

**AGRICULTURAL INFORMATION SERVICES PROVISION BY LIBRARY STAFF
OF COLLEGE OF AGRICULTURE LIBRARIES IN NIGER STATE, NIGERIA**

ADAMU, MOHAMMED SABA (CLN, MNLA, CTN)
*University Library Services,
Federal University of Technology Minna, Niger State, Nigeria*
mohd.adamu@futminna.edu.ng

KASIM, MUHAMMAD BALA (CLN)
*University Library Services,
Federal University of Technology, Minna Niger State, Nigeria*
kasim.bala@futminna.edu.ng

ADAMU, MAHMUD (CLN)
*University Library Services,
Ibrahim Badamasi Babangida University, Lapai, Niger State, Nigeria*
adamumahmud109@gmail.com

ABUBAKAR, FATI (CLN, MNLA)
*University Library Services,
Federal University of Technology, Minna, Niger State. Nigeria*
fati.abu@futminna.edu.ng
08051328048

Abstract

This study investigated the agricultural information services provision by library staff of college of agriculture libraries in Niger State, Nigeria. The research design adopted for this study was descriptive survey research design. The population covers the staff of the libraries. The instruments used for data collection were checklist containing items on availability of agricultural information services and questionnaire containing items on methods of providing of agricultural information services and strategies to enhance provision of agricultural information services and strategies for enhancing the provision of agricultural information services. Data collected were analysed using frequency counts and percentages. Findings showed that outreach services, bibliographic services, user education, reprographic services, current awareness services (CAS), etc 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 etc were not in use in the College of Agriculture Libraries in Niger State. The study recommended provision of outreach services, bibliographic services, user education, reprographic services, current awareness services (CAS), etc and make use of latest technologies such as ICTs based information provision models, Smart Phones, CD-ROM, Radio, Television, Computer show case etc to provide agricultural information services to their clientele.

Keywords: *Agricultural Information Services; College of Agriculture Libraries; Library Staff Provision, Niger State; Nigeria.*

Introduction

Information is generally believed to be power and libraries or information centres rendered a lot of information services to individuals regardless of the area of specialisation. Information plays a crucial role in agriculture as this would help to boost agricultural productivity for sustainable development. Information is needed for individual growth and development and by extension societal growth and transformation. It is required for personal, social or work related activities of individuals and for the development of societies and states. Information service is defined as any process of resolving information needs of users in response to a particular type of question, interest, assignment or problem and building positive relationships with users (Radford cited in Cassell and Hinemath, 2013).

Agricultural information services could be viewed as any agricultural library activity designed to provide agricultural information to patrons or farmers in finding agricultural information within or outside the library or information centre. Agricultural information can be published or unpublished knowledge in all aspects of agriculture, this can also be categorised into four namely: technical, commercial, socio-cultural and legal agricultural information. However, for agricultural productivity to improve, farmers should have access to accurate and relevant information in order to facilitate prudent and adequate utilisation of agricultural information for sustainable development (Adamu, Babalola and Dogara, 2018).

Library is an indispensable aspect of education that is widely connected to other existing aspects of education and which intends to inculcate into the public the methods of processing, organising, preserving, retrieving, providing and using information and its resources for individual and group sustainable development across the globe. Emphasis would be given to agricultural libraries as one the examples of academic library on this study. Consequently, library is vital as Agriculture is a major source of livelihood in Nigeria. Agricultural productivity can be doubtlessly augmented by relevant, reliable and useful information and knowledge. Agriculture sector thrives on the basis of availability of relevant agricultural information services that is associated with the needs of those in the agricultural sector. The provision of agricultural information services are very crucial to agricultural productivity of farmers because it is only through this means that they can learn innovations which can improve their productivity (Amaechi and Ossai-Onah, 2015). In developing countries,

Nigeria inclusive, agriculture has been the source of livelihood for about seventy-five percent of people living in the rural areas.

The rural areas in Nigeria have the largest concentration of poverty and food insecurity and one of the causes of the low incomes in the rural Nigeria is low agricultural productivity. Lack of adequate information and non-application of ICT in agriculture has been regarded as one of the purpose for low productivity in Nigerian agriculture. In recent time, there is a radical changes and development brought by the emergence of Information and Communication Technology (ICT) in all aspect of human endeavour and agriculture is not left out. Fawole cited in Onyeneke and Solomon-Uwakwe (2018) states that ICTs play vital role in bringing about sustainable agricultural development when used in the appropriate manner. The author further states that ICT can help in the gathering, storage, retrieval and provision of wide range of information needed by farmers. ICT can also bring new information services to rural farmers where they would have much greater control over current information gateway.

Functions of Agricultural Libraries

Agricultural libraries, according to Aguolu cited in Adamu *et. al.* (2019) derive their functions from the objectives of their parent institutions. They are established to play an important role in the achievement of the training or research objectives of their parent institutions through the provision of agricultural information services. They play this role by performing the following functions or activities. Aguolu cited in Adamu *et. al.* (2019, p195) further outline the functions of agricultural libraries as:

- Collection, organisation and provision of information materials in general agriculture or particular area of specialisation as well as allied subjects.
- Receiving and disseminating technical reports and information.
- Reference, queries services, inter-library loan services.
- Literature search services
- Current awareness services such as distribution of accession lists, content pages of journals, selective dissemination of information (SDI) services.
- Provision of photocopying services.

The college of agriculture libraries in Niger State which started as a reading room at the establishment of the college at Mokwa Campus in 1979 and later established additional campuses in Kuta and Kontagora has grown to a magnitude of what is obtainable in any

higher institution of learning in the country. In order to ensure effective provision of agricultural information services, The libraries houses over eight (8) thousand volume of books and periodicals.

Statement of the Problem

Agricultural information is an essential ingredient in agricultural development programmes all over the world, Nigeria inclusive. In Nigeria stakeholders such as peasant farmers rarely feel the impact of agricultural innovations either because they have no access to such vital information or because it is poorly provided. The information provided is exclusively focused on policy maker's researchers and those who manage policy decisions with scanty attention paid to the information need of the largest beneficiaries of the policy decision. The non-provision of agricultural information services is a key factor that has greatly limited agricultural development in developing countries, Nigeria for example. Over the years, government has established several agricultural colleges with supportive agricultural libraries. This has been to promote the study, teaching and research in agriculture. The colleges and their libraries are responsible to generate and provide agricultural information or knowledge to agricultural extension workers, researchers, teachers, students, peasant farmers as well as policy makers in government. Consequently, it has been observed that agricultural information services are not adequately provided to the clientele or farmers particularly in the study areas. It is in the light of the above that, this study is carried out.

Objectives of the Study

The objectives of the study are to:

1. identify the types of agricultural information services provided by library staff of college of agriculture libraries in Niger State;
2. ascertain the methods used for provision of agricultural information services in college of agriculture libraries in Niger State;
3. determine strategies for enhancing provision of agricultural information services in college of agriculture libraries in Niger State.

Research Questions

The study is carried out to provide answers to the following questions:

1. What are the types of agricultural information services provided by library staff of college of agriculture libraries in Niger State?
2. What are the methods used for provision of agricultural information services in college of agriculture libraries in Niger State?

3. What are the strategies for enhancing provision of agricultural information services in college of agriculture libraries in Niger State?

Literature Review

Information is a formidable bedrock and a pivot upon which any developmental activities including agricultural productivity are hinged. Surely there will be a better production of foodstuff for sustainable development in the nation. The growth and development of agriculture of any nation can be achieved with skilled and effective manpower through continuous increase in knowledge. Therefore, it is vital to have immediate access to innovations, transformations and the latest results of agricultural research information (Adamu, Babalola and Dogara, 2018). Stojanovski and Papic (2012) posited that Information service encompasses not only services via which librarians directly supply clientele with information but also interfaces created by librarians and adjusted to patrons through which library users could independently find needed information. Consequently, Ilyasu, Usman and Kasim (2019) averred that information services is any library activity intended for providing information or assisting a client or user in finding information within or outside the confinement of the library or information centre.

Agricultural library collection or documentation centre are synonymous and mean a collection of knowledge materials, especially books, journals and reports pertaining to agriculture. The collection may be a definite entity, like in many agricultural research institutions, or within a library collection like that of a university library. Agricultural information can be in coded (documented) form or uncoded (oral) form. The provision of agricultural information service is vital to improve agricultural production because it is a media through which people get acquainted with new and better farming methods, fertilizers, improved seedlings, modern pest control measures, pesticides, herbicides and fungicides (Aguolu cited in Adamu et. al., 2019). According to Emmanuel, and Chuwang (2009), the scarcity of agricultural information is a bane or impediment to agricultural development in developing countries including Nigeria. The provision of agricultural information services by agricultural libraries to rural farmers is significantly important to rural communities in developing countries of the world. It is equally important for farmers to be armed with the type of information that could alleviate poverty, boost their economic base and eventually enhancing their standard of living which could also be provided by the agricultural libraries. For instance, they need information on how to access loan/credit facilities, marketing

strategies, export opportunities and utilisation of organic matter in farming. The traditional channels of providing information to the farmers seem to have minimised the efficiency of production and also the output; this is because it is a single path flow of information. However, modern technology has the capacity to influence the efficiency of production and the output of farm crops by the farmers as it reflects double way flow of information with response just as it involves several stakeholders at a time especially the agricultural libraries (Ugwu cited in Adamu, Babalola and Dogara, 2018).

Modern technology such as Information and Communication Technology (ICT) is defined as a science of collecting and processing information, facts, values, skills, thoughts, texts, graphics, pictures, card sounds, news and all other forms of data in digital form for provision in both immediate and remote locations. Afolabi and Abidoeye (2011) stressed that the development and availability of ICTs in the provision of library and information services have not only increased and broadened the impact of information resources but placed more emphasis on effective and efficient services. This is equally pertinent to farmers as agricultural information services provision is essential for sustainable development of every nation including Nigeria.

Agricultural information services provision to stakeholders such as extension workers, media professionals and educational facilitators as they have to work hand in hand in multi-dimensional flow of information. According to Ugwu (2008) there are many channels through which agricultural information services can be provided to farmers fastest of which is the use of ICT applications. The author outlined further the various ICT applications to include: CD-ROM, global positioning system (GPS), smart cards, radio, digital television, digital personal assistants (DPAs) and mobile phones etcetera. Ugwa (2008) further posited that mobile phones are now the transparent technology medium of communication which they identify short message services (SMS) as one of the commonest ways. SMS has become an extremely essential means to send and receive information. These short and simple messages are affordable, convenient, and usually free to receive. Other advantage of SMS is that it is possible to set up a system to deliver messages automatically to a large number of people at the same time. Mobile phones are also considered as the most viable device of providing agricultural information services to farmers.

The development of Smart phones such as the blackberry, android and the iphone has made it possible for subscribers to begin to have access to the web. These smart phones are tools that provide access to the web over 3G (third generation) wireless networks. This will help farmers to access the web for agricultural information: even though it will require some level of literacy to understand the message. Dedicated Number with a Voice Activated Menu Option: - This is a kind of information service that farmers can use with the help of mobile phone to call a dedicated number to get advice on the best ways to grow a wide range of crops or to raise livestock.

In Kenya, this service is called Banana information line. This helps to provide farmers with specific information on a particular situation either in English or in their native languages. Combined Service with other Technology:- Mobile phones are now used with other digital technologies to provide information to farmers in rural areas. For example, one can use mobile phones and geographic information system (GIS) based maps with global positioning system to discuss with other group herders about the availability of fresh pastures and water supplies and decide where cattle could be grazed in order to prevent overgrazing (Ugwu cited in Adamu, Babalola and Dogara, 2018).

Methodology

The case study research design was adopted for this study. A total of sixteen (16) library staff in College of Agriculture Libraries in Niger State. Namely: College of Agriculture Library, Mokwa Campus, College of Agriculture Library, Kuta Campus and College of Agriculture Library, Kontagora Campus constitute the study population and sample. Questionnaire and checklist were the instruments used to elicit responses from the respondents. Data gathered were tabulated and analysed using simple frequency counts and percentages.

Results and Discussion

Table 1: Distribution of the Respondents by Gender

S/N	Sex	Frequency	Percentage (%)
1.	Male	12	75
2.	Female	4	25
	Total	16	100

Table 1 reveals that out of 16 respondents, 12(75%) were males while 4(25%) were female. This implies that, there are more male library staff than female library staff.

Table 2: Educational Qualifications of the Respondents

S/N	Educational Qualifications	Frequency	Percentage (%)
1.	Ph.D	-	-
2.	MLS or M.Tech.	1	6.25
3.	BLS or B.Tech.	1	6.25
4.	HND	-	-
5.	National Diploma (ND)	1	6.25
6.	Ordinary National Diploma (OND)	6	37.5
7.	SSCE	7	43.75
	Total	16	100

Table 2 reveals that out of 16 respondents, 1(6.25%) possessed Masters degree in library science, 1(6.25%) possessed First degree in library science, 1(6.25%) possessed National Diploma (ND), 6(37.5%) possessed Ordinary National Diploma in library science while 7(43.75%) possessed Senior Secondary Certificate Examination (SSCE). This implies that majority of the library staff need to further their education to acquire first degree and above.

Table 3: Agricultural Information Services Provided in the Libraries

S/N	Agricultural Information Services	Provided	Not Provided
1.	Outreach services		√
2.	Reference services	√	
3.	Technical services	√	
4.	Serials services	√	
5.	Exhibition and display services	√	
6.	Bibliographic services		√
7.	User education		√
8.	Reprographic services		√
9.	Current awareness services (CAS)		√
10.	Reserve services (short loan services)		√
11.	Selective dissemination of information (SDI)		√
12.	Counselling services		√
13.	Referral services		√
14.	Information and Communication Technology (ICT) services		√
15.	Document delivery services		√
	Total	4(26.7%)	11(73.3%)

Table 3 reveals that out of 15 items listed, 4(26.7%) of services were provided in the agricultural libraries under study such as reference services, technical services, serial services and exhibition and display services while 11(73.3%) of services were not provided in the libraries such as outreach services, bibliographic services, user education, reprographic services, current awareness services (CAS), reserve services, selective dissemination of information (SDI), counselling services, referral services, ICT services and document delivery services.

Table 4: Methods of Providing Agricultural Information Services

S/N	Methods	Yes (%)	No (%)	Total (%)
1.	Mass Media (via CD-ROM, Radio, Television, Newspapers, Film show, Computer show case, Pamphlets, Banners, Handbills, Handout etc.)	4(25)	12(75)	16(100)
2.	Verbal and non-verbal methods (such as Meetings, Workshops, Conferences, Symposia, Lectures, etc.)	14(87.5)	2(12.5)	16(100)
3.	Use of 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 etc. and Photocopying Machine.	1(6.25)	15(93.75)	16(100)
4.	Use of Smart Phone	4(25)	12(75)	16(100)
5.	Outreach services such as Farmers home visit	3(18.75)	13(81.25)	16(100)
6.	Reference services (such as Ready reference, Question and answer service, Directional, E-mail reference service, Collaborative Digital Reference Services (CDRS), Indexing and abstracting services, CAS, SDI etc.)	4(25)	12(75)	16(100)

Table 4 reveals that majority of the respondents indicate that method used for providing agricultural information services include: verbal and non-verbal methods (such as meetings, workshops, conferences, symposia, lectures, etc.) with 14(87.5%) while on the other hand, majority of the respondents indicate that methods not use include: mass media with 12(75%), use of ICT with 15(93.75%), use of Smart Phones with 12(75%), outreach services with 13(81.25%) and reference services (such as ready reference, question and answer, e-mail reference service, etc.) with 12(75%).

Table 5: Strategies for Enhancing Provision of Agricultural Information Services in the libraries

S/N	Strategies	Yes(%)	No(%)	Total(%)
1.	The use of Mass Media (via CD-ROM, Radio, Television, Newspapers, Film show, Computer show case, Pamphlets, Banners, Handbills, Handout etc.) in the provision of agricultural information services.	16(100)	-	16(100)

2.	The use of ICTs based information dissemination models such as Web portal service, Voice-Based service, Text (SMS) Based service, Self-support online community service, Interactive video conferencing service, etc. and photocopying machine in the provision of agricultural information services.	16(100)	-	16(100)
3.	The use of Smart Phones in the provision of agricultural information services.	16(100)	-	16(100)
4.	The use of reference services (such as Ready reference, Question and answer service, Directional, E-mail reference service, Collaborative Digital Reference Services (CDRS), Indexing and abstracting services, CAS, SDI etc. in the provision of agricultural information services.	16(100)	-	16(100)
5.	The use of outreach services such as paying timely visit to farmers at their homes or at the market places.	15(93.75)	1(6.25)	16(100)
6.	Organising agricultural shows	16(100)	-	16(100)

Table 5 reveals that majority of the respondents agreed that all the items listed in the table above should be provided to enhance efficient and effective provision of agricultural information services in agricultural libraries in Niger State as all the responses were positive (i.e. above 50%).

Discussion of the Findings

The findings reveals that library and information services provided in the agricultural libraries under study include: reference services, technical services, serial services and exhibition and display services with only (26.7%) while services not provided in the libraries include: outreach services, bibliographic services, user education, reprographic services, current awareness services (CAS), reserve services, selective dissemination of information (SDI), counselling services, referral services, ICT services and document delivery services with (73.3%). The impacts of the lacking of these services are obvious and disturbing. This would lead to inefficiency and ineffectiveness in achieving the aims and objective of the

college and the entire educational system in Niger State and Nigeria at large. The non availability of these services in the college libraries could be due to the fact that the professional staff strength is very low and ICT facilities are complex and expensive to purchase, need some certain skills and knowledge to handle and access in comparison to printed and other materials.

The study reveals that majority of the respondents with (75%) indicate that mass media methods were not use in providing agricultural information services in the libraries under study while only few respondents with (25%) indicate that mass media method is being used in providing agricultural. Majority of the respondents with (87.5%) indicate that verbal and non-verbal method is being used in providing agricultural information services in the libraries under study. Consequently, majority of the respondents with (93.75%) indicate that ICT based information provision models were not used in providing agricultural information services. Majority of respondents with (75%) indicate that Smart phones were also not used in providing agricultural information services. Furthermore, majority of respondents with (81.25%) indicate that outreach services were not used and (75%) indicate that reference services were not used. This study is in line with the study of Adamu, Babalola abd Dogara (2018) who reported that agricultural libraries in Nigeria are yet to adopt the use of modern technology in providing and dissemination information.

The study reveals that majority of the respondents agreed that all the strategies listed should be used to enhance efficient and effective provision of agricultural information in agricultural libraries such as the use of Mass Media (via CD-ROM, Radio, Television, Newspapers, Film show, Computer show case, Pamphlets, Banners, Handbills, Handout etc.), the use of ICTs based information dissemination models such as Web portal service, Voice-Based service, Text (SMS) Based service, Self-support online community service, Interactive video conferencing service, etc. and photocopying machine, the use of Smart Phones, the use of reference services (such as Ready reference, Question and answer service, Directional, E-mail reference service, Collaborative Digital Reference Services (CDRS), Indexing and abstracting services, CAS, SDI etc., the use of outreach services such as paying timely visit to farmers at their homes or at the market places and organising agricultural shows in the provision of agricultural information services.

Conclusion

The essence of establishing agricultural libraries in Nigeria is to provide agricultural information services to clientele on demand and as when due. This enable librarian in agricultural libraries to play the role of information service providers especially on the latest discoveries in agriculture which would help farmers to produce farm crops at their optimum for sustainable development. The study highlighted the importance of technology applications in providing agricultural information services with emphasis on ICT based information provision model and Smart phones as a viable methods of information service provision to peasant farmers. Farmers can now receive information that could enhance their productivity in terms of goods produced and how such goods could be preserved for a long period of time. The college of agriculture libraries in Niger State needs to adopt the use of ICTs applications in providing agricultural information services to the clientele especially the peasant farmers on the new innovations in the field of agriculture.

Recommendations

1. Management of the agricultural libraries in Niger State should provide outreach services, bibliographic services, user education, reprographic services, current awareness services (CAS), reserve services, selective dissemination of information (SDI), counselling services, referral services, ICT services and document delivery services to their clientele.
2. Management of agricultural libraries in Niger State should adopt the method of use of latest technologies such as Smart Phones, ICTs based information dissemination models, CD- ROM, Radio, Television, Computer show case etc. Other methods like reference services and outreach services (i.e. paying home visit to farmers and other patrons).
3. Management of the agricultural libraries in Niger State should employed the strategies listed for enhancing dissemination of agricultural information such as the use of Mass Media (via CD-ROM, Radio, Television, Newspapers, Film show, Computer show case, Pamphlets, Banners, Handbills, Handout etc.), the use of ICTs based information dissemination models such as Web portal service, Voice-Based service, Text (SMS) based service, Self-support online community service, Interactive video conferencing service, etc. and photocopying machine, the use of Smart Phones, the use of reference services (such as Ready reference, Question and answer service, Directional, E-mail reference service, Collaborative Digital Reference Services (CDRS), Indexing and abstracting services, CAS, SDI etc., the use of

outreach services such as paying timely visit to farmers at their homes or at the market places and organising agricultural shows in the provision of agricultural information services.

References

- Adamu, M. S., Babalola, G. A. & Dogara, L. (2018). Library and information science education and dissemination of agricultural information for sustainable development in Nigeria. *Middlebelt Journal of Library and Information Science*, 16, 23 - 31.
- Cassell, K. A. & Hiremath, U. (2013). Reference and information services: An introduction (3rd ed.) Chicago: Neal Schuman.
- Afolabi, A. & Abidoye, J. A. (2011). The integration of information and communication technology in library operation towards effective library services. Proceedings of the 1st international technology education and environment.
- Aguolu, I. E. (2000). Agricultural libraries and the dissemination of agricultural information in Nigeria. *Annals of Library Science and Documentation*, 47 (3), 115 - 119.
- Amaechi, N. M. & Ossai-Onah, O.V. (2015). Utilization of agricultural information among literate women in Ihiagwa Autonomous Community Owerri, Nigeria. *Journal of Information and Knowledge Management*, 6 (1), 41 - 50.
- Ekoja, I. I. (2010). Personal variables affecting the adaptation of agricultural innovations by Nigeria farmers. *Forthcoming in the South Africa Journal of Agricultural Extension*.
- Emmanuel, H. & Chuwang, P. Z. (2009). Assessment of information needs of rural farmers on Okpokwu Local Government of Benue State. *Journal of Information Resources Management*, 2 (2), 85 - 88.
- Ilyasu, J. A., Usman, I. & Kasim, A. (2019). Delivery of information services by practitioners in the 21st century: In Igwe, K. N., Sadiku, S. A. & Edam-Agbar, I. B. (Eds). *Themes and Trends in Information Science*. Lagos, Nigeria: Zeh Communication Limited.
- Lamptey, R. B., Sambo, I. A. & Hassan, A. A. (2016). Disseminating and promoting agriculture information through Library and Information Services in Ghana. *Qualitative and Quantitative Methods in Libraries*, 5, 901 - 907.
- Onyeneke, C. O. & Solomon-Uwakwe, B. (2018). Using Information and Communication Technology in promoting access to information needs of poultry farmers in Nigeria: A case study of Michael Okpara University of Agriculture, Umudike. *International Journal of Applied Technologies in Library and Information Management*, 4 (1), 14-21.
- Stojanovski, J. & Papic, A. (2012). Information services in academic libraries: Browsing services vs. searching services. A paper presented at the Central European Conference

on information and intellectual system held on 19th - 27th September, 2012 at the Faculty of Organisation and Informatics, Varzdin, Croatia, Pp. 85-90.

Zhang, Y., Wang, L., & Duan, Y. (2016). Agricultural information dissemination using ICTs: A review and analysis of information dissemination models in China. *Information Processing in Agriculture*, 3 (1), 17-29. Accessed from <http://doi.org/10.1016/j.inpa>.