techniques, agricultural marketing strategies and other agricultural matters. It is likely that agricultural production will be enhanced if agricultural information are properly utilized by fanners.

Utilization of agricultural information means effective use of the information which requires proper delivery of information in line with the needs of the fanners. Rural farmers need information on sources of inputs, input utilization, production systems, and prices of farm produce. Olowu and Yahaya (1998) reputed that women farmers need information on techniques of production, management systems, and current and future prices. The of extent using the information depends on the communication pattern of farmers which are shaped by their socio-structural factors like; age, gender, level of education, farm size and income (Yahaya 2002). Sources of information also influence the adoption rate of new technologies. Thus Munyun (2000) said that rural women farmers depend to a great extent on interpersonal communication for their agricultural information. It follows that personal characteristics of farmers, delivery system and sources of the information all shape the utilization pattern of agricultural information. In their opinion, Meitei (2000) and Oladele (2003), agricultural information utilization pattern means how farmers receive, accepts and adopt information transmitted to them. In this study, agricultural information utilization pattern refers to the regular sources, delivery systems, ways and regularity of use of the information. In their reports Banmeke and Ayayi (2007) said that women readily utilize information on improved seeds/seedlings, pest and disease control storage and processing methods, market prices, crop combination and labour availability. Efficient utilization pattern of agricultural information

among rural women farmers is expected to lead to increased production, enhanced income and poverty reduction. It is therefore necessary to examine how rural women farmers that constitute very high percentage of the farming population in the developing countries utilize agricultural information in various agricultural activities.

Statement of the problem

There is no empirical record on the pattern of agricultural information utilization by women in the study area. That is the sources of agricultural information, acceptance and adoption behaviour of rural women farmers, farmers' variables that affect use of information and ways and regularity of use have not been examined in the state. It is now difficult to design means of improving agricultural information services to rural communities in this

Purpose of the study

The main purpose of this study is to determine the pattern of agricultural information utilization among rural women farmers in Effium community of Ebonyi State in order to enhance the pattern for increased food production. Specifically, the study sought to;

1. Examine socioeconomic variables of rural women farmers which affect their information utilization pattern.
2. Identify information needs and sources of rural women farmers.
3. Examine the regulatory of use of information for agricultural activities.

Hypothesis

There is no significant difference in the mean ratings of rural women across the five zones of Effium community on the regularity of use of information for agricultural activities.

METHODOLOGY

This study was carried out in Effium community of Ebonyi State. The community was chosen for this study because majority of the inhabitants are farmers in rural villages dominated by women. Multi-stage random sampling method was used in selecting a village in the 5 zones of the community. That is 5 rural villages were randomly selected for the study. Thereafter, 108 registered women farmers were randomly selected from each of the five (5) villages of the community; giving 540 respondents.

The primary data was collected by holding personal interview regarding socioeconomic characteristics of the respondents while other data on sources and needs of the farmers and regularity of uses of the information were collected through questionnaire which was validated by experts, Information on the personal data of the respondents were analyzed using frequency counts and percentage while data on the sources, needs and extent of use of the information were analyzed using mean and standard deviation. Analysis of variance (ANOVA) was utilized for testing the hypothesis at 0.05 level of significance.

RESULT AND DISCUSSIONS**Table 1: Socioeconomic Variables of Rural Women which Affect their Agricultural Information Utilization Pattern**

Variable		Frequency	Percentages
Age	Young (.18 -34)	159	29.44%
	Middle (35-59)	357	66.11%
	Old (>60)	24	4.45%
Size of farm holding	Small	369	68.33%
	Big	171	31.67%
Educational qualification	No formal education	221	40.93%
	Primary education	193	35.74%
	Secondary education	94	17.40%
	OND/NCE	28	5.11
	HND, B. Sc., and above	4	0.74

Data in the table 1 above show that most of the rural women farmers are within middle age (35-59) representing 66.11% of the respondents. This finding indicates that most of the women farmers in the rural communities are within active age for good use of information for agricultural production. The finding is in keeping with the views of Yahaya (2002), that women are more active in agriculture within 20-50 years of age.

The data also reveal that most of the rural women farmer have small farm holding with 68.33% of the sample. This may be responsible for their low incomes which has detrimental effects on agricultural information utilization pattern. The finding is in consonant with the report of Ajoku (1994) that most rural farmers operate at subsistence level with low income.

Again from the table 1, 221(40.93%) of the rural women farmers are without formal education. This finding agrees with the opinion of Quisumbing and Meinzen-Dick (2001) that many rural farmers in sub-Saharan Africa have low education which affect their reception and adoption pattern of agricultural services.

Table 2: Information sources and needs of rural women farmers

Sources		Mean (\bar{x})	Standard deviation	Remark
Interpersonal communication	Fellow farmers	3.11	0.73	Accepted
	Friends/neighbours	3.01	0.77	Accepted
	Community leaders	2.53	0.81	Accepted
	Extension agents	2.27	0.83	Not accepted
	Spouse/male	3.10	0.74	Accepted
Electronic media Communication	Radio	2.5	0.88	Accepted
	Television	2.35	0.91	Not accepted
	Mobile phone	1.11	0.93	Not accepted
	Printed media (bulleting, newspaper, posters and letter)	1.19	0.97	Not accepted
	Internet	0.37	0.99	Not accepted

Scale: Strongly accepted (4), Accepted (3), not accepted (2), strongly not accepted (1).

Data on sources of agricultural information to the rural women farmers are presented in table 2 above. The data indicate that respondents source for agricultural information from fellow farmer (= 3.11), friends/neighbours (= 3.01), community leaders (= 2.53) and spouse/male (= 3.10), within their communities. But the respondents get limited information from extension agent (= 2.27). These findings agreed with the comment of Munyun (2000) that rural farmers depends to a great extent on interpersonal communication (traditional knowledge) to transmit agricultural information. The respondents also agreed that radio (= 2.51) is the most widely used mass media for getting information on agricultural matters. Based on the table 2, a limited number of rural women farmers get information through television (= 2.35), while a negligible number source information through mobile phone (= 1.11), printed media (= 1.19) and internet

(= 0.37). Very low level access to mobile phone and internet as indicated by the findings signifies that rural women in agriculture in developing countries still depend greatly on traditional sources for agricultural knowledge.

In reacting to question on the information needs, the respondents agreed that they need information on the sources of farm inputs, techniques of production, management skills, safety techniques, marketing strategies and literacy programmes. This implies that extension agents or community level workers need to be more active in their dealings with rural women farmers.

Table 3: Regularity of use of Agriculture Information among Rural Women Farmers for Agricultural Activities

A Input supply information					
			Mean (\bar{x})	SD	Remarks
		Pesticides	1.91	1.01	Rarely
		Herbicides	2.58	0.91	Regular
		Improved seed/seedlings	3.02	0.79	Regular
		Credit sources	2.13	0.99	Rarely
		Livestock stocks	1.56	1.11	Rarely
		Livestock feeds	1.55	1.01	Rarely
		Veterinary services	1.23	0.98	Rarely
		Labour sources	3.05	0,85	Regular

B Production Techniques Information					
			Mean (\bar{x})	SD	Remarks
		Techniques of land preparation	2.69	0.97	Regular
		Planting (timing and quantity)	2.76	0.89	Regular
		Fertilizer application	2.96	0.88	Regular
		Hal-vesting techniques	1.19	1.10	Rarely
		Storage/processing	2.57	0.99	Regular
		Livestock housing	1.99	1.02	Rarely
		Livestock feeding	2.11	1.01	Rarely
		Livestock breeding			

C Farm Management Information					
			Mean (\bar{x})	SD	Remarks
		Disease and pest control			
		Soil management	1.98	1.14	Rarely
		Farm planning and budgeting	1.13	1.11	Rarely
		Record keeping and accounting	1.10	1.01	Rarely
		Credit management	1.09	1.12	Rarely
		Risk management	2.54	0.97	Rarely
		Agricultural Insurance	0.48	0.99	Rarely

D Marketing Information					
			Mean (\bar{x})	SD	Remarks
		Current Market prices	2.61	0.87	Regular
		Future market priges.	2,59	9,98	Regular
		Market locations	2.68	085	Regular
		Exporting procedure	0.25	1.11	Rarely
		Advertisement	1.18	0.96	Rarely

E Information Training Programmes					
			Mean (\bar{x})	SD	Remarks
		Adult literacy programme	2.41	0.94	Rarely
		Input utilization programme	2.22	1.23-	Rarely
		Use gf mechanized equipment	2,01	1,28	Rarely
		Handicraft making	2.04	0.94	Rarely
		Wild life conservation principles	1.09	0.95	Rarely
		Leadership development/good family living	2.59	0.88	Regular

Scale: Very regular (4), Regular (3), Rarely (2) Never (1).

Data presented in table 3 reveal that rural women farmers regularly use information on fertilizers, herbicides, improved seeds and labour sources. The respondents agreed that they rarely use information on pesticides, credit sources, livestock feeding and veterinary services. These findings show that the respondents are mainly crop bias which may not be unconnected with the limited information from extension agents. Again the inability of the women farmers to utilized information properly on credit sources may be responsible for their small farm holdings and low incomes.

The data on pattern of utilizing information on production techniques show that rural women farmers regular adopt information on land preparation, planting of crops, fertilizer application and crop processing. The findings also show that information on livestock housing, feeding and breeding are rarely used by the respondents.

The findings on the pattern of utilizing farm management information show that rural women farmers often use information on pest and disease control and risk management with mean of 2.77 and 2.54 respectively. The respondents rarely use information on soil management, farm record keeping, planning and agricultural insurance as each has a mean below 2.50. These findings agree with the findings of If Banmeke and Ajayi (2007) that rural women farmers adopt information on If pest control and crop combination. The findings on marketing information utilization indicate that rural women farmers regularly use information on market

locations(=2.68) current prices (=2.61) and future market prices (=2.59). But, the respondents rarely use information on exporting procedure and advertising as the mean of each is below 2.50. These findings signify that rural women farmers are conscious of local market information. The findings agree with those of Olowu and Yahaya (1998) in their survey of information needs of women farmers in Northern Nigeria that women farmers need information on current and future prices.

The extent of utilization of information on training programmes is low as indicated by the findings. The rural women farmers make limited use of information on adult literacy, equipment, handicraft making and wild life conservation as the means of each is below the cut-off point of 2.50. However, the respondents agree that rural women adequately use information on leadership development and good family living. These findings signify that extension workers need to create greater awareness which is essential step towards the adoption process of agricultural services.

Table 4: Analysis of variance (ANOVA) on difference in mean Ratings of Rural women farmers across the five states of South Eastern Nigeria

Source of variance	Df	Sum of squares	Mean Squares	f-call	f-critical	significance	Decision
Between groups	4	0,057	0.01425				
				0.0129	2.37	Ns	accepted
Within groups	535	589.65	1.1021				
Total	539	589.707					

Data presented in table 4 indicate that f-calculated value is 0.0129 and f-critical value under 4 and 535 degrees of freedom at 0.05 level of significant is 2.37. Since the calculated f-value (0.0129) is smaller than the critical value (2.37) the null hypothesis is accepted that there is therefore no significance difference in opinions of rural women farmers in South Eastern Nigeria on regularity of information utilization for agricultural activities. This is not unexpected because of the similarity in agricultural practices in the states of the zone. Moreover, the level of development and social amenities in rural areas of the zone are similar.

CONCLUSION

The study established that much of the information reached rural women farmers through interpersonal communication but with very low mass media sources, It made certain contributions to knowledge and poultry industry by exposing that most rural women farmers are within active age for information utilization but lack formal education which limits reception and effective use of agricultural information and for greater production hence their farm holdings are small. Women farmers need information for various agricultural activities

but presently do not effectively utilize the information which may be due to certain socio-economic variables, poor awareness, lack of proper communication strategies, low access to information or problems in understanding or implementing information services.

It was therefore; recommended that extension agents or community workers should be more persuasive in their discussions with women farmers to accept and use information. The farmers need more education and training through adult education programmes in order to be equipped to accept and use new information technologies (ICT) in agriculture. Again, farmers should be assisted to form co-operative societies to enable them secure greater inputs to improve their farm holdings and incomes.

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