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ACCESSIBILITY AND UTILIZATION OF AGRICULTURAL INFORMATION BY FARMERS IN ABOH MBAISE LOCAL GOVERNMENT AREA OF IMO STATE, NIGERIA

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ABSTRACT

This study analyzed the agricultural information accessibility and utilization by farmers in Aboh Mbaise Local Government Area of Imo State, Nigeria. Multi-stage random sampling techniques were employed to select 120 respondents used for the study. Primary data were collected with the aid of a well-structured questionnaire and analyzed using descriptive statistics such as means, frequency, percentage, mean scores and Chi-square test. Result showed that the most predominant classes of agricultural information by the rural farmers were; town crier (95.83%), friends (90.83%), radio (80.83%) and extension agents (86.67%). Also, the most accepted factors of accessing and utilizing information by farmers were; access to extension agents (X = 4.13), cost of accessing information (X = 3.89), access to ICT facilities (X = 3.78) and nature of information (X = 3.53).The agricultural information accessed mostly was production techniques (X= 4.67) and harvesting (X= 4.16). Production techniques (X = 4.52) and harvesting (X = 3.89) were also the most utilized agricultural information in the area. The result of null hypothesis showed that there is significant difference between access and utilization of agricultural information by the respondents. It was concluded that adequate access and utilization of agricultural related information by the farmers could lead to increased agriculture production and improved welfare of the farmers. Recommendations such as training of farmers on the use of modern information and communication technologies, employing and mobilizing extension agents for enhanced extension service delivery, improving method of information dissemination by town criers as well as improving information dissemination in input distribution, storage techniques and marketing strategies among others.

Keywords: Accessibility, Utilization, Small Scale Farmers, Aboh Mbaise

INTRODUCTION

Agricultural information is operationally defined as the various sets of information and messages that are relevant to agricultural production activities of farmers such as crop production and protection, animal production and conservation. Samuel (2001) defined agricultural information as the data for decision-making and as resources that must be acquired and used in order to make an informed decision.

According to Agbala (2013), agricultural information has been an important tool in farmers' production as it is very pertinent in

the following areas; seed to purchase, when to plant, where to plant, how to plant, actual crop to plant, reason to plant, fertilizer to use and agro-chemical to use, etc. Similarly, Eze (2013) observed that rural farmers are really aware of the need for accessing information though most of the farmers find it difficult to access information due to poor access to extension agents, poor access to improved technology, lack of requisite skills on the use of ICTs among others. Meera (2004) noted that ICT can bring new information services to rural areas where farmers (end users) will have much greater control, than ever before, over current information channels.

Access to such new information source is a crucial requirement for the sustainable development of the farming systems. Ozowa (2013) reported that ICT can be of immense help by enabling extension workers to gather, store, retrieve and disseminate a broad range of information needed by farmers. The emergence of such extension workers will result in the realization of the much talked about bottom-up, demand-driven technology generation, assessment, refinement and transfers.

Umali (1994) classified agricultural information into two broad groups: pure agricultural information and agricultural information inherently tied to new physical inventions. Pure agricultural information refers to any information which can be used without the acquisition of a specific physical technology. On the other hand, agricultural inventions or technologies are those that come in the form of agricultural inputs, management technologies facilitating farm management, marketing and processing equipment.

Okolo (2013) noted that lack of access and effective utilization of agricultural information is the major constraint to increased food production in rural areas as information plays a vital role in the level of productivity of farmers. While, Uwakwe (2012) reported that the problem of rural farmers in agricultural production is differentiating between access and utilization of agricultural information as they think access of information is same as utilization of information. This has resulted to several having access to information but not properly utilizing it.

Unfortunately, resource poor farmers are mainly affected by the digital divide which is a gap between groups or individuals in their ability to use ICTs effectively due to differing literacy, technical skills, and useful digital content (Ghatak, 2007). Nevertheless, the emergence of low cost ICTs (such as radio, cell phones, and the media provided by the

telecenters) may bridge the digital divide (Lwoga and Ngulube, 2008). Given the fact that there are disparities to the accessibility and utilization of the ICTs especially in the developing countries, the level of productivity is uncertain even in the face of many available innovations.

Despite so many literatures on the availability of agricultural information, its access and utilization for agricultural production, there seems to be dearth in empirical knowledge on the access and utilization of agricultural information by rural farmers in Aboh Mbaise L.G.A of Imo State. Thus, the research was conceptualized to find answers to the following research questions; what are the classes of information accessed and utilized by farmers? what are the factors that influence access and utilization of agricultural information? what is the level of access and utilization of agricultural information by farmers?

Objectives of the study

The broad objective of the study was to analyze the accessibility and utilization of agricultural information by rural farmers in Aboh Mbaise L.G.A of Imo State; while the specific objectives were to;

i. identify the classes and sources of information accessed and utilized by farmers;
ii. identify the factors that influence access and utilization of agricultural information;
iii. analyze the level of access and utilization of different identified agricultural information by farmers;

Hypothesis:

$H0_1$: There is no significant difference between access and utilization of agricultural information for agricultural productivity by rural farmers in the study area.

Methodology

The study area lies within latitude $5^0$27'N and longitude 7^o14E, covering an area of 184 km2 and a population of 195, 652 people (NPC, 2006). The L.G.A is made up of nine communities to include; Nguru-Nweke, Okuato, NguruAhiato, NguruNwank EnyioGugu, Lorgi, Amuzu, Uvuru and Umuorobala. The major crops grown in this area include; oil palm, cassava, groundnut, melon, maize while goat, sheep and poultry are the major livestock. The major occupation of inhabitants of this area include; farming and trading, though a few public servants exist. The climate of the area is divided into two major seasons, rainy which runs from April – October with July and September as peak and dry season which runs from November – March. Atmospheric

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temperature in the area varies from 18^{o}C to 34^{o}C within the year.

Sampling Techniques

Multi-stage, purposive and random sampling techniques were employed to sample the population of the study

Stage one: This involved purposive selection of six (6) communities to include; Nguru-Nweke, Okwuato, NguruAhiato, NguruNwankwo, EnyioGugu and Lorgi. The purposive selection at this stage is based on the level of farming in the area.

Stage two: This involved purposive selection of two (2) villages from each selected community to make twelve (12) villages.

Stage three: This involved random selection of ten (10) farmers from each of the villages to make a total of one hundred and twenty (120) respondents who formed the sample size for the study.

Data Collection

Primary data were collected using a structured questionnaire that was administered as interview schedule.

Data Analysis

Data collected were analyzed using descriptive statistics such as mean, frequency, percentages and mean scores generated from a 5-point likert scale. Null hypothesis H_{01} was tested using Chi-test at 5 % level of significance.

Models Specifications

Mean scores in the form of a five point likert scale was used to analyze the level of access and utilization of different identified agricultural information. The mean score was gotten using the formula;

$$\overline{X} = \frac{\sum x}{n}$$

Where;

X = Mean score of each response item

$\sum$ = Summation

X = Likrt value

N = Number of respondents which is also the total sample size.

Decision rule: 5 + 4 + 3 + 2 + 1 = 15/5 = 3.0

From the calculation shown above, an item is said to have significant access and utilization if it is > 3.0.

Chi Square Model

The null hypothesis ($H0_1$) was tested using the Chi-Square formula as stated;

X^2 Calculated = chi square calculated value

Of = observed frequency

EF = expected frequency

Degree of freedom = (C – 1) (R – 1)

Where C = no of columns = 2

R = no of rows = 2

Decision Rule

If X2 – cal> - tab, reject the null hypothesis and accept the alternative hypothesis.

RESULTS AND DISCUSSION

Classes of Information Accessed and Utilized by Farmers

The result of the classes and sources of Agricultural information accessed and utilized by farmers is shown in Table 1.

Table 1: Distribution of Farmers according to Classes of Information

Classes of information	Frequency	Percentage
Input distribution	05	4.00
Production techniques	63	52.00
Harvesting techniques	28	23.00
Management	03	2.00
Storage techniques/ facilities	06	5.00
Marketing strategies	15	10.00

Source: Field Survey, 2019.

The result of the analysis on the classes of information received by the small scale rural farmers in the study area showed that the most predominant classes of agricultural information received by the small scale rural farmers were on; production techniques (52.00%) and harvesting techniques (23.00%) while the least classes of agricultural information received by the small scale rural farmers were on; management (2.00%) and marketing strategies (4.00%). Furthermore, some others among the farmers received agricultural information on storage techniques/facilities (5.00%) and input distribution (4.00%). This implied that most small scale farmers only received information on the production techniques as well as the best harvesting methods. This is in line with the finding of Okoto (2013) which reported that the predominant agricultural information small scale rural farmers seek were on best production techniques.

Table 2: Sources of Agricultural Information in the Study Area.

Sources of Information	Frequency	Percentage
Radio	97	80.83
Extension agents	104	86.67
Television	56	46.67
Town Crier	20	16.00

Internet	05	4.16
Social Media	11	8.33
Friends	109	90.83
NGOs	64	53.33
Research institutes	41	34.16

Source: Field Survey, 2019.

The result of the analysis on the sources of agricultural information received by small scale farmers in the study area showed that the most predominant sources of agricultural information for the rural farmers included; friends (90.83%), radio (80.83%) and extension agents (86.67%) while the least sources of agricultural information were social media (8.33%) and internet (4.16%). It was further observed that some others accessed agricultural information through; NGOs (53.33%), television (46.67%), and research institutes (34.16%). Chukwu (2008) reported that the major sources of information for rural farmers were through; extension agents and family and friends. Umeh (2013) reported that extension agents were the major sources of agricultural information in the rural areas.

Factors that Influence Access and Utilization of Agricultural Information

The result of the factors that influence access and utilization of agricultural information is shown in Table 3.

Table 3: Mean Scores of Factors that Influence Access and Utilization of Agricultural Information

Parameters	Factors	Mean score	Weighted mean	Decision
F1	Cost of accessing information	3.00	3.89	Accepted
F2	Access to extension agents	3.00	4.13	Accepted
F3	Level of education	3.00	3.22	Accepted
F4	Age	3.00	2.19	Rejected

F5	Access to ICT facilities	3.00	3.78	Accepted
F6	Willingness to accept new information	3.00	3.10	Accepted
F7	Nature of information	3.00	3.53	Accepted
F8	Source of information	3.00	2.66	Rejected
F9	Attitude of extension agent	3.00	3.24	Accepted

Source: Field Survey, 2019.

The result of mean score analysis on the factors that influence access and utilization of agricultural information in the study area as presented in Table 4 showed that some factors were accepted by the small scale farmers to have influenced their access and utilization of agricultural information for production. The most accepted factors included; access to extension agents (4.13), cost of accessing information (3.89), access to ICT facilities (3.78) and nature of information (3.53). Some other factors that influenced access and utilization of agriculture information were; attitude of extension agent (3.24), level of education (3.22) and willingness to accept new information (3.10).

Level of Access and Utilization of Agricultural Information

The result of access and utilization of Agricultural Information is shown in Table 4 and 5.

Table 4: Mean scores on Level of Access of Agricultural Information

Factors	**Mean score**	**Weighted mean**	**Decision**
Input distribution	3.00	2.33	Rejected
Production techniques	3.00	4.67	Accepted
Harvesting techniques	3.00	4.12	Accepted
Management	3.00	2.50	Rejected
Storage techniques/facilities	3.00	3.08	Accepted
Marketing strategies	3.00	1.83	Rejected

Source:FieldSurvey,2019.

The result of the mean score analysis on the agricultural information accessed by the small scale rural farmers as presented in Table 4 showed that the agricultural information which the small scale rural farmers accessed most included; production techniques (4.67) and harvesting (4.16). The implication is that most of the rural farmers had accessed only information on production techniques as well as harvesting techniques. This further means that farmers in the study area may be incompetent in the areas of management and marketing strategies due to lack of information in these areas.

Table 5: Mean Scores on Utilization of Agricultural Information

Factors	Mean score	Weighted mean	Decision
Input distribution	3.00	2.03	Rejected
Production techniques	3.00	4.52	Accepted
Harvesting techniques	3.00	4.89	Accepted
Management	3.00	2.20	Rejected
Storage techniques/facilities	3.00	3.14	Accepted
Marketing strategies	3.00	1.21	Rejected

Source: Field Survey, 2019.

The result of the mean score analysis on the agricultural information utilized by the small scale rural farmers as presented in Table 6 showed that the agricultural information which the small scale rural farmers utilized most included; production techniques (4.52) and harvesting (3.89).

Hypothesis Testing

Chi square test was employed to test the truism or otherwise of the null hypothesis which stated that; there is no significant difference between access and utilization of agricultural information for agricultural production by small scale rural farmers.
The result obtained showed that since X2-cal (85.99) > X2 – tab (3.841), the null hypothesis which stated that there is no

significant difference between access and utilization of agricultural information for agricultural production by small scale rural farmers was rejected, whereas the alternative hypothesis which stated that there is significant difference between access and utilization of agricultural information for agricultural production by small scale rural farmers was accepted.

Conclusion and Recommendations

The result from the research showed that the rural small scale farmers had accessed and utilized some agricultural information for their agricultural production. It was observed that socio-economic characteristics of farmers actually influence their access and utilization of agricultural information though there were some constraints which retarded their access and utilization of agricultural information. The result implies that if these constraints are tackled, there will be increased access and utilization of agricultural information which will improve agricultural production in the study area. Farmers should be encouraged to access agricultural credits which will encourage access and utilization of such funds in agricultural production; Farmers should be trained on how best to utilize accessed agricultural information as this will increase agricultural production.

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