ACCESSIBILITY OF INFORMATION SOURCES, SERVICES AND USE BY FARMERS OF THE UPPER BENUE RIVER BASIN DEVELOPMENT AUTHORITY, YOLA

BY

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A THESIS SUBMITTED IN PARTIAL FULFILMENT FOR THE REQUIREMENT FOR THE DEGREE OF MASTER IN LIBRARY SCIENCE

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JUNE, 2011

DECLARATION

I hereby declare that this study has been conducted by me and it is a record of my own research work. I also certify that this work has not been presented or accepted in any institution of higher learning for award of higher degree. All quotations were indicated and the sources of information were acknowledged by references. Also I accept full responsibility for its contents.

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CERTIFICATION

This thesis "Accessibility of Information Sources, Services and Use by Farmers of the upper Benue River Basin Development Authority" has been read approved as meeting the required of Postgraduate school, Ahmadu Bello University, Zaria for award of the degree of Master in Library Science.

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ACKNOWLEDGEMENT

The researcher expresses his profound gratitude to Almighty God for His gratitude and mercy to undertake this study. I am very much grateful to my supervisors; Professor Umar Ibrahim and Dr. K.A. Sanusi for their efforts and endurance for training me and for understanding what this work is all about. My profound gratitude goes to the Head of Department, Professor Tijjani Abubakar for his encouragement and support throughout my studies in this Department. Moreso, my profound gratitude goes to Prof. Zakari Mohammed, Mallam Baba Aduku, Mallam A.A. Lemu, Mallam Abu Yusuf, Dr. Ezra S. Gbaje and the entire academic staff of the Department of Library and information science for their endless effort of encouragement toward completion of this work. And also the non teaching staff of the Department I say thank you.

My gratitude also goes to the General Manager of the upper Benue River Basin Development Authority Yola and the entire staff of the Authority, for their contributions towards this work by providing me with the necessary required information.

My sincere gratitude goes to Mallam Ibrahim Dogara, Mallam Abdullahi Tanimu and the rest of my colleagues in the 2005/2006 Postgraduate class for their assistance.

Finally my gratitude goes to my late mother and father who inspired me to be steadfast. I am Obliged to thank my wife Madam Habiba Halilu and my children; Saratu, Mary, Murjanatu, Nayaya, Abraham, Moses, Maryam and Joshua for their patience and understanding while undertaking this course of study. And may God in His mercy bless everybody that assisted me in one way or the other.

ABSTRACT

The study was undertaken to investigate the accessibility of information sources, services and use by the farmers of the Upper Benue River Basin Development Authority Yola, that cover Adamawa, Bauchi, Gombe and Taraba states of Nigeria. The study used five research questions and collected data from the sample of 1,694 out of the total population of the study which 17,720. A survey research method was adopted for the study and answer were sought on the types of information need by the farmers, the type of information resources and services available with the farmers, the types of information resources and services provided by the authority, how does the farmers use the information resources and the extent at which the information resources and services provided by the authority is assisting the farmers. The data were analyzed using frequency tables and percentage. The study revealed that the farmers operating under UBRBDA have different types of information resources on agriculture which include books, journals, radio and others. The agricultural services provided by the authority include extension services, seminars and workshops among others. The result also revealed that farmers operating under UBRBDA are satisfied with services given by the authority, which as a result they are getting good market of their produce and getting assistance toward adopting modern farming techniques. In conclusion, the study recommends that there is the need for the UBRBDA to recognize that the bulk of the rural farmers are illiterate, the extension workers should be well fluent with the language of farmers they are serving.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Information is one of the basic resources required for the improvement of agricultural production. Information has been identified as the essential data for making decision. With this quality of information it has become very necessary to be acquired and use in order to make an appropriate and meaningful decision. Mohammed (1994) information is a vital resources which provides impetus for a nation's social, cultural, spiritual, political, economic, scientific and technological advancement. Information supports every aspect of human endeavour, so information is needed and it will continue to be relevant towards human existence and for this reason the quality of the Upper Benue River Basin Development Authority (UBRBDA) that was established in Nigeria, with eleven other River Basin Development Authorities, by a decree No.25 of 1976 must be base on good information sources. The River Basin Development Authority were established to serve as agencies of the Federal Ministry of Water Resources. They were established with the aim and intent to provide services such as hydro electric power

generation, irrigation, fishing and to provide domestic services. (Annual Report of the Federal Ministry of Water Resources 2004).

According to the report, the River Basin Development Authorities in the country have such core functions as:

i. To formulate, implement and update natural water resources of the country in a systematic, integrated and coordinated manner.

ii. To collect, store analyze and disseminate hydrometrological and hydrological data and water resources, through the establishment, maintenance of water resources data base databank using the latest information and communication technology (ICT)

iii. To support, monitor and evaluate the progress and performance of the river basin development authorities and national water institute.

iv. To develop and support irrigated agriculture and reduce the nations dependant on rain fed agriculture.

V To provide and sustain national food security by minimizing unexpected and undesirable shortfall in domestic production and agro-based raw materials caused by vagaries of weather.

vi. To explore and develop underground water resources.

vii. To coordinate, formulate and review from time to time the national water legislations.

viii. To coordinate the development and utilization of water resources for irrigation and water supply

ix. To liaise with all relevant national and international agencies on matters relating to water development.

x. To support studies and research on the nation's underground and surface waters resources potentials.

xi. To undertake hydrological and hydro geological investigation

xii. To formulate and implement a national policy that is consistent and complementary to the national agricultural policy.

xiii. To develop policies and programmes towards storage scheme.

xiv. To develop guiding principles for dam constructions.

However, these basic and laudable functions of the river basin development authorities (RBDA) cannot be achieved without adequate provision of information. Information can give knowledge, impart skills and experiences and of course create awareness that are required for the utilization of the river basin developments authority's facilities. This will then enhance or make Nigeria food sufficient and a sustainable food security. This is necessary for any nation, because a nation that can not feed itself or have no food security is a failed state. This is so because in the case of any sanctions it cannot withstand it. To day, the situation in Nigeria and particularly the Upper Benue River Basin region is alarming because of threat being posed by desert encroachment and drought, which is of course causing disasters and frequent harvest failure in the region. To get rid of this problem of concern and to make progress in the agro-allied business, the way forward here is

to give appropriate attention to information access services and use. It should be bored in mind that any one who has access to information is ahead of others and stands a better chance of making progress. Therefore if information is to be made accessible, it can bring development, progress, good yield and make profit to the farmers.

Information today is produced in many forms including posters handbills, television, Pictures,books, newspapers, magazines, journals and other audio devices like radio, discussion or through the role of extension service workers, in seminars and workshops. It can also be accessed electronically from the internet, CD ROMs, database and other related electronic form of representation of information.

CONCEPT OF INFORMATION

Information is regarded as data presented in a comprehensible form and which makes meaning to the recipient. In other words, it is a message conveyed by the use of a medium of communication or expression. Information can be referred to as facts, conclusion, and ideas creative works of human intellect and imagination which might have been communicated formally or informally in any form. Reitz(2004)refers information as opinion provided or received during the course of daily life).

Information as related to farming, can be described as the idea or knowledge of agricultural technology. The information should be delivered in such a way that is physical or practical but it must be appealing to the farmers before it can be used. The method to be

employed in conveying the information to the farmers, may be through the use of practical demonstration and a pursuance language that is quite encouraging, friendly and may be understood by the recipient i.e the farmer.

The information provide to farmers should enrich the farmer with ideas, facts and knowledge on the use of pesticide, fertilizer, seeds selection, storage methods, planting spacing, the ability to identify hybrid crop or animals etc. and adopt them. Through the knowledge acquire or obtained from information, the farmers behaviour should change and enable him to adopt new farming techniques. A new awareness is now created in him and influence him to have new believes and practices that may be beneficial to the agricultural business.

The practice in agriculture service is to bring change in methods of farming or sustain the old way that is beneficial to the farmers. The old thinking which is based on agricultural practices and which has no regard to information services.

INFORMATION NEEDS OF FARMERS IN NIGERIA

The concept of information needs of farmers is defined by Aina (1990) as a function of extrinsic uncertainty about important environmental objectives and a criterion state he seeks to achieve. He stated that "needs is a value judgment that some groups have problem that can be solved. 'Problem' can be defined as violation of psychological state associated with uncertainty and the desire to fulfill gap in knowledge. He further identified information necessary to farmers as;

INFORMATION NEEDS ON FARMING METHODS

The rural farmers may need to acquire the skills on the different farming system such as irrigational farming methods which may includes the different ways in which each crop is being cultivated, also, the types of fertilizer to apply, the quantity and the types of fertilizer that is needed by the farming in other to get better yield. Moreso, farmers needs information on loans facilities, the implication of the loans such as interest rate and the mode of payment needed to be known by the rural farmers, hence they enter into a contract in which they mortgage their life and profession and profession.

FARMERS NEEDS INFORMATION ON HUSBANDRY

They needed information on the variety that may be profitable and the ones that would be practicable in a particular environment and the types of feeds they may be provided and its availability.

Farmers need information on difference diseases that affects their animals and process to be adopted in managing such cases. they need to know of preventing animal disease and control. Knowing such may help them to avoid it. Also farmers need information on pest control and protection such information help them to keep

inform and save their animals from contacting it. Farmers need information on irrigational farming system. The facilities to be used and how it is being practice. Storage method that can help the farmer in preserving his crops from damage is be sought by the farmers in other to save especially perishable crops from being destroyed. Farmers need information from the type of machinery to be use in the farm, such farm implement such as hue tractors etc. needs information about different types and how it can be obtained. Infact all the areas that significant to the farmers operational activities are needed.

This information's need may create awareness and bring in improvement in the general life of the individual in the execution of his daily work.

INFORMATION RESOURCES IN AGRICULTURE IN NIGERIA

There are many agricultural research institutions and universities of agriculture, faculties of agriculture in conventional university etc. where a lot of research work is conducted on regular basis. The findings of these studies are reported in journals annual reports technical reports, books and monographs. Sometimes the findings are presented at conferences, seminars and workshops. These findings constitutes most of the technical scientific information in

agriculture. These are disseminated through their extension division or literature such as posters, leaflets, radio jingle etc.

Government through legislation also generates agricultural information especially social and commercial agricultural information. For most of the laws and acts on agriculture have direct bearing on farmers and the general improvement of agriculture. These are usually published in gazettes. And occasionally, government commission feasibility studies into various areas of agriculture and the findings are reported etc. Other area where agricultural information is generating includes agro-allied based industries, multi-national companies involved in agro-allied industries and banks. They provide literature on agrochemicals such as fertilizers, farmlands, pesticides, loans and bank credits on agriculture. These various types of information generated may directly get to the users who need them or indirectly through Librarians, extension service workers or agro-allied based industries salesmen who are expected to repackage the information in a usable form.

INFORMATION SERVICES IN AGRICULTURE IN NIGERIA

Information services in agriculture in Nigeria is a process used in order to educate the farmer in the course of operating agric business. These services may come from extension workers services to the farmers through an interactive process on how to use specific resources on specific agricultural discipline or area. The extension workers provide their services by way of reaching out to the patron. This is done by carrying out the information on

agriculture to the door step of the farmers through a meaningful and educational interaction. Also, librarians provide reference services that enable the farmer to meet his agricultural information needs. They do this by answering questions and by giving instructions to the farmers that would aid them in the appropriate selection of tools and techniques. Also, inter library lending or library cooperation is some of the strategist used by librarians to provide effective agricultural services to the farmers.

Another aspect in which agricultural information service that are provided to the farmers is through workshops and seminars. Usually expects organize seminars and workshops, where presentations on specialized subject area on agriculture are discussed and deliberated upon. So the mass media both print and electronic are important medium in which agricultural services are provided to the farmers.

The states of agricultural inform services in Nigeria may be said to be inadequate because both the printout electronic means of inform services do not reach out to the rural areas. And also the illiteracy rate is high among the farming class and this may prevent them from assimilating the information as require

ACCESS TO INFORMATION RESOURCES AND SERVICES IN NIGERIA

There are a variety of ways the Nigeria farmer would get access to information resources and services. These could be through consultancies services by expert's, extension farm workers, who may visit the farmer, give advice and demonstrate to the farmers

the best modern techniques that the farmers require in order to have better yield and produce enough. More so, the mass media, both print and electronic are the major sources of information which farmers would adopt in accessing agricultural information in Nigeria. For instance, the radio, television provides radio jingles, deliberations and display pictures and films that relates to agriculture. The telephone and the internet are sources of information that can quickly reach out and link farmers with agricultural information. One can browse in the internet and see current research report that are readily available in the agricultural website. The newspapers, magazines, journals posters and books serve as a medium which information on agriculture is communicated to the farmers in Nigeria. These publications usually contains currents reports and research findings in the various fields of agriculture and can serve as avenues for agricultural information to farmers in Nigeria.

1.2 STATEMENT OF THE PROBLEM

Farming is the sole preoccupation of the people of Nigeria and of course the bedrock of the Nigeria Economy and the origin of wealth, before the discovery of oil for even today in Nigeria, over (80%) eighty percent of the people of Nigeria do engage in farming FAO Year Book (1990) though the peasant farming is subsistence type, producing only enough for their families. The practice is so because of the farmer's inadequate access to agricultural information resources and services. Lack of access and effective information delivery services to the farmers which would them remain in the state of peasantry and subsistence farming practices.

Without access to information resources, and services on agro-allied business and the inability to be abreast with the usage of agricultural information resources, the Nigerian farmers remain stagnant without growth and progress and continue to maintaining the yester year's status quo. The inability by the Nigerian farmer to produce much to meet the food need of the teeming population and faces the challenges of the new millennium on food it is great challenge and threat security, peaceful co-existence and stability of the nation.

Today, access to agricultural information is on a variety of formats and medium, through which a farmer can have the right information, knowledge and new techniques that would enhance his farming system from the traditional method. It is in line of the these aforementioned problems that this study is set to make a survey on access to information source, service and use by the farmers under the Upper Benue River Basin Development Authority in Nigeria.

1.3 RESEARCH QUESTION

In line with the above statement this research work set to answer the following questions:

1. What are the information needs for the farmers operating under the Upper Benue River Basin Development Authority in Nigeria?

2. What types of information resources are available to farmers in UBRBDA in Nigeria?

3. What type of information resources and services are provided to farmers in UBRBDA in Nigeria?

4. How do the farmers use information resources and services in UBRBDA in Nigeria?

5. To what extent do the information resources and services provided by the UBRBDA assist farmers on modern farming techniques?

6. What group of farmers do enjoy the information resources and services provided by UBRBDA?

1.4 OBJECTIVE OF THE STUDY:

The study is out to achieve the following specific objectives:

1. To identify the information needs of the farmers that operates under the Upper Benue River Basin Development Authority in Nigeria.
2. To identify the type of information resources available with the farmers that operates under UBRBDA in Nigeria.
3. To examine the types of information resources and services provided to the farmers by UBRBDA in Nigeria.

4. To find out how do the farmers use information resources and services provided by the UBRBDA in Nigeria.
5. To examine the extent at which the information resources and services provided by UBRBDA are assisting the farmers on modern farming techniques.
6. To identify the group of farmers that enjoyed the information resource and services provided by the UBRBDA.

1.5 SIGNIFICANCE OF THE STUDY

This study will be significant in a number of ways:

1. It will be to reveal the extent to which access to agricultural information sources, services and use is with the farmers and under UBRBDA. Its findings will also lead to the improvement agricultural information sources and services by the authority.
2. An improvement of information on agricultural sources, services and use among the farmers under UBRBDA will lead to better utilization of agricultural information by the farmers to improve on their farming techniques and systems.
3. It will serve as an important art, contribution in the area of agricultural information source and service, as a field of study and knowledge in general.
4. The study will benefit the authority in evaluating it services to the farmers.
5. It will assist the authority when it comes for decision making.

1.6 SCOPE OF STUDY

The research work is designed to investigate how farmers in the Upper Benue River Basin Development Authority carry out their agro-allied business. The areas cover by this study is Bauchi, Gombe, Taraba and Adamawa States.

The study is focused on the farmers' accessibility to information and how effective such information are used by farmers in order to boost production in the farming industry.

1.7 LIMITATION OF THE STUDY.

Due to the large population of the farmers operating under the UBRBDA, Yola, and as well the time constraints, the researcher randomly selected manageable size of 1,722 farmers operating under the authority. Also the researcher has to interpret the questionnaire to the respondents in the local language.

1.8 OPERATIONAL DEFINITION OF TERMS

FAO - Food and Agricultural Organisation

UBRBDA - Upper Benue River Basin Development Authority

ICT - Information Communication technology.

AGRICOLA – Agricultural Online Access

FNIC - Food and Nutrition Information Centre

U.S. - United States

BIOSIS - Bioscience Information Services

ASFA - Aquatic Science and Factors Abstracts

CARIS - Current Agricultural Research Information System

CIACL - Compact International Agricultural Library

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CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

2.1 INTRODUCTION

The purpose of this chapter is to present the review of related literature to the study. In order to appropriately review the literature, the following sub-headings have been adopted:

2.2 Agricultural Information Services
2.3 Farmers Agricultural Information Needs
2.4 Information Sources in Agriculture in Nigeria
2.5 Agricultural Information Services in Nigeria
2.6 Access to Information Resources and Services
2.7 Electronic Information Sources
2.8 Use of Information and Communication Technology to access Agricultural Information Services
2.9 Summary of the Review

2.2 AGRICULTURAL INFORMATION SERVICES

In Africa, agric has an all persuasive role in the lives of the inhabitants. It provides the bulk labour force and contributes substantially to the Gross Domestic product (G.P.D) and in addition, it provides a large proportion of the food needs of the continent, Aina (1995). According to Food and Agriculture organization (F.A.O) production year book (1990), 61.9% of active labour force in Africa is in agriculture. While Europe has 8.6% North America 10.3%, South American22.1% and Asia 58.6% where the world average involvement in agriculture which shows that the proportion of agricultural labour force in Africa is far

higher than the world average, this emphasizing the importance of agriculture to the people living in Africa. Therefore, any resources or information that will improve agriculture will directly affected the lives of the majority of people in the continent. Aina (1995) define information as data for decision making that must be acquired and used in order to make an informed decision, and that those who possess appropriate and timely information will make a more rational decision than those without. According to Dervin (1976) every individual whether literate or non-literate needs information in order to take decisions, thus every sectors of the population engaged in agriculture needs information. He then categorized the various agricultural user populations as follows:

1. Policy maker and planners
2. Researcher
3. Extension staff
4. Editors and students.
5. Agro- based industries and services staff
6. Farmers.

He identifies these six categories because of their direct involvement in agriculture production and services. He however did not include the activities of agricultural marketers and the role play by middlemen that sometimes hamper the system in terms of prick determination.

Aina (1989) observed that agricultural information is inter disciplinary in nature and shall be classified as follows:

1. Technical / scientific information
2. Commercial information'

3. Social / cultural information

- Technical and Scientific information:- This type of information arises from research and development work carried out in various agricultural research institutions including Universities. And the result of which is aimed at increasing agricultural production by providing high yield seedlings, control of major pests and diseases. This type of information is needed by researchers, extension officers agro-based industries staff and farmers. But this type of information may not be easily access and used by the local farmers, whom are major agricultural providers, due to their handicapness in technological known how.
- Commercial information:- Although agriculture in Africa is essential at subsistence level yet surplus are still sold in the market by farmers to market money farmers that are involved in export crops need commercial information in order to maximize their profits, thus information that covers credits and credits cooperatives, national prices for export commodities are important to farmers, because it will encourage them to produce more. Extension workers, agro-based industries and policy makers do benefits from such information.

  The commercial information by Aina did not provide how the local farmers would manage their agricultural produce is often being hijack by middlemen in the market.
- Social / Cultural information:- This en compasses traditional information on agricultural practices local culture, background information on farming loan utilities, availability

of, extension staff and the farmers. labour etc. this type of information will be useful to policy makers and planners, extension staff and the farmers. It may not only be to the above mentioned but of great use to researchers and students who need to study and carryout research on the people involve.

- Legal information:- All legislative that affect agriculture such as land tenure system, the production, distribution and sales of agricultural produce will come under this category. This type of information will be the domain of extension staff, policy matters, farmers educators and students of agriculture. Legal information may not be limited to the areas identify above but, to suppose to provide legislation that checks the activities of loaders and middlemen.

Generation and communication of Agricultural information, as observed by Kaniki (1995) is through the agricultural user population themselves and they appeared in various formats such as monographs and books, journals reports extension, literature, government gazettes newspapers and magazine commercial literature. This generated information is communicated to the farmers or user population through the telephone, computers via internet, television, radio and the print media. But the fact that the level of computer and communication technology is low In Africa and the provision of information through electronic media is not

common makes the information amongst relevant user population through information technology network hardly practicable. And also the inadequate agricultural information facilities have become a major constraint to improving agricultural provision of information, services and uses in Africa.

In Disseminating Agricultural information librarians and information specialist and extension officers have the primary responsibility to the relevant user population. They are expected to collect all relevant agricultural literature and make it available to all the user population that is researchers, scientists' extension officers, educators and students, planner and decision makers and even farmers through various methods such as current awareness services selective dissemination of information compilation of bibliographies translation services reference services and repackaging. It is however unfortunate that most libraries and documentation centres in Africa are unable to perform most of these functions because of inadequate funding of most agricultural libraries by the responsible authorities.

Also, another problem is the inadequate number of well trained agricultural information specialist which makes it impossible for libraries and documentation centres to perform the function as is expected of them in a study by Aina (1989) on education and training of librarians for agricultural information works, the need for a curriculum for agricultural Librarians in Africa was suggested so as to make them adopt and provide

information to researchers, planners farmers and decision makers. It is still difficult to attract enough agricultural graduates to such programmes.

The consensus of most information makers however, is that the inadequate provision of agricultural information user population militates against the development of Agriculture in Africa. Neumair (1979) attributed problems to have arisen in Agriculture in Asia, South America and Africa partly to poor information services which is in turn reduce farmers agricultural knowledge and production.

Aubrac (1977), Williams (1978) and Thorpe (1980) also linked the slow development of agriculture in developing countries to lack of information to rural farmers.

Broadbert (1987) listed the failure to provide policy makers as one of the factors that hinders agricultural production in Africa. From these various observation and submission of these experts. It is obvious that a lot more attention should be paid to the provision of information to agricultural user population and the training of agricultural information specialist in Africa should be given top priority not only to the literate user population but the predominant illiterate farming population. Librarians of agriculture should be strengthened to ensure that they subscribe to journals published both locally and abroad and effort should be make to improve resource sharing amongst related libraries and established agricultural information network in the continent.

2.3 FARMERS AGRIC INFORMATION NEEDS

Agricultural information needs as observed by experts have over the years have been trying to develop some framework or methodology upon which the effectively predict and analyze information needs. Hewins (1990) has gone to some length to work at the different approaches and the continuing tension in the literature on the best methods of determining information needs. It is evident that in most information work situations information experts are unable to commit enough time to conduct full pledge scientific studies to analyse information needs of individual persons who face critical situations or information needs. Most of the studies in information needs in Africa have been based upon what Hewins calls the "ask approach…. Anomalous knowledge state of knowledge… which their knowledge is incomplete" This ask approach method was used by Ikpaahinli (1985) Mutewera (1991) and Kaniki (1989). Information seeking situation among agricultural researcher in Africa have been identified through this method. These includes situation where researches need have been a basic understanding of research result before applying such results situation where researchers have to make a choice among the different cropping for particular crops, vegetables and fruits. Other situation includes the investigations into diagnosis and treatment of different diseases that affect livestock, crops vegetables fruits etc. the analyses and prediction of yields and forecasting of climatic and weather patterns.

- Researchers also require information when they simply have insufficient knowledge about subject or new technology, when

they want to plan design, conduct empirical studies which may be experimental and they also seek information in situations when they have to deal with personnel problems.

Agricultural Librarians and information experts have to work with whole inter disciplinary field of agriculture in order to provide basic information to meet the information needs of the user population. Therefore, information experts need rapid bibliographic and physical access to information or source of information on behave of the client. Also, in the agric business sector, the user group needs product information such as patterns and standards. They need current information or research and development of current potential agriculture products and in addition they need up to date agricultural marketing information.

The farmer information needs should related to such directional information such as where to get (source) fertilizers (source) agricultural implements and other inputs, others as sources of credit facilities, issues on land ownership, land dispute and market for farm produce. Farmers information needs are often factual and related to choice among varieties of agricultural inputs such as fertilizes, seeds and types of livestock. The information shall also provide knowledge on hybrid that will have good yields.

2.4 INFORMATION SOURCE IN AGRICULTURE IN NIGERIA

One issue which has not received any serious consideration for quite sometime now in West Africa is how to strengthen the basic information infrastructure to meet the needs of the peacent

farmers Aina (1995) observed that the resources base is too weak to support any effective collection, processing, repackaging and dissemination activities. Those who are changed with the responsibility of making innovation move relevant to farmers by breaking down to useful bits for adoption are the ministry of agricultural extension service Division staff. But it is observed that in most case such personal are dearth of fund and they require necessary working tools such as vehicles, motorcycle etc. also, language barrier and illiteracy may affect the work of the extension farm workers.

The diffusion process to be effective, the choice of an appropriate channel of communication is very essential and of equal importance is the correct use of the context in most West Africa countries, information for farmers has to be oral and sometimes by charts, figures and drawings. But sometimes due to lack of dedication on the part of the extension farm workers, they do not utilize such strategies appropriately. Research have shown that in some cases output of corn, millet, cotton cassava and other crops have already increasing at least four fold through information given to farmers in the use of chemical fertilizer better land preparation techniques and improve seeds. But progress has to be made nationwide with regards to the provision of these farmers facilities to farmers and ensure that fertilizer and other chemical get to the farmers especially during the raining season.

Although, the use of extension officers has been the predominant method adopted in West Africa countries as far as diffusion of New technology is concerned. Some farmers still have their misgiving

about this. This is mainly due to the fact that in the process of explaining some of the methods involved to the farmers, some extension officers have been too theoretical and technical. In other cases, some extension officers have not been able to answer questions put to them by the farmers since they lack the practical knowledge which can enable them to demonstrate the techniques.

The television may be used to provide practical agricultural information to the farmers as suggested by Aina (1995) but the problem here is that, there is problem of electric power supply and inadequate television set in the rural area. The radio has been used effectively in providing information to farmers in the rural areas. Nowadays, the available of the transistor radio makes it easier for more farmers to own it and to carry them anywhere. Also the use of visual aids with written and spoken work presents more convincingly the improved methods of agricultural production. This method may arouse the interest of the evidence and the accompanying dialogue also helps to convey message intended for the people.Agricultural information in Nigeria is also being provided through the use of posters. The posters have advantage because it fosters repeated contact which imposes, strengthens and institutionalizes the message being conveyed. The shortcoming in the use of posters is that it does not come close to person to person communication, such posters were usually designed to be informative, persuasive and self-explanatory as well as a complementary didactic tools to re-enforce information received through other means of communication.

The reading of Newspapers assumes some degree of literacy which many adults in West Africa do not possess but they are important source of information that contains current development in the agricultural field.

The use of ICT by farmers, it may be used by farmers to check market prices, it can also be used in weather forecast monitoring, this may enable the farmers to understand the climatic condition of an area and equally knows the types of crops that be grown in a particular area or region. Farmers may use it as to enable them understand the new innovations and current farming techniques that might have been developed during the years. Through the use of information technology, farmers acquire knowledge on improved variety and hybrid that may be profited to the farmers.
Farmers may adopt any of the search strategies.

2.5 AGRICULTURAL INFORMATION SERVICES IN NIGERIA

The main users of Agricultural information in West Africa are farmers Ojiambo (1995) yet it is a common knowledge that these are among the most conservation group in the society. This may be due to the high rate of level of illiteracy among the farmers. It is often difficult to teach them any scientific idea much more to get them adopt innovations. Most of the farmers are wary of the risks they may be require to take. To a great extent, many of them maintain the age-old practices handed to them generation ago.

The extension farmers workers do provide information services to the farmers. But they sometimes do use some scientific jargons as

to make it impossible for farmers to comprehend what they want to put across. As a result of their inability to come to the level of the farmers, very often, essential information is misunderstand leading to a waste of manpower and other resources. Sometimes the farmers even got suspicious of the urban orientation of these extension farm officers.

Another important existing facilities that aid the farmers in the use of Agricultural libraries which usually have sizeable collections of agricultural literature. In addition, the mass media that radio and television may provide effective services to the farmers, the News, magazine and journal provide current and upto date services and information in agriculture. Added to these, the variety of traditional information services in agriculture may be use especially among the illiterate class.

The resources use in providing services to the farmers are sometimes inadequate or too technical for the Nigeria farmer, whom may be illiterate to comprehend and utilize it. To solve this problem, the resource persons that is the extension officers should be persons that could understand and speak local languages of the Local farmers as to impact proper knowledge.

2.6 ACCESS TO INFORMATION RESOURCES AND SERVICES

It is the true that there are different ways in which farmers in Nigeria can access to. Information services such as extension and consulting services, through mass media both print and electronic.

But illiteracy rate cannot allow the Nigerian farmers to easily access information from the internet. And without the ability to access information from the internet it becomes very difficult to be aware of the most current development in the agricultural arena.

Even the argument about the news papers is that, it is a literate medium and the therefore limits access to only those who can read and write (Omu 1993). The point here is that the news papers are essentially Urban and elitist phenomenon that are metropolitan and orientation inherently devalues the currency of rural news. So the factor of literacy is certainly of critical importance, for instance Mac Bride commission observed that language both spoken and written is the primary code of human communication. Therefore to aid rural farmers, community newspapers in the major ethnic languages be established to aid accessibility to information by farmers.

The electronic media, radio and television are commonly referred to as electronic media. But today, due to the information technology explosion we have others forms such as computers via internet, telephone facsimile etc. these two forms of mass media reach millions of people simultaneously and with immediacy that they have profound effects on the attitudes and behaviours of the people.

2.7 ELECTRONIC INFORMATION SOURCES FOR FARMERS

Agricultural database and the need for networking in Africa was defined by Azubuike (1995) as a collection of structured intellectual works stored and access for information by electronic means. These

include the indases, controlled vocabulary and the search and output system of data bases are usually regarded as part of it. So in other to make meaningful progress access to reliable databases to facilitate the acquisition of information is necessary. These include:

1. Agricola is produced by the U.S. national Agricultural Library in Bethesda, Maryland, USA. It is produced from the cataloguing records for all monographs and series received at NAL and records of articles from agricultural literature processes by NAL's indexing section including also are contributions from NALs Food and Nutrition information centre (FNIC); America. Economics services; state Agricultural experimental stations; and other U.S source.

   It also covers all aspects of agricultures and food, including animal science, production and production; plant science, production and protection engineering, geography, administration, soil science; food science; and veterinary medicine. The database is among the major agricultural database because it contains record of holdings of leading agricultural Libraries and documentation centres. And over 6000 journals are different languages order than English language. Edwards (1986) asserted that Agricola (Agricultural Online Access) holds over 3 million records dating from 1970 with monthly addition of about 9000 records and that 90% of the records are for journal articles and the remaining are catalogue records of books and maps.

   The database correspondent to the indexing journals such as Bibliography of Agriculture, which contains entries of

journals articles and other analystic; National Agricultural Library catalogue which covers the monographic holdings of NAL; food and Nutrition quarterly index; the Book catalog of food and Nutrition index nutrition catalogue (FNIC) and Audiovisual Resources in Food and Nutrition.

AGRICOLA is available for online searching from DIOLOG Information services; BNS information technologies; Knowledge index; and DIMDI Deutshes institute for medizinische Documentation and information i.e. German institute for medical documentation and information and can be obtained from online computer library centres and quanta press. .

2. Also, the international information system for food and agriculture is another data base being produced by FAO (Food and Agricultural organization of the United Nations). The database covers the whole range of agricultural science and technology, including agricultural administration economic legislation development geography, history of plants, plant science, production and protection, post harvest science and technology; agricultural engineering, animal science production and protection, forestry, fisheries, natural resources and the environment, Agricultural products and commodities, human nutrition; Rural sociology and methodology in research and production.

   According to the FOA 1992, the database contained about 2 million references by the end of 1991 and grow by about 11,000 records per month. Another database that house

agricultural information that can be access by agricultural information user population is

3. CAB ABSTRACT database. It is produced by the CAB international Farm land Royal United kingdom CABI is an intergovernmental organization of countries of the common wealth of nations and other countries interested in the programme CAB ABSTRACT database is a comprehensive database covering all fields of agricultural except the food science and technology.
4. Also, BIOSIS is a database produced by bioscience information services in Philadelphia,, Pennsylvania, USA. It is a leading biological science, database with comprehensive coverage in batamy zoology, microbiology, ecology evolution biomedicine, biochemistry, biophysics, bioengineering and biotechnology. It is an important source of information on agriculture and food biology. Biosis search guide (Wakins 1981).
5. SCISEARCH is a multidisciplinary index to the literature of science and technology A.A. Agubuike (1996). It is produced by the institute of scientific information Philadelphia, Pennsylvania, USA. Scisearch is an important source of published research in Agriculture especially in soil science, plant science agronomy, food science, biochemistry, microbiology, entomology, hematology. It is particularly useful for identification of literature in a very specific research topic and also helps to establish the historical research problem.
6. The life scientific collection is a bolographic database produced by the Cambridge scientific abstracts Bethesda,

Maryland U.S.A The database is good for purely biological aspect of agriculture and food such biochemistry, nutrition microbiology of food plant and animal pathology.

7. Food Adlibra is a database devoted to the food industry and related trade information, including new product ingredients development management, processing and technology patents packaging and a variety of trade related subject. It is available online through DIALOG.

8. TROPAC AND RURAL (Abstracts on tropical agriculture and abstracts on rural development in the tropics). These are companions biolographic database on the practical aspects of tropical and sub-tropical agriculture and rural development. The databae contain wide range of record that provide the necessary development oriented information needed by extension and agricultural project workers in areas crops, livestock production, soil fertilizers agricultural engineering and food processing as well as the socio-economic and nutritional aspects of agricultural and rural development. And the fact that the database contains wide range of information in all aspect of agriculture. It will serve as a good database source that would benefit farmers and allied workers greatly

9 Aquatic science and factors abstracts (ASFA) is an international information system with cooperating input in several member countries. The database will be of significant benefit to people who people who are engaged in Aqautic and fish farm.

10 Current Agricultural research information system (CARIS) is a referral database on agriculture institutions. The database can be access online by research and scholars.

11 Permanent inventory of agricultural research projects in the European counties is also a referral database on research in agriculture, forestry, fisheries and food.

12 Current research information system (CRIS) is a database for documentation and reporting of information.

13 Compact international Agricultural research Library (CIARL) is an international consortium of donors and some United Nations system organizations put together by the World Bank to coordinate funding of, and facilitate cooperation among international agricultural research centre. The information services provided by the centre are designed to benefit developing countries. Access this type of information will benefit our farmers to a greater extend since it aid them to obtain assistance from the donor bodies.

Also there are other database among which are food and Agriculture (FAO) in house database. This provides services to both in house and external users.

These in-house database of FAO listed in the 1990 edition of the Directory of the United nations and database and information services has 56 such database (United Nation publication 1990). These includes information system of Agricultural statistics services on numeric / statistical system user for the storage processing, retrieved, selection analysis and dissemination of statistics data on food and agriculture. And also it provide information on human population,

production and trade of crops, livestock, agricultural machinery, pesticides, fertilizers, fisheries, forestry etc. some of other FAO in-house database that of significant information to the agro-allied business are Agroclimatological database; animal data; climate data analysis by country; cooperative statistic, country cereals balance spreadsheet; FAO comprehensive, Demographic Estimates and projections; FAO database pertaining to income, expenditure and food consumption from household surveys; FAO documentation database forest products direction of trade and forest products prices, forest resources system database, quarterly Agricultural external trade, rainfall series for probability analysis, raw materials information system database, seed information system, sheep and goat information network database, all compendium of forestry and forest products research institutions and finally, the world food model commodity projections.

Other database that related to agriculture and produced by the United Nations Organization are:

1. The International member information system (INIS)
2. Information service on technology alternatives for development (INSTEAD)
3. Industrial Development abstracts (IDA)
4. The international food and aid information system (INTERFAILS)

The information system database is a bibliographic referral database by the world bank, the subject coverage of the database

includes agro-forestry, agriculture, environment, fisheries, forestry livestock and locust information.

The data base identifies in the chapter as a source of information provision, it of course aid to ease information provision and use, particularly, in the western world where they have a developed technology. In Africa and Nigeria in particular the users of this database have been limited as most users have access only to the printed version.

Also, most of the databases are based in Europe and America and their contents cover essentially the information on works done in these place. To solve this short coming, information can be accessed from these database and adapt it to local situations. Secondly, much of the research done in Africa is published outside the content and is therefore covered by these databases as literature emanating from the country of publication.

It is now a challenge for Africa and of course Nigeria professional to improve the coverage of Africa Agricultural literature in these databases by actively disseminating the internally produced literature and cooperating with the database producers. For instance, a study found that abstracts on tropical Agriculture (from TROPAG), AGRINDEX (from AGRISS), Bibliography of Agriculture (from AGRICOLA) and Science citation index (from SCISEARCH) did not give good coverage of Agricultural literature produced in Nigeria, mainly because the local publication and distribution practice did not facilitate international coverage of the literature. Ibekwe and Azubuike (1988) They also assert that an international

cooperative information system did not do well as a source of locally published literature because the national centre did not play it role of contributing input. Poor telecommunication facilities and inadequate power supply makes access to a variety information in Africa

Another major constraint is the lack of funding to agricultural libraries and information centre. Then the problem of funding is a global phenomenon to any organization even those in advance countries. But the libraries in order to continue to render efficient and effective information services shall vigorously seek funds both internally externally to support themselves. Given the very serious need for Africa to develop its agriculture and have food security and recognize the value of information in agricultural production. And also, concerted efforts should be made by information professional to improve accessibility of information to their user.

Equally efforts should be made to coordinate information activities, share resources, undertake joint projects and avoid duplication of efforts in information development activities.
Again, to assist one another in the efforts to improve their capacities for developing managing and delivering of modern information services, through the creation of specialized ICT information systems.

To establish an avenue where technical training shall be provided in the relevant information technology that would enhance the skills necessary for effective information services

Member should be encouraged to identify the sources of funding that would support their information resources and services.
Frequent workshops and seminars to discuss new information technology and services and the possible way in which such should be used to initiate and develop contracts with relevant national regional and international networks, and organization that will be of benefit to members.

USE OF INFORMATION AND COMMUNICATION TECHNOLOGY TO ACCESS AGRICULTURAL INFORMATION RESOURCES SERVICES IN NIGRIA

Farmers may use information and communication Technology systems in a variety of ways. They use it to make findings, to crosscheck for information or carried out studies and research. They may also use it to access information and gather ideas and obtained new knowledge on different areas of agricultural endowment. The farmers or those engage in agricultural business may use or adopt information communication technology systems to check for agricultural market prices. And the knowledge which may enable him to determine the types of crops he may grow in order to make profit.

The lCT may be use by farmers to monitor weather condition of a given area. And with the knowledge from the use of lCT, the farmer or the agro-allied workers may effectively utilized the knowledge obtain and booster agricultural growth and development, also ICT may he adopted and use for climatic and weather forecast. The weather forecast may give the agro-allied workers an idea on the amount of rainfall, period of drought, flood etc. that may be

experience in a particular area and enable him to take quick decision or appropriate steps. Now with the knowledge of the weather condition of an area, the agro-allied workers or farmer may know when to start farm clearing, planting, weeding up to the period of harvest. It may help to determine the type of crops to be planted in a particular place, having acquired or access to the appropriate information from the ICT.

On pest and pest control, agro-allied workers may use the radio, phone and internet to gather current information and access to information by using ICT to get knowledge to control such epidemic. It is observed that cattle rearer use to listen to radio and exchange phone call now adays in order to know safe route that are free from cattle disease and communal conflicts and then keep away from danger zones.

Agro-allied workers may use the internet, radio, phone etc and access to information and make new findings on agricultural development and growth. It is observed that the use of ICT by farmers provide them the knowledge on newly developed hybrid, which they adopt and use and make more profit.

The ICT may be an avenue that may provide information on genuine agricultural insurance and services, agricultural soft loans I aid. Therefore, if farmers may browse the appropriate or relevant website form the internet, they may have access to information and obtain useful assistance from local and international donors on agricultural business.

Farm equipment I implement may be among the basic things the farmers may requires. The farmers may need tractor, fertilizer, plough, insecticide, herbicide etc. for an effective modern farming or agricultural practices and with the help of information communication technology. famers may access easily and faster to where their services may be obtained.

The adoption and use of information communication technology systems may aid farmers in keeping accurate farm records. For it is observed that before one can succeed in the farming business, one may have clear understanding of what one is doing. And to have thorough understanding one may keep accurate records. These records kept may keep the farmer abreast with the progress he made so far or area of weakness. He may be able to identify the amount of money expanded on the project, the time spend, the personal that participated in the farm work. These recordkeeping may help the farmer to determined the profit or loose hat might have been incure in the course of his farming business.

The AGORA program, set up by the Food and Agriculture Organisation of the UN (FAO) together with major publishers, enables developing countries to gain access to an outstanding digital library collection in the fields of food, agriculture, environmental science and related social sciences. AGORA provides a collection of 1900 journals to institutions in 107 countries. AGORA is designed to enhance the scholarship of the many thousands of students, faculty and researchers in agriculture and life sciences in the developing world.

Finally, the adoption of information communication technology by farmers or agro-allied workers in accessing to agricultural

information may provide the farmers with up-to date and authoritative information that may be necessary for a profitable business.

2.8 SUMMARY OF THE REVIEW

From the various literatures reviewed it could be agreed that agriculture has an all persuasive role that affects the lives of all inhabitants, and it provide the bulk labour force and substantially contribute to the Gross Domestic Product (GDP).

The review further revealed that the technical and scientific information was arouse as a result of research and development work by various agricultural research institutions including Universities, with the aim of increase in food production.

The review also revealed that agricultural information is disseminated through various media, such as radio, television, posters, handbills, magazines, journals and extension services, to mention few.

In conclusion it was also revealed that today farmers in Africa are making good use of the information and communication Technology, by organizing information sharing among themselves through the use of various databases and networking system.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter deals with the methodology for conducting this research. The sub topic discussed are research method, population of the study, Sample size and sampling procedure, instruments to be used for data collection and procedures for data collection and data analysis.

3.1 Research Method, Adopted

This research work adopted survey research method. Akuezilo (1993:12) explains that survey method aimed at obtaining affirmation from a sample of respondents that relate to the issue under investigation. He further observes that survey research may be broad or narrow in scope and may even include several countries or may be confirmed to one nation, state and even a small unit. The use of survey Method has become necessary due to the fact that it involves gathering of data about a given sample and then generalizing information obtained to the entire population. The survey method is widely acclaimed as the best method available to social group that is too large to be observed directly.

Also, the survey methods help to examine at length or in details in order to arrive at a generally acceptable opinion or view. The method also gives a convincing statistical assessment of the respondent, in which an investigation has been conducted and carried out, which provides a true representation of the situation under study.

3.2 Population Of the Study

The population of this study will be the farmers and Agro-allied workers operating at upper Benue River Basin Development Authority, which covers some parts of Bauchi, Gombe, Adamawa and Taraba States.

In this study the population is represented by all the farmers farming in the land belonging to the Upper Benue River Basin Development Authority. According to the UBRBDA (2010) there are 17,720 identified farmers under the UBRBDA as indicated in table 3.1 below.

Table 3.1: The Distribution of the Population of the study

S/N	UBRBDA	Farmers		Total
		Male	Female	
1.	Adamawa	3,500	1,500	5,000
2.	Bauchi	2,900	600	3,500
3.	Gombe	3,150	950	4,100
4.	Taraba	4,100	1,020	5,120
	Total	13,650	4,070	17,720

3.3 Sample and Sampling Procedure

A sample size of 1,772 was proportionately and randomly selected from the total population of 17,720. This figure represents 10% of the total population. This is in line with what was reported by Adetoro (1986) that researchers like Borg and Gall (1971) suggest the use of 10% up to 1,000 population when determining sample size from a given population. The researcher adopted 10% considering the large population of the study which he believed will ensure fair and enough representation of the population.

3.4 Instrument For Data Collection

Considering the nature and predisposition of the respondent, the researcher used questionnaire as instrument for collecting data for the study. Akuezuilo (1993) postulates that survey research utilizes instruments like questionnaire and interview and/or observation. The researcher believes that the questionnaire is adequate to provide the data required for the study and upon that interpretation of the questionnaire was made to the respondents at their various locations in their local languages.

3.4.1 Questionnaire

A set of questionnaire was constructed and administered to the respondents. The questionnaire is divided into two sections. Section A asked questions on biodata of the respondents and area of the study. Section b asked questions on the five research questions raised in the study.

3.5 Procedure for Data Collection

Questionnaire was made on each of the research question raised in the study. The questionnaire was distributed to the respondents at their various locations. The questionnaire is in three section :the introductory letter by the researcher requesting the respondents for their response, the bio data of the respondents then the last section questions on accessibility to information sources, services and use by the farmers under UBRBDA. The researcher used approximately eight months to collect the data for the study.

3.6 Procedure For Data Analysis

The data collected from the various location of the study were quantified, processed and analysed using frequency count, percentages, bar charts and simple statistical techniques such as percentages, tables and charts.

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CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

The purpose of this chapter is to present the data collected from the study made on accessibility of information sources, services and use by the farmers under the upper Benue River Basin Development Authority.

4.2 Response Rate

There are 1,694 (95.60%) numbers of respondents. Out of the 1,772 of questionnaires distributed to the targeted sampled, that were returned duly completed. The researcher was able to achieved high rate of response as a result of the long period he happened to spent with the respondents in their various locations and the patience exercised over the process in Table 4.1 below:

Table 4.1: Distribution of respondents from their various locations

S/N	UBRBDA	10%	No. of quest. Returned
1.	Adamawa	500	478
2.	Bauchi	350	341
3.	Gombe	410	392
4.	Taraba	512	483
	Total	1,772	1,694

4.3 DATA PRESENTATION

This section presented the analysis and the discussed of the data collected with respect to the six research questions raised in this study.

4.3.1 Types of Information needs of farmers in Upper Benue River Basin Development Authority in Nigeria.

There is no doubt that any activity of human endeavour requires meets it targeted aims and objectives. Information as one of the resources required for the improvement of agricultural production. The tables 4.2 below present the analysis the types of information needs by the farmers that operate under the Upper Benue River Basin Development Authority (UBRBDA).

Table 4.2: Types of information needs of farmers in UBRBDA

S/N	Type of information needs	Frequency	Percentage (%)
1.	Information on farm management	516	30.4
2.	Information on storage Techniques	270	16.0
3.	Information on Disaster management	150	9.0
4.	Information on seed selection	220	12.9
5.	Information on Access to loan	392	23.1
6.	Information on marketing	146	8.6
	Total	1,694	100

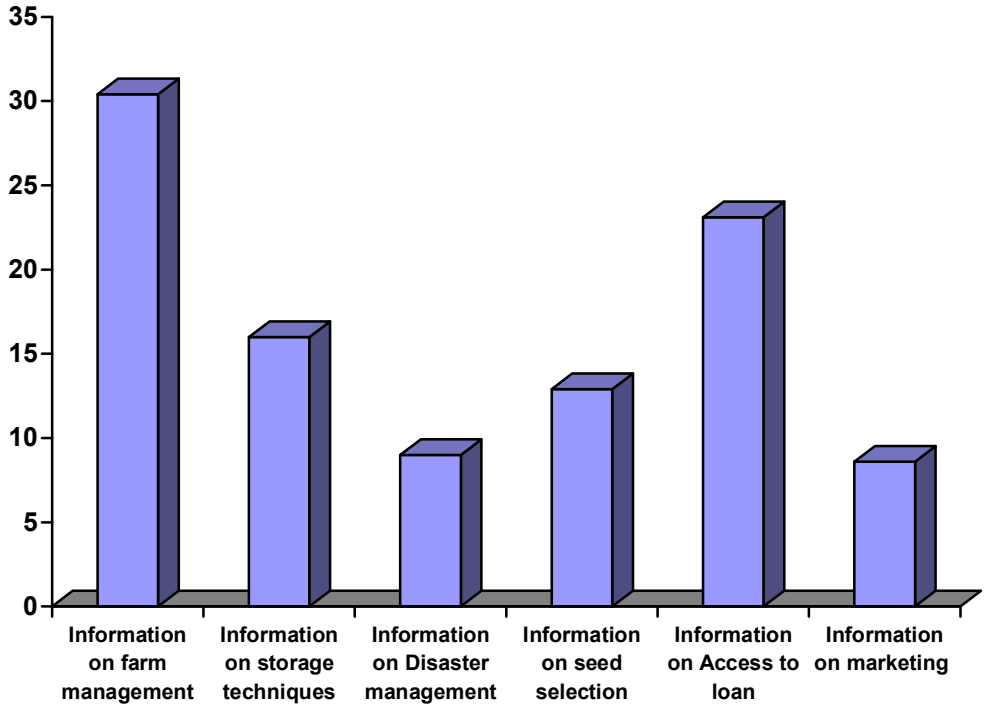


Table 4.2 and figure 1 above show the different types of information needed by the farmers that operate under UBRBDA. It was reported from the analysis that the farmers are in need of information on farmer management upon other information to improve in their business. According to the table above information on farm management is having 516(30.4%) of the total respondents. While information on disaster management is having the least with 150(9.0%). The implication of this finding is that the farmers operating under this authority are in need of various types of agricultural information. This in accordance with what Dervin (1976:19) observed that, every individual whether literate or non-

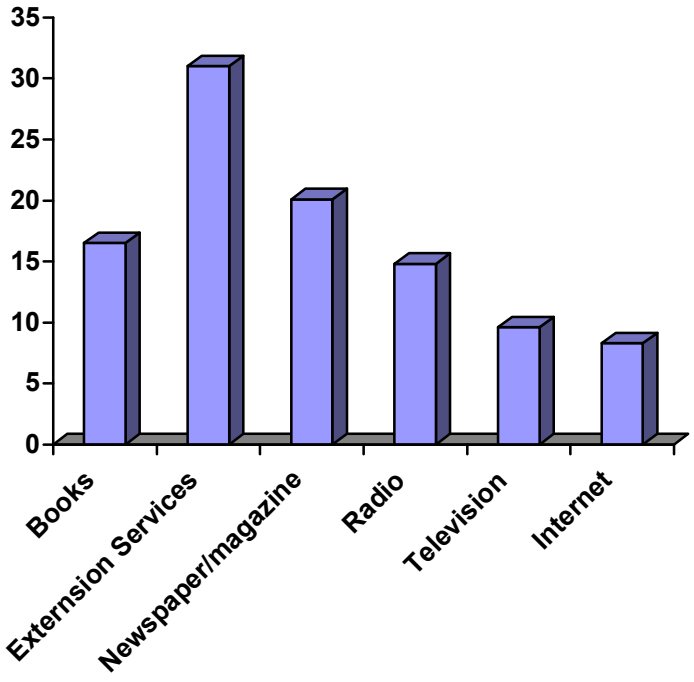
literate needs information in order to take decisions, thus every sector of the population engaged in agricultural needs information.

4.3.2 Types of Information resources available to farmers under UBRBDA in Nigeria.

Information resources include materials that ranged from book periodical, monographs, gazettes, reports conference, workshops and seminars papers, radio, television and internet. Table 4.3 below carried the various information resources for the farmers operating under UBRBDA.

Tale 4.3: Distribution of types of information resource available with the farmers operating under UBRBDA

S/N	Types of resource	Frequency	Percentage (%)
1.	Radio	281	16.5
2.	Extension Services	523	31.0
3.	Journal/ Newspaper/ magazine	342	20.1
4.	Television	244	14.5
5.	Books	163	9.6
6.	Internet	142	8.3
	Total	1694	100



From the above table 4.2 and figure 2 above it can be clearly seen that farmers operating under UBRBDA have different sources of information. The analysis has shown that extension services as a source of information is the most available to farmers that operate under UBRBDA, this was 523 (31.0%) response. This was followed by Newspapers and magazine with 342 (20.1%). While Radio is 281(16.7) and Books became the least with 163 (4.6%).

The implication of this finding is that the farmers that operate under this authority are using current information to enhance their services. Considering the newspapers/magazine they are all carrying the most current information. This is in accordance with

what Aina (1995:5) described that a lot of agricultural information is generated from the research made by agricultural research institutes and faculties of Agriculture in universities which are subsequently published in journal annual reports, books and monographs. And most of the times such findings are presented at conferences, seminars and workshops.

4.3.3 Types of Services Provided to farmers under UBRBDA in Nigeria.

Information service is referring to the techniques, means or procedures in which information is disseminated to the intended users of any type of information. There are different types of information services through which information is disseminated to users. The table 4.4 below indicated the various services that the upper Benue River Basin Development Authority is using in disseminating agricultural information to its farmers.

Table 4.4: Types of information services provided to farmers under UBRBDA in Nigeria.

S/N	Services	Frequency	Percentage (%)
1.	Extension service	548	32.0
2.	Seminars	384	22.5
3.	Conferences	326	19.5
4.	Workshops	436	26.0
	Total	1694	100

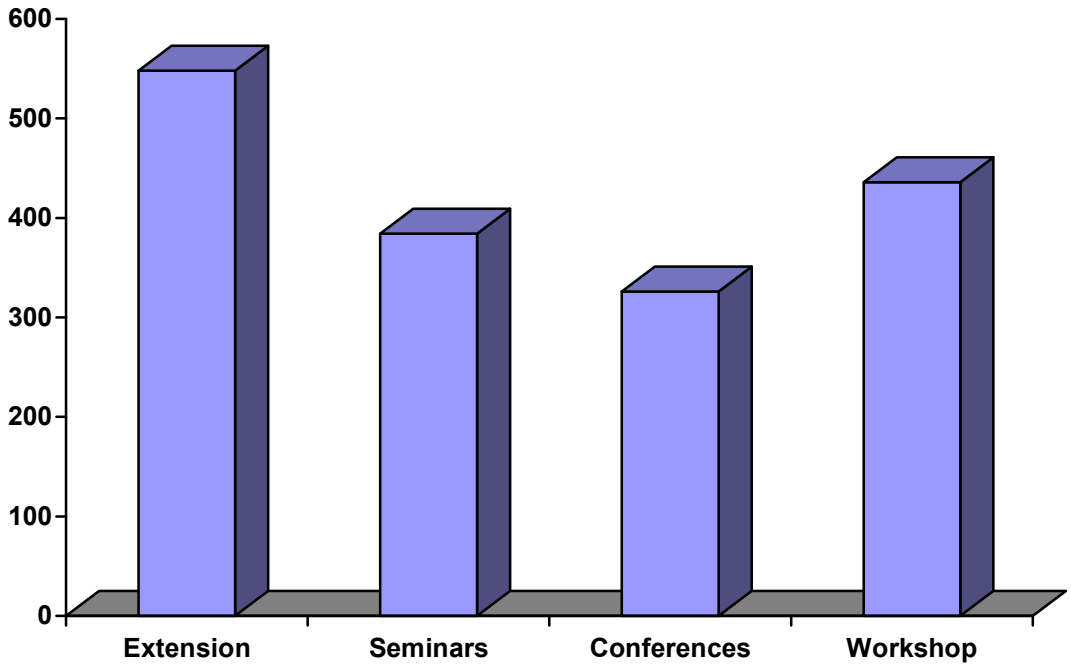


Table 4.3 and figure 3 above have clearly indicated that the UBRBDA is providing various information services to the farmers under it authority. However, the most services provided to farmers is services extension with the highest 548 (32.0%) response. While conferences is having the least with 326 (19.5%). The implication of this finding is that UBRBDA is using the benefits of its extension officers in disseminating relevant information to farmers. Also the finding showed that no matter the level of illiteracy farmers, they are benefitting from agricultural information. This finding is in line with what Kaniki (1995:26) identified that the extension workers are generally considered as a link between researchers and farmers in providing advisory information and know-how to farmers while at same time feeding researchers with field problems which require further research.

4.3.4 The Extent of use of information resources and Services by the farmers under UBRBDA.

The essence of each and every information and services in whatever form or pattern is to serve the need of the users towards accomplishing its aims and objectives. The table 4.5 below indicates the extent to which agricultural information resources and services are used by the farmers that operate under UBRBDA.

Table 4.5: The extent at which the farmers are using agricultural Information resources and Services provided market by UBRBDA

S/N	Extent	Response	Percentage
1	Very frequent	312	18.1
2	Frequent	610	36.1
3	Not frequent	304	17.9
4	Not at all	400	23.6
5	Undecided	68	4.0
	Total	1,694	100

From the table 4.5 above it has revealed that the farmers operating under UBRBDA are using the information resources provide by the authority. The respondents response shows that those that are making use of the information resources and services very frequent are 312(18.15%) those that are frequenting the resources and services not very frequent are 610 while those that are not frequenting the resources and services provided by the authority are 400.The analysis shows that the farmers are making used of the agricultural information resources and services provided by the UBRBDA.

4.3.5 The extent at which information resources and services provided by UBRBDA assist farmers on modern farming techniques

The basic objective of any information is to solve one problem and the other, for this to be possible information must be relevant to the needs of the user. Table 4.6 below indicated the extent to which the information resources and services provided to farmers operating under UBRBDA transformed their farming system from traditional to the modern techniques.

Table 4.6: The extent at which information resources and services provided by UBRBDA assist the farmers

Items	Types of Response					Total
	SA (5)	A (4)	U (3)	D (2)	SD (1)	
Are the information resources and services provided by UBRBDA assisting the farmers.	569	551	196	251	127	1,694

From the above table 4.6 it has revealed. That the farmers operating under UBRBDA were assisted by the information resources and services provided by the UBRBDA authorities towards transforming their farming system from traditional system to modern one. Considering the response rate whereby those

agreed are having 569, strongly agreed are having 551, while those that are strongly disagreed are having251.With these responses one would conclusively say that information resources and services provided by UBRBDA is really transforming the farming of the farmers in the area the modern techniques, that would ease and facilitate the farming activities towards good food production.

4.6 Group of farmers that enjoyed the information and services provided by URBBDA

From the analysis and interpretation of the data collected for the study is shown that all the farmers are enjoying the information and services provided by the UBRBDA.

The implication of this in finding is the authority is however achieving it aims and objectives towards appropriate provision of information resources and services.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The chapter presents the summaries of the study and its findings, conclusion and recommendations.

5.2 SUMMARY OF THE STUDY

The purpose of the study was to investigate and report the information needs of farmers that operate under the upper-Benue River Basin Development Authority (UBRBDA) in Nigeria. The study also examined the availability of information resources and services within their reach. The research further investigated the extent to which information resources and services assisted the farmers on modern farming techniques.

Survey method was adopted for the study. 17,720 farmers and agro allied workers constituted the population of the study. Out of this number 1,772(10%) sample was chosen proportionately and randomly. Questionnaire was the instrument used for data collection.

5.3 SUMMARY OF THE FINDINGS

1. The Study revealed the types of information needs of the farmers and agro-allied workers that operate under UBRBDA. The study found that the farmers are in need of all type of information on agriculture, it is as a result of this that information on farm management became the highest with 516 (30.4%) of the total respondents.
2. The study revealed that among the information resources available to the farmers that operate under UBRBDA it include books, reports, newspapers/magazine and journal among others.
3. The study revealed that among the various services provided to the farmers that operate under UBRBDA, extension services, seminars, conferences and workshops are included.
4. The study identified that the agricultural information sources and services provided by UBRBDA are creating good market to the farmers operating under the authority.
5. The study also revealed that the information resources and services provided by the UBRBDA is assisting the farmers in

changing their farming system from traditional to modern farming system.

5.4 CONCLUSION

Considering the findings of this investigation on the accessibility of information sources, services and use by the farmers that operate under the Upper Benue River Basin Development Authority, It can be concluded that the farmers that operate under Upper Benue River Basin Authority are in need of various agricultural information and services to enhance their services as farmers. These efforts by the authority make it possible by the farmers to adopt the modern farming system and in return creating good market of their produce.

This has shown that the provision of basic information in agriculture would help in solving farmers' problems. As what Alemna (1995) said, that in agriculture sector information is one of the appropriate tool which can be relied upon to increase food production.

In conclusion, we came to believe that agriculture is very critical to the development of the country as the Gross Domestic Production of a country largely depend upon agriculture

5.5 RECOMMENDATIONS

Based on the findings of this study the researcher is obliged to make the following recommendations:

1. The management of the Upper Benue River Basin Authority (UBRBDA) should as much as possible increase the number of their extension workers to adequately cater for their bulk population of the farmers and Agro-allied workers.
2. There is the need by the UBRBDA authority to engage into resource sharing and possible networking with the other agricultural research centers and institutes as a means of exchanging ideas and new technological development on agriculture.
3. The management of UBRBDA should provide intensive awareness programmes on agriculture to the farmers operating under the authority quarter or bi-annual.
4. The UBRBDA should try as much as possible to provide with the public libraries under their areas of operation with the possible agricultural information resources for their farmers and Agro-Allied workers.
5. The federal government should make it a policy or law for the establishment of a commission to handle the issues for the of information on all aspects of agriculture at the national level and state as well.

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APPENDIX I

Department of Library and
Information Science
Ahmadu Bello University,
Zaria.

6th June, 2011

Upper Benue River Basin,
Development Authority,

Dear Respondent,

QUESTIONNAIRE ON ACCESSIBILITY AND USE OF INFORMATION RESOURCES AND SERVICES BY FARMERS OF THE UPPER BENUE RIVER BASIN DEVELOPMENT AUTHORITY.

I am a student of the above named institution and department conducting research on the above named topic.

The research is purely for academic purpose therefore, kindly respond to the attached questionnaire by ticking the appropriate response. You are guaranteed of strict confidentiality of any information provided.

I thank you for the usual cooperation and assistance.

Yours truly,

Biringina Halilu Kulani

APPENDIX II

Questionnaire for farmers and Agro-allied workers that operate at the Upper Benue River Basin Development Authority.

1. Location of the river basin development authority_____
2. Sex: (a) Male [ ] (b) Female [ ]
3. Age: (a) 20-30yrs [ ] (b) 30-40yrs [ ] (c) 40-50yrs [ ]
   (d) 50yrs and above [ ]
4. Qualification:
   a. Adult Education [ ]
   b. Primary School leaving Certificate [ ]
   c. WAEC/GCE/NECO [ ]
   d. ND [ ]
   e. NCE [ ]
   f. Degree-above [ ]
   g. Others specify_____
5. How long have you been in the Agro-Allied business?
   a. 0-10 years [ ]
   b. 10-20 years [ ]
   c. 20-30 years [ ]
   d. 30-40 years [ ]
   e. 40 years –above [ ]
6. Hectares of land cultivated.
   a. 0-10 hectares [ ]
   b. 10-20 hectares [ ]
   c. 20-30 hectares [ ]
   d. 30-40 hectares [ ]
   e. 40 – above [ ]

7. Types of Agro-allied business?
    a. Farming [ ]
    b. Marketing of farm produce [ ]
    c. Marketing of farming chemical [ ]
    d. Extension service work [ ]
8. Types of Crops produce.
    a. Cash crops [ ]
    b. Food crops [ ]
    c. All of the above [ ]
9. Category of farmer.
    a. Large scale farmer [ ]
    b. Medium scale farmer [ ]
    c. Subsistence farmer [ ]
10. Particular crops being cultivates
    a. Rice [ ]
    b. Maize [ ]
    c. Cotton [ ]
    d. Groundnut [ ]
    e. Wheat [ ]
    f. Cassava [ ]
    g. G/corn [ ]
    h. Others specify_____
11. To what extent are you satisfied with the yield of your produce?
    a. Very satisfied [ ]
    b. Satisfied [ ]
    c. Fairly satisfied [ ]
    d. Not satisfied [ ]

12. To what extent are you satisfied with the quality of your produce?

    a. Very satisfied [ ]
    b. Satisfied [ ]
    c. Fairly satisfied [ ]
    d. Not satisfied [ ]

SECTION B: The role of information in promoting Agricultural development.

13. What type of information you need as a farmer that operate under Upper Benue River Basin Development Authority?

    a. Information on farm management [ ]
    b. Information on storage techniques [ ]
    c. Information on disaster management [ ]
    d. Information on seed selection [ ]
    e. Information on access to bank loan [ ]
    f. Information on marketing [ ]
    g. Others specify_____

14. How effective has information help you in:

	Highly effective	Effective	Fairly effective	Not effective
a. Pest control				
b. Disaster management				
c. Weather monitoring				
d. Seed selection (Hybrid)				
e. Accessing bank loans				
f. Maximizing yield and profit				
g. Creating market for your product.				
h. Storage techniques				
i. Accessing to Agro-allied chemical				

15. What type of information resources are available at your disposal for your consultation?
    a. Books [ ]
    b. Journals [ ]
    c. Newspaper/magazine [ ]
    d. Radio [ ]
    e. Television [ ]
    f. Internet [ ]
    g. Others specify_____
16. What are the types of information services provided to you by the UBRBDA?
    a. Extension services
    b. Seminars
    c. Conferences
    d. Workshops
    e. Specify others
17. How effective (is) are information resources/services meets your information needs?
    a. Very effective [ ]
    b. Effective [ ]
    c. Fairly effective [ ]
    d. Not effective [ ]
18. What are the types of services that are provided to you by upper Benue River basin Development Authority?
    a. Extension services [ ]
    b. Seminars [ ]
    c. Conferences [ ]
    d. Workshops [ ]

19. How adequate is the information services rendered to you on Agriculture by upper Benue River Basin Development Authority?
    a. Very adequate [ ]
    b. Adequate [ ]
    c. Fairly adequate [ ]
    d. Not adequate [ ]
20. To what extent information resources and services create good market for you?
    a. Very good extent [ ]
    b. Good extent [ ]
    c. Fairly good extent [ ]
    d. Not good extent [ ]
    e. Undecided [ ]
21. To what extent do you make use of information services and resources on modern farming techniques?
    a. To a very great extent
    b. To a great extent
    c. A fair extent
    d. No extent

SECTION C: ACCESSIBILITY AND USE OF INFORMATION SERVICES

22. Through which method do you have access to information services?
    a. By reading [ ]
    b. By listening to radio [ ]
    c. By viewing television/films [ ]
    d. By internet browsing [ ]

e. Through Agric extension farm agents [ ]

f. Others specify_____

23. How frequent do you access to information on agriculture?

a. Very frequent [ ]

b. Frequent [ ]

c. Fairly frequent [ ]

d. Not frequent [ ]

24. Which language is use in providing information to you?

a. English [ ]

b. Hausa [ ]

c. Yoruba [ ]

d. Ibo [ ]

e. Others specify_____

25. How appropriate is the language used in dissemination information to you?

a. Very appropriate [ ]

b. Appropriate [ ]

c. Fairly appropriate [ ]

d. Not appropriate [ ]

26. Do you benefit from the information services rendered to you?

a. Well benefited [ ]

b. Benefited [ ]

c. Fairly benefited [ ]

d. Not benefited [ ]

27. Comment freely on any relevant information in your opinion may assist me on this research_____