



INFORMATION NEEDS AND AGRICULTURAL INFORMATION SERVICES FOR RURAL RICE FARMERS IN PUBLIC LIBRARIES AND AGRICULTURAL CENTERS IN ANAMBRA STATE, NIGERIA

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ABSTRACT

This study investigated the information needs and agricultural information services for rural rice farmers in public libraries and agricultural centres in Anambra State, Nigeria. The purpose of the study is to ascertain the information needs of rural rice farmers and the availability of agricultural information services in meeting the information needs of rural rice farmers. Two research questions guided the study. Survey research design was adopted for the study. The population of the study was 860 registered rural rice farmers in five local government areas that cultivate rice in Anambra State. The study used multistage sampling procedure to select local government, simple random sampling technique and Taro Yamane's sampling formula to determine sample size of 273 rural rice farmers from three selected local government areas in Anambra State. The instrument for data collection were structured questionnaire and checklist titled information needs of rural rice farmers questionnaire (INRRFQ) and availability of agricultural information services checklist (AAIRSC). The instruments were validated by three experts. The instrument was pilot tested on a group of 20 rural rice farmers in Enugu State. Cronbach Alpha was used to determine the internal consistency of the questionnaire items in section A and Kuder Richardson 21 for checklist items. Data collected were analysed using Arithmetic mean, standard deviation and percentages. The findings of the study showed among others that rural rice farmers have a wide variety of information needs in which the resources available to them significantly depend on the type of need, which when met will help them better their rice production. All the relevant agricultural information services needed are available in the public libraries and agricultural centres in Anambra State.

Keywords: Information needs, information services, availability, public libraries, agricultural centres.

Introduction

Nigeria is one of the largest producers of rice in Africa and the continent has witnessed a consistent increase in the demand of rice as a

result of its popularity as a major continental diet. It is necessary that rural rice farmers are provided with the appropriate information needed for rice production. By effectively



meeting their information needs, it is possible to increase the supply of agricultural products like rice in many ways, by providing information such as best practices in farming, market information about where to sell their products and buy inputs, use of information services to encourage farmers to boost their production so as to meet consumption and industrial demands (Bonephace, Xuewen and Makawia, 2022). According to Momodu (2013) information based on the information needs of users as well as the availability of information services is an essential tool used in improving the living conditions of people in any developed and developing nation in the world. Therefore, available information has been used to solve pressing societal problem. This implies that the development of a country depends largely on how its citizenry have access to accurate, appropriate and reliable information. The need for information varies from one user group to another

According to Ternenge and Torkuma (2021) this implies that information users need information for problem solving, current awareness, and recreational purposes and for up-dating their knowledge. Also, information need is often understood as an individual's or group's desire to find and acquire information to meet an unconscious or conscious need. The place of information need in human development cannot be overemphasized. Information is needed by everyone in order to know what is going on in the society, to acquire basic needs of life, as well as to cope with every given situation (Mohammed and Garaba, 2019). Anunobi, Ogbonna and Osuchukwu (2014) reported that the information needs of rural community for their day to day activities include healthcare, employment, transportation, self-governance, agriculture,

local community events, housing, programmes of education, religion, recreation, current-affairs, legal information, crime and safety as well as information about their vocations, trade or occupations such as farming.

Information needs

Information needs among farmers particularly are different from those of other human needs. It can be said that the information needs of farmers are many and diverse, especially in an information dependent sector like agriculture where there are complex problems facing farmers. Yongshan and Yonghe. (2019) stated that the information needs of Nigerian farmers are likely to vary from one individual to another due to individual differences or various other factors like age, level of education farming experience and method applied in farming. Hence, a better understanding of the specific needs of farmers for each individual or group according to their products is needed. Through this, specific information can be provided by public libraries and agricultural centres by making accessible publications on agricultural information in journals, posters, government documents, books, extension workers, radio, television and film shows to cater for the specific needs of the farmers in their peculiar localities.

According to Idiegbeyan-Ose, Adekunjo, Ilo and Odion (2015) stated that the information needs of rural rice farmers (RRF) can generally be categorized into health; agriculture; education; housing; employment, transportation, welfare, family, legal information, crime and safety, policies and government, land and human rights, markets, civics, politics, finance (credit), academic, leisure, international news, occupations, farm inputs, adult literacy



programmes, social services, and religion. Others include: prices of local commodities, water conservation, job vacancies, food and nutrition, national poverty eradication programme, community development, cultural activities and empowerment strategies. The information needs of rural rice farmers in Anambra state include; information on fertilizer application, pesticide use, weed control, land preparation, seed selection, disease treatment, weather condition, storage methods, irrigation, planting methods, marketing information, co-operative societies, extension agent services, sources of credit and improved rice management techniques.

Information services refer to activities of librarians which ensure that information are satisfactorily accessed and used by library users including rural rice farmers. These information resources are made available in public libraries and agricultural centres. Moreover, information services involve services provided to farmers about agricultural practices by extension workers in agricultural centres. In another vein, information service could be defined as any library activity intended to provide information to users in locating published or unpublished information within or outside the library or information centre. According to Stojanovski and Papic (2012), information services can be defined as services through which librarians directly supply users with information, or interfaces created by librarians and adjusted to users through which users could independently find needed information. In the view of Cassell and Hiremath (2013) information services can be conceptualized as any process of resolving information needs of users in response to a particular type of question, interest, assignment on problem as well as building

posture relationship with users. LRCN (2015) stated that the information services of the public libraries should be based on the information needs of the user communities and identified target groups. The services should be accessible regardless of ideological differences, gender, religious learning, nationality, social status and language. The following services are provided: reference services, community information services, library services to special groups including farmers among others. It highlights the daily services library should provide in meeting the information needs of their users. Access to information services for rural rice farmers is vital for daily farm production as it provides knowledge and create awareness on modern farming innovations.

Availability of information services

Iorver, Ternenge, Terlanga, and Terhemen (2019) investigated the information needs and resources utilization of rice farmers in Anyiin, Logo Local Government Area of Benue State, Nigeria. The result showed that, the rice farmers need information to get improved varieties, modern farm technology, market location, agricultural loan and credit facilities. The information needs of the rice farmer's understudied are not being satisfactorily provided

Benard, Dulle and Ngalapa (2014) assessed the information needs of rice farmers in Tanzania using rice producers in Kilombero District as a case study. The results of the study revealed that rice farmers have a wide variety of information needs including information on marketing, weather condition, agricultural credit/loan, new seeds, storage method, planting methods, diseases and pest control, and pesticide availability and its application. On the other hand,



Adetimehin, Okunlola and Owolabi (2018) examined the utilization of agricultural knowledge and information by rice farmers in Ondo State, Nigeria. The results of the study revealed that rice farmers in the study area have a variety of information needs including information on pests and diseases management practices, mechanical land preparation and planting, use of farm machines, improved storage methods and agricultural credit/loan.

Abdullahi and Aliyu (2019) ascertained the availability and use of information resources and Services in Bauchi State Public Library. The findings revealed that information resources and services were made available to users. It was discovered that books, newspapers, and dictionaries (84.3%, 67.0%, 61.4 %,) respectively were the most available information resources. Furthermore, the available information services were exhibitions and displays, lending services and library orientation/user education (45.9%, 47.0%, 42.2%) respectively. In addition, Adamu, Kasim, Adamu and Abubakar (2020) investigated the agricultural information services provision by library staff of college of agriculture libraries in Niger State, Nigeria. The findings of the study showed that outreach services, bibliographic services, user education, and reprographic services. Current awareness services among others were not provided, ICTs based information provision models such as web portal, voice-based service, text (SMS) ,based service, self-support online community service, interactive video conferencing service among others were not in use in the college of agricultural libraries in Niger State.

The public library is a local centre of information that makes readily available all types of information to their users in

electronic or print form. It is established by state government, funded and supported by the general public. Public library is designed to provide people with materials that enable easy and unrestricted access to knowledge and ideas that can be shared between individuals. Users are its primary focus. However, Agricultural centres are institutions or facilities that focus on advancing and improving agricultural practices and techniques. These centres often serve as centres for research, education and outreach activities related to agriculture. Agricultural centres collaborate with farmers, government agencies, agricultural experts and the community to address various challenges and issues in agriculture. They often serve as a resource for the local community, providing information, expertise and technical assistance to rural rice farmers. Agricultural centres provide agriculturally-oriented services to the rural community which include information on rice production and protection, pest and diseases control, fertilizer availability and application, agricultural credit facilities, market prices, improved seeds varieties, rainfall gauge, extension advisory services, training services, agricultural shows, community services, outreach among others. These information are made available to rural rice farmers through extension workers, radio, television, film shows, agricultural pamphlets, government agricultural agencies. This information centre is designed to provide agricultural information and services to farmers.

Statement of the Problem

The current situation reveals that the information needs of rural rice farmers change from time to time because agricultural technologies, environment, agricultural policies, and agricultural



innovations are always evolving. As a result of these changes, public libraries and agricultural centres which provide information resources that drive the implementation of cutting edge agricultural practices need to provide, diverse, up to date and current information resources that deal with all aspects of agricultural production and specifically rice farming and other relevant information on knowledge of best seedlings and fertilizer application, as well a information services such as free ICT access and training, agricultural information services, extension services, an online marketplace for rural rice farmers. This implies that rural rice farmers need to be connected to communication channels through which appropriate information can be disseminated. If this is not done there seems to be a threat of their being separated from the most current developments in rice farming that will affect rice production as is presently being witnessed in Nigeria. The gap in availability of agricultural information services, compounded by the information needs of rural rice farmers not being well articulated spells doom for their information needs to be met. It is on this background that this study aimed to empirically find out the information needs and ascertain the availability of agricultural information services for rural rice farmers in public libraries and agricultural centres in Anambra State, Nigeria.

Research Questions

1. What are the information needs of rural rice farmers in Anambra State?
2. What are the available agricultural information services provided to rural rice farmers in public libraries and agricultural centres in Anambra State?

Research Method

Survey research design was adopted for the study. The study was conducted in Anambra state, Nigeria. The population of the study comprised all the 860 registered rural rice farmers from the five local government areas that cultivate rice in Anambra State. The population is made up of 220 rural rice farmers from Ayamelum, 205 rural rice farmers from Awka North, 195 rural rice farmers from Orumba North, 130 rural rice farmers from Anambra East, 110 rural rice farmers from Anambra West local government areas in Anambra State. The study used multistage sampling procedure by simple random selection of the local government areas and Taro Yamane's sampling formula to determine the sample size of 273 rural rice farmers from the selected local government areas in Anambra State. It involved- stage 1: Simple random sampling was used to select 5 LGAs from the 21 LGAs in Anambra state that cultivate rice (Ayamelum, Awka North, Orumba North, Anambra East, and Anambra West). Stage 2: simple random sampling of 3 LGAs out of the selected 5 (Ayamelum, Awka North, and Orumba North). Stage 3: selection of 273 rural rice farmers belonging to rice producers' cooperative society in the selected LGAs by applying Taro Yamane sampling formula .The instrument for data collection was a structured questionnaire titled Information Needs of Rural rice Farmers Questionnaire (INRRFQ) and Observation Checklist titled Availability of Agricultural Information Services Checklist (AAISC). The instruments were validated by three experts, one from the Department of Educational Foundation (Measurement and Evaluation) and two from the Department of Library and Information Science, all in Nnamdi Azikiwe University, Awka. The



instrument was pilot tested on a group of 20 rural rice farmers in Enugu State. Cronbach Alpha was used to determine the internal consistency of the questionnaire items in section A and Kuder Richardson 21 for checklist items. Data collected were analysed using descriptive statistics. Arithmetic mean and standard deviation was used to answer research question one with 4 point rating scale with response options of agreed, strongly agreed, disagreed and strongly

disagreed while percentages was used to answer research question two. For research question 2, items with value of 1 and above were considered available while those with the value of 0 were considered not available.

Presentation of Results

Research Question 1: What are the information needs of rural rice farmers in Anambra State?

**Table 1: Mean (\bar{X}) rating of information needed by rural rice farmers in Anambra State
N = 243**

S/N	Rural rice farmers need information on	Mean	SD	Decision
1	Fertilizer application	3.62	.58	Strongly Agree
2	Pesticide use	3.45	.53	Agree
3	Weed control	3.62	.55	Strongly Agree
4	Land preparation	3.57	.61	Strongly Agree
5	Seed selection	3.51	.59	Strongly Agree
6	Disease treatment	3.44	.59	Agree
7	Weather condition	3.34	.62	Agree
8	Storage methods	3.55	.56	Strongly Agree
9	Irrigation	3.41	.71	Agree
10	Planting methods	3.43	.63	Agree
11	Marketing information	3.47	.65	Agree
12	Co-operative societies	3.39	.67	Agree
13	Extension agent services	3.35	.58	Agree
14	Sources of credit	3.51	.70	Strongly Agree
15	Improved rice management techniques	3.68	.54	Strongly Agree

Data presentation in Table 1 shows that rural rice farmers need all the information listed to improve their rice production with. Information on improved rice management techniques (mean = 3.68) being the highest rated. Followed by information on fertilizer application (mean = 3.62), information on weed control (mean = 3.62), information on pesticide use (mean = 3.45), information on land preparation (mean = 3.57), information on seed selection (mean = 3.51), information on disease treatment (mean = 3.44), information on weather condition (mean =

3.34), information on storage methods (mean = 3.55), information on irrigation (mean = 3.41), information on Planting methods (mean = 3.43), information on marketing (mean = 3.47), information on extension agent services (mean = 3.35), information on sources of credit (mean = 3.51), and information on Co-operative societies (mean = 3.39) was the least rated. Rural Rice Farmers need a variety of information

Research Question 2: What are the agricultural information services available



for rural rice farmers in public libraries and agricultural centres in Anambra State?

Table 2: Information services available in public libraries in Anambra State

S/N	Items	Ayamelum	Awka North	Orumba North	Remark
1	Internet/website services	✓	✓	✓	Available
2	Binding services	✓	✓	✓	Available
3	Exhibitions services	✓	✓	✓	Available
4	Reference services	✓	✓	✓	Available
5	Outreach /extension services	✓	✓	✓	Available
6	Current awareness services	✓	✓	✓	Available
7	Selective dissemination of information services	✓	✓	-	Not Available
8	Telephone request services	-	-	-	Not Available
9	Inter-library loan services	-	-	-	Available
10	Documentation services	✓	✓	✓	Available
11	Training services	✓	✓	✓	Available
12	Translation services	✓	✓	✓	Available
13	Book mobile	✓	✓	✓	Available
14	Orientation programme	✓	✓	✓	Available
15	Circulation/lending services	✓	✓	✓	Available
	Total	13	13	12	

Table 2. A. shows information services available in public libraries under study in Anambra State. The study revealed that out of 15 listed information services 13 are available in all the libraries studied, while 2 are not available. They are as follows: Ayamelum has 13 out of 15 listed information services, this means that 87% of the listed information services are available for rural rice farmers. Awka North has 13 out of 15 listed information services, this means that 87% of the listed information services are available. Orumba North has 12 out of 15 listed information services, this means that 80% of the listed information services are available for rural rice farmers in the public libraries being understudied in Anambra

State. All the studied libraries offer internet/website services (100%), binding services (100%), exhibitions services (100%), reference services (100%), outreach services (100%), current awareness services (100%), documentation services (100%), training services (100%), translation services (100%), book mobile (100%), orientation programme (100%), circulation/lending services (100%). While selective dissemination of information services is available in only two libraries rated 67%. Telephone request services and inter-library loan services are not available in any of the libraries and rated at 0% in all the studied libraries in Anambra State.



2. B. Information services available in agricultural centres in Anambra State

S/N	Items	Ayamelum	Awka North	Orumba North	Remark
1	Extension advisory services	✓	✓	✓	Available
2	Training services	✓	✓	✓	Available
3	Agricultural show	✓	✓	-	Available
4	Community services	✓	✓	✓	Available
5	Outreach services	✓	✓	✓	Available
6	Exhibition services	✓	-	✓	Available
7	Radio broadcasting services (programme)	✓	-	-	Available
8	Current awareness services	-	✓	✓	Not Available
9	Rainfall gauge services	-	-	-	Not Available
10	Agro-services	✓	-	-	Available
11	Seminar	9	✓	✓	
	Total		7	7	

Table 2.B. shows information services available in agricultural centres under study in Anambra State. The study revealed that out of the 11 listed information services 9 are available while 2 are not available in all the agricultural centres under study. They are as follows: Ayamelum has 9 out of 11 listed information services, this implies that 82% of the listed information services are available for rural rice farmers. Awka North has 7 out of 11 listed information services, this means that 64% of the listed information services are available. Orumba North also has 7 out of 11 listed information services, this means that 64% of the listed information services are available for rural rice farmers in public libraries under study in Anambra State. All the studied libraries offer extension advisory services (100%), Training services (100%), community services (100%), outreach services (100%), current awareness services (100%), seminar (100%), Ayamelum and Awka North offers agricultural show (67%), Ayamelum and Orumba North offers exhibition services (67%), Only Ayamelum offers radio broadcasting services (programme) (33%), while rainfall gauge

services (0%) and agro- services (0%), were not available in any of the studied libraries in Anambra State.

Discussion of Findings

The findings in table 1 showed that rural rice farmers have a wide variety of information needs associated with rice production, which when met will help them better their rice production. As such they need a corresponding wide array of services to meet these information needs, these services will equip them to make informed decisions, adopt improved practices and increase their productivity. Therefore, public libraries and agricultural centres are required to identify the information needs of the farmers, and to provide adequate information services to meet those needs. The current study's findings align with the study by Iorver, Ternenge, Terlanga and Terhemen (2019) which stated that rice farmers need information to get improved varieties, market location, and agricultural loan and credit facilities. Moreover, the findings are corroborated by the studies of Adetimehin, Okunlola and Owolabi (2018); and Benard,



Dulle and Ngalapa (2014) which earlier maintained that rice farmers have a variety of information needs including information on marketing, weather condition, agricultural credit/loan, new seeds, storage method, planting methods, diseases and pest control, pesticide application and land preparation.

The findings of tables 2.A. & 2.B. showed that a large number of information services were available while few of the services were not available in public libraries and agricultural centres under study in Anambra State. However, more advanced services need to be developed in order to fully meet rural rice farmer demand? This findings are in line with the findings of Abdullahi and Aliyu (2019) which noted that available information services were exhibition and display, lending services, library orientation, and user education. Adamu, Kasim, Adamu and Abubakar (2020) findings align with the studies finding as the observed that outreach services, bibliographic services, user education and reprographic, current awareness were not provided, and advised that such services be provided to their clientele. Ngwira and Majawa (2018) confirmed this finding as they reported that farmers experienced challenges in accessing agricultural information due to the fact that agricultural information on radio and television were always aired at odd hours when farmers who desire such information had gone to their farms and illiteracy level among them was high. They further advised that adequate funding should be made to libraries and agricultural centres to improve the quality of agricultural information and services. In line with the findings which showed that some services were absent, Jona and Terblanche (2015) regretted that other service providers who were able to give quality services only catered for few farmers which made the farmers receive less of those services.

Conclusion

The findings of the study showed that rural rice farmers have a variety of information needs that are critical for improved rice production, while some of the relevant information services needed were available to meet the information needs of rural rice farmers in the public libraries and agricultural centres in Anambra State others were not available. However, it is expedient that the available information services provided should be re-examined to bear on the need to strategically offer cutting edge services in line with the dynamics of present day rice production that is in tandem with international best practices. This will help to cut down the present day escalating price of rice in Nigeria.

Recommendations

1. Public libraries and agricultural centres in Anambra State should carry on needs assessment to determine the information needs of rural rice farmers because it will enable appropriate and efficient provision of information services and promote use of public library and information centres among rural rice farmers.
2. Public libraries and agricultural centres' management should introduce information centres that are innovative in line with the rural rice farmers' operations and organize trainings, seminars, and workshops to educate their staff on the new innovations in line with international best practices with regards to services provision and services delivery.

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