

# INFORMATION DEVELOPMENT

**VOLUME 17**

**NUMBER 2**

June 2001

ISSN 0266-6669

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# Agricultural Research in Nigeria: the role of institutional libraries

Cooperation is the key to improving the provision of agricultural information by research institutes in South-western Nigeria.

Georgina Dien Ekpenyong

## INTRODUCTION

Agriculture ranks second only to crude oil as the mainstay of Nigeria's economy. Nigeria currently has eighteen federal universities, three of which are universities of agriculture. The universities of agriculture are found in the southern part of the country. Of the other fifteen federal universities, six are in the North, five in the Southwest and four in the Southeast. In addition, there are several federal agricultural institutes scattered around the country. There is also an International Institute of Tropical Agriculture in Ibadan.

Most of the universities offer courses in agriculture. It will, therefore, not be surprising to find duplication of research output and journal acquisition in these institutions if they lack intensive and coordinated monitoring of research results, cooperation and collaboration among institutions and researchers. Cooperation, though acceptable in principle, will certainly be hampered by lack of several key facilities such as: easy communication systems, reliable electricity supply in the country and appropriate legislation to prevent violation of intellectual property rights in publication. In spite of these problems, most institutions still believe their libraries should provide all their research needs. This may have been possible in the past (when funds were available and journals were relatively cheap) but not so in the twenty-first century, where global inflation has taken over.

In the developed world today, the emphasis on information has shifted from ownership to accessibility. With modern technology evident in the establishment of the Internet, information in whatever field can be made available electronically without the enquirer actually possessing the information physically. With digitization of unpublished documents like theses, the chances of phasing out paper (print) in future are high. Multi-volume reference works are now available electronically, as are indexes and abstracts. The Internet and the World Wide Web (WWW) have offered opportunities for information sharing globally through on-line databases which provide more efficient updates than printed sources. Electronic networking between similar organizations and institutions will, therefore, enhance resource sharing among them. This means that information held by one library would be available to all the participating libraries. This will enable an enquirer to locate where the information resides electronically

and make use of it through document delivery. In this way, documents are located and delivered fast electronically, to research scientists. Such cooperation efforts are found in the United States of America, the United Kingdom and in Europe. In the UK, JANET (Joint Academic Network, UK) which is a network of all academic libraries, enables all participating libraries to access any other library in the network electronically. In the United States of America, the Research Library Group (RLG) cooperated to produce RLIN which is the bibliographic system of RLG, which is used for on-line cataloguing and searching operations in the USA. In developed countries, this type of cooperation is preferred, since no single library can fund all its research needs.

Ekpenyong (1994) observed that cooperation and networking among libraries with similar missions in Nigeria is important in resource sharing. Cooperation and networking among them should facilitate and encourage standardization of hardware, software and mode of bibliographic data entry.

The aim of this research is to sensitize agricultural librarians in Nigeria to the awareness that, in the twenty-first century, strategic cooperation among their libraries will go a long way in satisfying the research needs of scientists.

At present, this is the preferred choice in this era of inadequate funds, dwindling economic resources and advancing technology. To beat global inflation, therefore, electronic resources and the Internet constitute the choice.

## CHARACTERISTICS OF AGRICULTURAL INFORMATION

Agricultural information in Nigeria is generated from the following sources:

- agricultural colleges and universities
- agribusinesses
- farming communities
- extension services
- agricultural research institutes (national and international)

Of all these, the major sources of agricultural information come from governmental and academic institutions involved in agricultural research and experimentation. Agriculture is perhaps the most interdisciplinary subject in nature, covering biological sciences, medicine, chemistry, engineering, climatology, food technology, environmental sciences, economics, management, physics, just to name some. This interdisciplinary character has made it difficult to provide an effective control of its literature.

Relevant literature in agriculture is widely scattered in a multitude of journals, thus leading to ineffective control. While virtually all literature of interest to chemists can be found in *Chemical Abstracts* and those of medicine in *Index Medicus*, *Medline* or *Excerpta Medica*, literature covering agricultural information in comparison is so diverse that no single abstracting or indexing service is likely to satisfy them all completely. This great diversity of agricultural information has posed serious problems to information specialists, as it is difficult to remain knowledgeable in all subject areas impinging on agriculture.

Another characteristic of agricultural literature is its universality, as there is virtually no country in the world that is not dependent, to a certain degree, on its own agricultural production. Improvements in agricultural methods as reflected in its literature could be of critical and immediate importance to a small developing country. By the same token, agricultural research institutes in one developing country may produce reports that could be of potential interest and value to many other nations. All countries of the world have the potential of making significant contribution to agricultural literature. Information needs in agricultural extension are for practical, current and proven information (theories) of local relevance to farmers in the field. This is where the agricultural extension workers are relevant. They are the ones to translate such research findings from the scientists to the farmers in the field. In this way, their role is that of facilitating the transformation of research results into tangible benefits such as increased crop yields. The end result is to improve the living conditions of the rural populace.

Presently, the availability of information in African national agricultural systems is still poor as most information found in relevant electronic databases relates to research work done in industrialized countries, where temperate climatic conditions are different from the tropical conditions found in most African countries. In addition, the exchange of electronic data between African countries is very limited because of poor infrastructure and lack of direct access to the Internet.

In Nigeria there is a need to coordinate and assemble primary research emanating from all the research institutes and universities offering agriculture. There should be aggressive agricultural information gathering, processing and storage in a database. An information policy is necessary to avoid waste, duplication and needless expense, and also to defend freedom of information and the right to privacy. This policy is expected to lead to the expansion of documents, holdings and collections of data which have for long been locked up in many institutions. Nigeria is ripe to produce its own databases on all aspects of agriculture.

## AGRICULTURAL INFORMATION AND RESEARCH IN NIGERIA

Information and research in agriculture cannot be separated from each other, as they are dependent on one another. Availability of information will not only open up new channels for research but will also help prevent duplication. Lack of information will affect agricultural research negatively. For efficient, effective and relevant research, therefore, access to information is paramount. In Nigeria, as in other developing countries, lack of information is a big constraint on research.

In south-western Nigeria, there are six federal universities, one of which is a University of Agriculture in Abeokuta. In addition, there are four Federal Agricultural Research Institutes and an International Institute of Tropical Agriculture. Each of these institutions has a functional library.

### *Federal Universities*

University of Ibadan, Ibadan  
Obafemi Awolowo University, Ile-Ife

University of Lagos, Lagos  
University of Agriculture, Abeokuta

### *Federal Agricultural Research Institutes (all in Ibadan)*

Forest Research Institute of Nigeria (FRIN)  
Cocoa Research Institute of Nigeria (CRIN)  
Institute of Agricultural Research and Training, Ibadan (IAR&T)  
Nigerian Institute of Horticultural Research, Ibadan (NIHORT)

### *International Institute*

International Institute of Tropical Agriculture (IITA), Ibadan (IITA is a member of the Consultative Group on International Agricultural Research (CGIAR)).

These institutes are all located within a few kilometres of each other. If only they were able to cooperate and pull resources together, a databank of agricultural information could be obtained from the Southwest of Nigeria. Other similar institutions in the country will certainly emulate this example and ultimately a national agricultural database will be produced and launched on the Internet.

## AGRICULTURAL INFORMATION AND THE ROLE OF LIBRARIANS

The primary producers of agricultural information are agricultural research scientists, who during the course of their research cause events to happen in their laboratories. Their observations and findings are relayed to the world through publication in learned journals. Secondary producers of information are the publishers of indexes and abstracts, which direct researchers to what has been published in their fields, in which journals. Librarians provide or facilitate access to these sources of information, thus transmitting information or concepts and ideas from person to person. The agricultural librarians, in their various institutes and universities, are duty bound to collate concepts, ideas and research results and to have them documented in their catalogues or databanks. Each institute's databank can be made available to the others if there is strategic and meaningful cooperation among them. This cooperation will reduce unnecessary duplication of research.

If established in these institutions, library cooperation should include the following:

- cooperation in acquisition, collection development and management (book and journal acquisition)
- cooperation in resource sharing (database sharing)
- cooperation in the preservation of research materials
- cooperation in inter-library loan/document delivery
- cooperative cataloguing
- cooperation in sharing expertise in answering users' reference questions.

Such cooperation will in future lead to a zonal linkage where these libraries, if networked, can log on to one another online to search for items they do not have in their own collections. This will be the beginning of a computerized bibliographic

network that would support the cooperative programs of participating members.

Access to members' databases is the ultimate goal, thus reducing the duplication of research within the country. Cooperation, networking and linkages will lead to the achievement of an effective and efficient information control system, since information sharing often leads to the sharing of points of view and ideas.

There is now a need for an aggressive method of identifying, locating and obtaining local agricultural information. It is unfortunate that there is a predominance of foreign agricultural information which, though important, tends to be irrelevant to the needs of scientists in tropical Africa. African countries are producing enough agricultural information but access to it is the problem. Access is hampered by lack of proper reporting by scientists, which may lead to misinformation, lack of proper documentation of project reports or consultancy reports which have been painstakingly prepared but are then allowed to rot away in cabinets and cupboards.

It is time to realise that information gathering processing and dissemination is of vital importance to this country.

## MEETING CHANGING NEEDS

Research and academic libraries can no longer afford to acquire all the research materials needed by their end users because of inadequate funding, global inflation and economic recession in most developing countries. Ekpenyong (1993) observed that book acquisition in the Kenneth Dike Library, University of Ibadan, declined from 17,000 volumes in 1977 to 1770 volumes in 1990; likewise journal titles decreased from 3626 in 1983 to only 317 titles in 1990. Not much has changed in the year 2000. Libraries have therefore to embark on a strategy that will enable them to remain relevant to their parent organizations and end users. Academic and research libraries located within a few kilometres from one another should be thinking about establishing an information network as a means of fostering strategic partnership to enable them to support the needs of research, scholarship and instruction. There is a need for intelligent collaboration to produce shared assets. Entering into this kind of responsible partnership for the purpose of improving library services is not only reasonable but necessary in the twenty first century. Globally, it has been acknowledged that cooperation on an economic and strategic level is vital in information exchange, job sharing, resource sharing and overall benefit distribution. With ever-decreasing budgets, cooperation seems inevitably the challenge of our time.

Nigerian agricultural information, if properly managed and documented electronically (i.e. made available on CDs), will form the basis of a national electronic databank, the ultimate aim of which will be to make this information available globally on the Internet. With the advent of information and communication technologies the countries of the world are communicating with each other via their computers and the Internet. It is embarrassing that a country like Nigeria still does not have a direct gateway to this global village. We are still dependent on commercial Internet service providers who use other countries as outlets. It is now time for Nigerian

agricultural information to be made available on the World Wide Web and the Internet.

## THE ROLE OF AGRICULTURAL LIBRARIANS IN THE RESEARCH PROCESS

Grover and Hale (1998) opined that 'it is the librarian's role to understand the research process and to create suitable aids for organizing and facilitating it'. This role has not been fully exploited by agricultural librarians in Nigeria. They should be aware of their institutions' missions and orientate the focus of their collections to fulfil the goals of these missions. To facilitate this process, there is a need for cooperation among agricultural libraries located close to each other.

The eight university and agricultural research libraries located close to each other in south-western Nigeria, should establish strategic and meaningful cooperation. It is the duty of these librarians to reach out to their scientists and researchers to become familiar with their topics of research. This will give them a clear picture of their researchers' information needs and thereby enable them to select the right databases and formulate search strategies topics for their users. They can also facilitate cooperation and networking among their libraries and direct scientists to libraries where the information they seek is available. Librarians can also facilitate networking among scientists by introducing them to other colleagues from multiple disciplines or with similar research interests. It is their duty to aggressively seek, collect, and store information emanating from research conducted in their institutions. This documented research will form the nucleus of the institute's databank.

An investigation into the libraries under study is very revealing. Although the national agricultural research institutions (universities and agricultural institutions) have experienced, professional librarians, most of them can hardly satisfy the needs of their scientists and researchers. These institutes are experiencing a substantial drop in standards as far as their collections are concerned. Their libraries lack relevant and up-to-date information and adequate facilities to access that held elsewhere. This is discouraging as scientists and researchers need current information in order to carry out their research.

## LIBRARY RESOURCES

Agricultural research libraries in Nigeria require current and relevant information in order to carry out their research. In essence, the aspiration of these institutions is to improve crop yield, and thus the nutritional status of Nigerians. Contrary to expectations, however, it may be observed that national agricultural research institutes in Nigeria have very limited current resources in their libraries. Research scientists in these institutions complain that the collections in their libraries are not current, are inadequate and, in some cases, are irrelevant to their areas of research.

Of the three universities, the University of Agriculture, although new, is still trying very hard to acquire current journals to cover the 'difficult' subject, agriculture. They can hardly be comprehensive in this task as articles on agriculture, as discussed earlier, are often found in journals covering other

disciplines. The University of Ibadan and Obafemi Awolowo University offer agriculture as only one of many subjects taught and cannot therefore, claim to be comprehensive in coverage.

Journal titles are duplicated in these universities. It is perhaps time for the librarians of these institutions to cooperate in journal acquisition in order to prevent duplication at this time of limited budgets. In a cooperative environment they could each be mandated to acquire core journals that they could all share. In this way, journals not found in one institution could be found in one of the others.

The Library of the International Institute of Tropical Agriculture, Ibadan (IITA), is very current as far as agricultural journals are concerned. Being aware of the unique nature of the subject, IITA also has current journals in the sciences, technology, economics, sociology, entomology and parasitology as they affect aspects of agriculture. It is a hybrid library with agricultural information in both print and electronic format. There are eight current agricultural databases on CD-ROM: *CAB Abstracts*, *Tropag* and *Rural*, *SESAME* (French), *INPHO* (Postharvest) *FAO*, *Current Contents*, *Global Plant Protection Information Systems (GPPIS)*, *CIRAD Yam CD* and *AGRIS*. These electronic databases are networked in such a way that their research scientists can access them from their laboratories. At the same time others can also access the databases from the networked computers in the library. With current information both in print (journals) and on CD-ROM databases, it is unlikely that a research scientist in agriculture will not find the information he needs. After finding the information, if the journal cited is not in the library, document delivery can be requested from the author by e-mail. The IITA library is, therefore, an asset to the agricultural institutions located around Ibadan. IITA is also a contributor to the *AGRIS* database.

## ANALYSIS OF THE SITUATION

Collectively, the mission of these institutions is aimed at supporting the research work carried out by their institutes. A SWOT analysis of the situation reveals the following:

### Strength

The most important observation is that these eight agricultural establishments are in Ibadan, except the University of Agriculture which is in Abeokuta (a few kilometres away).

Strategic cooperation among them will make their collective resources available to all of them. The IITA library, being of international standard, is a very strong point. Information resources on tropical agriculture abound both in print and electronic format in the IITA library.

### Weakness

The weaknesses of these national agricultural institutions are: their over-dependence on the federal government for funding; lack of modern technology infrastructures; lack of modern laboratory equipment; unreliable electricity supply; and unreliable and obsolete telephone lines. The libraries of these institutions lack modern facilities and are still operating their

functions manually. Not one has a computer. The universities have done better and have automated some of their library functions. The University of Ibadan is leading in this regard.

### Opportunities

These eight agricultural institutions are lucky to be located in the same area. They should take advantage of this situation to cooperate meaningfully with each other in order to satisfy the information needs of their scientists. They should exploit promotional linkages with agro-based industries around them, for example, in commercial towns like Ibadan, Lagos, Abeokuta, Ijebu-Ode and Ota. Such linkages will result in their carrying out relevant researches that will enhance commercial agricultural production, food processing, food preservation and food packaging. Such research will encourage these agro-based industries to fund these institutes to improve their research work.

### Threats

The main threats are gross under-funding and unchecked duplication of research output. Inadequate or non-existence of modern infrastructure and lack of meaningful cooperation among them are also contributory to their problems. It is unbelievable that the libraries of most of these institutes do not even own a computer in the year 2000. Without modern technological and communication infrastructures, access to resources outside their libraries is indeed daunting.

## CONCLUSION

For their libraries to remain relevant as centres of excellence in delivering agricultural information, the librarians of these institutions must take advantage of every reasonable financial opportunity to make current materials available to their end users. This dream can only be realised if they are aware that times are changing. The emphasis on availability of information has shifted from ownership to access. We are now living in an electronic age and, if nothing is done urgently now, we may be cut off from civilization.

Ekpenyong (1994) opined that for Nigerian libraries to benefit from the advancing global information technology and communication there should be an effective revolution from manual to electronic ways of doing things. Nigeria and indeed all African countries have made unique contributions to the global system. With improved infrastructure and the creation of local databanks within the country, subregions and Africa as a whole, this unique information will be made available globally. Bridges should be built from local area networks (LAN) to wide area networks (WAN) and ultimately to the Internet. Librarians have to play a proactive role in this regard. For now, access to each other's databases within the country is the goal.

Without access to the Internet, African countries risk getting poorer because they will practically be alienated from the mainstream of global economy. It is time for Nigeria to have a direct gateway to the information superhighway instead of depending on commercial Internet service providers, using other countries as gateways.

## References

- Ekpenyong, G.D. (1993). The effect of economic recession on university libraries in Nigeria: the case of the Kenneth Dike Library, *New Library World*, 94 (1107): 19-22.
- Ekpenyong, G.D. (1994). Computer technology and information retrieval in Nigeria. *African J. Psychological Study of Social Issues*, 1 (1): 286-296.
- Grover, Robert and Martha L. Hale (1998). The role of the librarian in faculty research. *College & Research Libraries*, 49(1): 9-10.
- International Institute of Tropical Agriculture. (1995). *A Guide to the Library and Documentation Centre*. Ibadan: IITA. 23p.

## Abstract

Investigates the problems of agricultural research libraries vis-à-vis their effects on the advancement of agricultural research in Nigeria. Proffers solutions in the form of modern electronic information facilities like electronic networking, e-mail and Internet access. A method of working is suggested in which research institutes and universities in Southwest Nigeria can each selectively develop a database information system on agricultural research, all of which are coordinated through a local area network. This will facilitate access to information possessed by other such institutions. The advantages of the model are numerous: reduction of the cost of information acquisition, reduction in the duplication of research efforts and greater productivity by agricultural research scientists.

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## MORE ON AGRICULTURAL INFORMATION IN NIGERIA

### Needed: user-responsive agricultural libraries in developing countries.

C. O. Omekwu. *Information Outlook*, 2 (4) Apr 1998, p.33-6, 38, 40. il. tbls.

The shortage of information professionals, poor telecommunication facilities, and uncoordinated information networks are crucial problems facing agricultural information sources in the Third World. The multidisciplinary nature of agriculture further complicates the effective coordination and integration of agricultural information. Reports on a case study of Nigeria's agricultural coordinating agency, the Federal Agricultural Coordinating Unit. The results of this study underline the need for more user-responsive libraries in developing countries. (Quotes from original text)

### The development of agricultural information in Nigeria.

L. O. Aina. Y. A. Adedigba. Edited by L. O. Aina, A. M. Kaniki and J. B. Ojiambo. Ibadan, Nigeria, Third World Information Services, 1995, p.83-107. tables.

Paper included in a collection of papers describing the development of agricultural information systems in Africa. Presents a comprehensive review of agricultural institutions in Nigeria providing access to agricultural information with particular reference to the generation of agricultural information and publications by Nigerian universities and to statistical data relating to agricultural libraries and information centres. Discusses relevant issues including: the constraints on the development of agricultural libraries and information centres, research in agricultural information and strategies for the development of agricultural information. The latter involve: the strengthening of informal information communication; the strengthening of the generation of agricultural information; and the strengthening of agricultural libraries.

### The International Institute of Tropical Agriculture (IITA) Library and Documentation Centre.

Y. A. Adedigba. S. M. Lawani. Edited by L. O. Aina, A. M. Kaniki and J. B. Ojiambo. Ibadan, Nigeria, Third World Information Services, 1995, p.169-84. refs.

Paper included in a collection of papers describing the development of agricultural information systems in Africa. Describes the work of the Library and Documentation Centre, at the International Institute of Tropical Agriculture (IITA), based at Ibadan, Nigeria, noting: library policy; goals and objectives; organizational structure; and the library services and information services offered by the Library. Outlines the scope of the library collection and the agricultural databases available, including the IITA Library's own database, ALISTRA (Automated Library and Information Service for Topical Agriculture). Discusses the application of modern information technology and the collaboration between the IITA and international and national agricultural research systems.

(From *Library and Information Science Abstracts*)