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# Agricultural Information Seeking Behavior of Rural Farmers in Kainji Lake Basin, Nigeria

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## ABSTRACT

The purpose of this study was to investigate the Agricultural information seeking behavior of rural farmers in Kainji Lake Basin. The study aimed at investigating the Agricultural information seeking behavior of the rural farmers. Descriptive survey research design was adopted for the study. A total of 160 rural farmers from four districts (Bussa, Dogongari, Wawa and Kuruwasa) formed the sample population of the survey. Purposive sampling technique was used to select sample for the study. A structured interview and questionnaire was used to bring out information from respondents. The findings showed that among the 160 respondents, 47% of them are 31-40years of age, 19% of the respondents are 41-50years of age, 16% of the respondents are below 30years of age, among others. The study also revealed majority of the have Qur'anic school education with 54% of them admitting that they are Qur'anic school certificate holders. The study shows that 89% of the respondents belong to one or two farmers' association. The study clearly revealed that the majority source of Agricultural information for the respondents is friends and family members with 96% of the respondents attesting to that, another 86% of the respondents indicated Age groups as their source of information. The study revealed that the major use of Agricultural information by respondents was to improve their farm operation, with 71.9% of respondents, improve access to credit facility with 74.4% of respondents rarely use the information. It is clear from the study that language barriers is the major barrier to the access of Agricultural information by respondents with 86%, illiteracy with 61% of respondents, lack of time with 54% respondents, among others. The study revealed that 79.4% of the respondents attesting to high or favorable Agricultural information seeking behavior while 20.6% of the respondents have low or unfavorable Agricultural information seeking behavior. Based on the results, recommendations were put forward to enhance access to Agricultural information by farmers in the rural areas.

Keywords: Agriculture, seeking-behavior, rural farming, Kainji lake, impoundment.

## INTRODUCTION

In order to make the Agricultural sector more productive and the base of Nigeria economy and food security, Agricultural information plays a great role. Information is very important in all phases of life. Information is the collection, storage processing and dissemination of new data, facts messages, opinions and comments required to understand and react accurately to personal, environmental, national and international conditions, as well as to be in a position to take appropriate decisions (David, 2006). Information is very important in all phases of life. Communication is the transfer of a message (personal knowledge) from one person the (source) to another (the receiver) through a medium. The medium could be oral, written or electronic recorded knowledge can be communicated at a distance in space and time. What is thus communicated is popularly referred to as information. Information is very useful in decision making, its availability enables the individuals, groups and organization to make rational decisions and reduce their level of uncertainty. Okwilaque (2007) said, information is knowledge communicated for useful purpose. It must be noted that attributes suitable for development may improve people live to such an extent that it is easy to see why information is regarded as a useful development resource, whereas attributes identified as less suitable for development can be regarded as limiting the usefulness of information. Because information is so crucial to almost all human activity, it

seems obvious that developers would like to neutralize the negative impact in order to achieve their goals. So, to address the problem of information attributes less suitable for development purposes it would perhaps be worthwhile to take a closer look at the information behavior of rural people used to the oral tradition. The reason behind this approach is that rural people who are used to the oral tradition have their own peculiar way of handing information that is closely related to their social and cultural background (Meyer, 2003).

There are many sources of Agricultural information that can help the rural farmers to make decision about their farming operation and other livelihood related issues. The channels through which this information is searched may differ depending on age, gender, education, location and other variables (Amstrong and Diepeveen, 2008). For a farmer to use the information available to them effectively, that information needs to be available in a format that can be incorporated into farmers' decision-making processes (Umber, 2006). Information must be meaningful to farmers' in addition to being packaged and delivered in a way preferred by the farmers (Diekmann, *et al,* 2009). Information seeking behavior is important because it tells how average citizen go about searching information that are crucial to their day to day activity. It is the process in which one goes about seeking information that will enhance is productivity. Information seeking behavior vary considerably from one individual to another according to age, gender, level of education, occupation, location, religion e.t.c. it is very difficult, if not impossible to identify common information seeking behavior for all people most especially in the developing regions of the world (Ekoja, 2010). Information seeking is a purposeful search for information to inform decision making. While Apata and Samuel (2010) suggested that information seeking is a fundamental human process closely related to learning and problem solving. For this study, information seeking behavior encompasses the way rural farmers seek, evaluate and use the needed information.

Agricultural information and seeking behavior is for all categories of people both in urban or rural area. According to Iwe (2003) the rural in Nigerian context, is any area that is far from the urban city, a village, a hinterland with no good access roads, no pipe born water, no electricity and no factories and industries. The rural dwellers consist mostly of illiterate, subsistence farmers and artisans, who demographic disposition is composed of older people than the young ones. They live in poor and deprived conditions due to the lack of these basic necessities of life (Amanze and Samuel, 2011). Farmers are described as people that are engaged in the business of farming operations, processing farm produce for marketing and storage (Agpalo, 1997). While Gerber (2011) noted that farmers are people who do some combination of raising field crops, orchards, vineyards, poultry or other livestock. Farming is described as technical activities in which farmers often encounter some problems in executing their tasks (Ekoja, 2004). Similarly, Agpalo (1997) said farming involves the cultivation and tillage of the soil, dairy, the production of crops, growing and harvesting of any agricultural products upon forest land, the raising of livestock (cattle, poultry, bees, e.t.c.) as commercial enterprise. Farming in this study is viewed as the act of cultivating crops and rearing of animals for human consumption, industrial needs and exportation to

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boost nation economy. Rural farmers are those subsistence farmers that employ traditional methods and tools, while Ilo (1988) reported that rural farmers use traditional tools and techniques, these tools and techniques are not efficient to generate the require output. For this study, Nigerian rural farmers are seen as small landholder that engage in farm operation as a occupation to feed themselves and family and to earn little income to meet up with family request and purchase of farm input for next farming season. However, to enhance Agricultural productivity, rural farmers should have access to well package and relevant agricultural information, it is in view of these fact that make it essential to investigate the agricultural information seeking behavior of the rural farmers in Kainji lake basin, Nigeria.

### Study Area

Lake Kainji was formed by damming the river Niger at Kainji Island. The dam was closed on 2nd August, 1968 and the reservoir created behind it has a surface area of 1,120k$m^2$ at maximum-recorded level. The lake is 137km long and 24km wide (Welcomme, 1972). Kainji Lake is in the Guinea savannah vegetation zone of the north-western Nigeria. Kainji lake is located between longitude $9^0$ 20′ and $10^0$ 55′ East and latitude $4^0$ 22′ and $4^0$ 45′ North. It has a length of 134km, a maximum width of 21.1km and a maximum depth of 60meters. It has a surface area of 1270 k$m^2$ and a mean annual water temperature of $27.85^0$c after construction (Abiodun, 2002), and catchment area of 1.6× 10k$m^2$. The river Niger has two flood regimes, the black floods and white floods. Although the primary aim of the impoundment is to generate hydro-electric power. The lake also offers opportunities for developmental projects like irrigation farming, fisheries and navigation. Kainji Lake has its source from Futa Jalon in Niger Republic and from local rivers around the lake basin. It takes three to four months for the water from Futa Jalon to get to Kainji Lake especially the southern basin (Ogundana, 2013).

### Objective of the Study

This study is aimed at achieving the following objectives

i. Identify the Agricultural information seeking behavior of rural farmers around Kainji lake basin.
ii. Describe the Agricultural information needs of rural farmers in the study area.
iii. Ascertain sources of Agricultural information used by the rural farmers and factors that affect their information seeking behavior.

### Purpose of the Study

The purpose of this study was to ascertain Agricultural information seeking behavior of rural farmers of Kainji lake basin with the view of improving access to Agricultural information that will translate into increased productivity.

## METHODOLOGY

A descriptive survey method was adopted for the study. Questionnaire was the main instrument used for data collection, while oral interview was used to clarify some aspects of the questionnaire found unclear. As few literate farmers were able to complete the

questionnaire on their own, most had to be interviewed and their responses were used to complete the questionnaires. The population of the study is made up of four districts in Kainji lake basin area, which include: Bussa, Dogongari, Wawa and Karuwasa. Forty (40) respondents will be selected from each district making it a total of one hundred and sixty (160) respondents which will be selected via random sampling. The researchers trained three (3) researcher assistant who have good command of the local languages that joined in the distribution and retrieval of the questionnaires, they also assisted in the interviewing of the illiterate rural farmers using the Bussawa and Hausa languages. During data collection, the researchers were opportune to view rural farmers in their natural habitat, working in their farms, harvesting of crops, processing of crops while some were marketing their produce. The entire questionnaires distributed to the rural farmers in the four districts, the researchers were able to retrieve it all, and thus there was 100% response rate. Data collected was analyzed using tables, percentages and frequency distribution.

## RESULT AND DISCUSSION

Table 1 shows that demographic information about the ages of the respondents. The result however revealed that among the 160 respondents, 47% of them are 31-40years of age, 19% of the respondents are between 41-50, 16% of the respondents are below 30years of age, those who are 51-60years of age are 11% while 7% of the respondents are 61-70years of age. Table 2 revealed that 74% of the respondents were males while 26% were females. This showed that males are more involved in farming work than females. Table 3 indicates the level of education of the respondents, the result shows that majority of the respondents have Qur'anic school education with 54% of them admitting that they are Qur'anic school certificate holder, 22% of the respondents have secondary school education while only 7% of the respondents have tertiary education. Table 4 showed that 82% of the respondents are married, 11% were single and 7% were widowed. This showed that Agricultural operation plays a vital role in supporting family welfare. Most of the respondents were married; this may slow decision-making and utilization of new information among farmers, because they are likely to consult family members before adopting new innovation. Table 5 revealed that 82.5% of the respondents were practicing muslims while 17.5% were Christians. This result showed that crop farming is generally practice among the respondents, only the Christians in the area are involved in rearing of pigs, which means there is a religion taboo in the study area. Table 6 shows that 16.5% of the respondents had a family size of between 1-4 members, while 77.5% had a family size of between 5-7 members and 6% had at least 8 and above. This result revealed that most of the respondents had family size of 5 or more. As a majority of the respondents had large family size, farm operation in the study area may depend on family labor, hiring of laborers may not be needed. This act will reduce the cost of production and add more value to the farmers.

The result in table 7 revealed that 89% of the respondents belong to farmers association while 11% did not. Farmers associations have been identified as an effective channel of information to farmers. The majority of the farmers belong to one or two associations where useful information can be passed to the farmers to improve on their production. Level of production may influence information seeking behavior of the farmers; level of production

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refers to the size of production. Table 8 shows the 28% of the respondents were in a low production, 54% were in medium production while 17.5% were in high production level. This result revealed that most of the respondents were medium level in production. The few farmers in high level production may seek more information than medium level production in order to maximize profits. Table 9 shows the various sources of agricultural information on farm operations to the rural farmers in the study area. The result revealed that the majority of the respondents sought information to improve on their production through various sources which include, friends and family, age group, mosque and church, farmers associations etc. this showed that the farmers are interested to seek information to improve on their production. 96% of the respondents got information from friends and family members, 86% obtained information from their age group, while 79% of the respondents indicated extension agents. The result also revealed that 14% of the respondents watch television programme on agriculture while 30% listened to transistor radio, this may be as a result of weak signal in the study area. This finding showed that the majorities 71.9% of the respondent always use information given on improved farm operations and 74.4% rarely use information given on improved access to credit facilities, while 61.25% rarely use information on improving harvest and post-harvest technology. 49.4% of the respondents never use information given on improved processing and modern storage structures. 50% of the respondents always use information on irrigation and Drainage technology, while 51.9% never use information given on marketing. These results indicate that rural farmers made use (either never or rarely) of information on improving processing methods and modern storage structures, marketing strategies to enhance their income. This implied that, immediately after harvest their produce are sold out at cheap price and there are left with little income.

The result in Table 11 revealed that language barrier is the major barrier to the access of Agricultural information by respondents with 86%, illiteracy with 61% of respondents, lack of time with 54% respondents, high cost of electronic gadgets with 46% of respondents and no library resources with 30% of respondents. Table 12 revealed that 79.4% of the respondents had high or favorable level of information-seeking behavior while 20.6% had low or unfavorable. As majority of the respondents had high level of information-seeking behavior, this means that rural farmers are willing to seek information to improve on their productivity.

## CONCLUSION AND RECOMMENDATION

The major purpose of this study was to investigate the agricultural information seeking behavior of rural farmers in Kainji lake basin. Specifically, it focuses on investigating the sources of agricultural information and identifying the factors affecting agricultural information seeking of the rural farmers in Kainji lake basin. There was a favorable level of information-seeking behavior among the respondents. The rural farmers were willing to seek information that will increase their production, enhance income. Majority of the respondents use friends and family members as their major source of Agricultural information, as farming is their major source of livelihood, they use the information given to enhance their productivity. One of the major barriers militating against access to

Agricultural information by rural farmers in Kainji lake basin is language barrier, which limit farmers' productivity and can threaten the food security of the nation if the trend is not checked.

Based on the finding of the study, the researcher recommends the following;

i. Government should rehabilitate both Nigeria Television Authority (NTA New-Bussa) and rural radio Koro, New-Bussa. To stage educative Agricultural programme in local languages.
ii. Adult literacy classes should be organized in the farm settlements by the ministry of education, so that the rural farmer will be educated and be able to access Agricultural information.
iii. Government or private organization should establish rice processing mill in the study area to meet the needs of the rural farmers.

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**Table 1: Demographic Distribution of Respondents**

| Age group | Frequency | Percentages |
|---|---|---|
| Below 30 | 25 | 16% |
| 31-40 | 76 | 47% |
| 41-50 | 30 | 19% |
| 51-60 | 17 | 11% |
| 61-70 | 12 | 7% |
| Total | 160 | 100% |

Source: Field survey, 2017.

**Table 2: Gender**

| Sex | Frequency | Percentages |
|---|---|---|
| Male | 119 | 74% |
| Female | 41 | 26% |
| Total | 160 | 100% |

Source: Field survey, 2017.

**Table 3: Level of Education of Respondents**

| Level of Education | Frequency | Percentage |
|---|---|---|
| Non formal Education | 11 | 7% |
| Primary | 14 | 9% |
| Secondary | 36 | 22% |
| Tertiary | 12 | 7% |
| Qur'anic school | 87 | 54% |
| Total | 160 | 100% |

Source: Field survey, 2017.

**Table 4: Marital Status**

| Marital status | Frequency | Percentages |
|---|---|---|
| Single | 17 | 11% |
| Married | 131 | 82% |
| Widowed | 12 | 7% |
| Total | 160 | 100% |

Source: Field survey, 2017.

**Table 5: Religion**

| Religion | Frequency | Percentages |
|---|---|---|
| Christianity | 28 | 17.5% |
| Islam | 132 | 82.5% |
| Traditional | 0 | 0% |
| Others | 0 | 0% |
| Total | 160 | 100% |

Source: Field survey, 2017

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Table 6: Family Size

| Family size | Frequency | Percentages |
|---|---|---|
| 1-4 | 26 | 16.5% |
| 5-7 | 124 | 77.5% |
| 8 and above | 10 | 6% |
| Total | 160 | 100% |

Source: Field survey, 2017.

Table 7: Farmers Associations

| Farmers' Association | Frequency | Percentages |
|---|---|---|
| Yes | 142 | 89% |
| No | 18 | 11% |
| Total | 160 | 100% |

Source: Field survey, 2017.

Table 8: Level of Production

| Level of production | Frequency | Percentages |
|---|---|---|
| Low | 45 | 28% |
| Medium | 87 | 54% |
| High | 28 | 17.5% |
| Total | 160 | 100% |

Source: Field survey, 2017.

Table 9: Source of Information

| Source of information | Frequency | Percentages |
|---|---|---|
| Friends and family members | 154 | 96% |
| Age group | 137 | 86% |
| Extension agents | 126 | 79% |
| Television | 22 | 14% |
| Radio | 48 | 30% |
| Church | 28 | 17.5% |
| Mosque | 132 | 82.5% |
| Farmers association | 142 | 89% |
| News paper | 2 | 1% |
| Library | 4 | 2.5% |

Source: Field Survey, 2017.

Table 10: Information Use of Respondents

| Information use of respondents. | Never use | Rarely use | Always use |
|---|---|---|---|
| Improving on farm operation. | 19/11.9% | 26/16.2% | 115/71.9% |
| Improving access credit facilities. | 7/4.4% | 119/74.4% | 34/21.2% |
| Improving harvest methods and post-harvest technology. | 20/12.5% | 98/61.25% | 42/26.25% |
| Improving processing methods and modern storage structures. | 79/49.4% | 55/34.4% | 26/16.2% |
| Irrigation and drainage practice | 31/19.4% | 49/30.6% | 80/50% |
| Marketing | 83/51.9% | 42/26.2% | 35/21.9% |

Source: Field survey, 2017.

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Table 11: Barriers to the Access to Information

| Barrier to the access of information. | Frequency | Percentages |
|---|---|---|
| No library resources | 48 | 30% |
| Illiteracy | 98 | 61% |
| Language barrier | 137 | 86% |
| Lack of time | 86 | 54% |
| High cost of electronic gadgets | 74 | 46% |

Source: Field survey, 2017.

Table 12: Information Seeking Behavior

| Information seeking behavior | Frequency | Percentages |
|---|---|---|
| High (favorable) | 127 | 79.4% |
| Low (unfavorable) | 33 | 20.6% |
| Total | 160 | 100% |

Source: Field survey, 2017.