Discusses the state of agriculture libraries in India and evaluates parameters such as need for Agriculture Library Association, Automation and Networking, Agriculture Documentation Centre, professional development of library staff, professional status etc., and suggests measures for improvement of library services.

INTRODUCTION

Agriculture sector has been the backbone of the Republic of India as it is the main source of economy for a large number of people residing in rural areas. It contributes nearly 25 percent of gross domestic product (GDP) and about 70% of population is dependent on agriculture for their livelihood [1]. In the present era of IT revolution, access to agriculture information has become vital for the development of agricultural community. Agriculture universities, colleges and research institutes have been playing an important role in teaching, research and extension, and to supplement their activities libraries and information centres have been acting as nerve centres by providing valuable information catering to their needs.

The agriculture libraries have served the nation since the inception of agriculture universities and Institutes. Today, there are 29 State Agriculture Universities(SAUs), one Central University, 9 Deemed Universities and 50 ICAR Central Research Institutes and 28 National Research Centres in India providing education and research facilities for development of agriculture in India. Each of these institutes has libraries catering to their needs. The libraries in these organisations have also grown along with the growth and development of these organisations.

The libraries and library management is undergoing significant changes today not only in outlook but also in function, services, methods and techniques for collection development, processing and dissemination of information. Agriculture libraries like other libraries have to adopt the applications of information and communication technologies for their obvious benefits to library and information centres. Various factors like emergence of digital collection, electronic sources of information, library automation and networking, reorganizing of human resources etc., have posed challenges before the agriculture library professionals to keep pace with the complexities of present requirements.

The agriculture libraries have been far behind in adopting the new technologies due to reasons of fewer funds, lack of training of staff, etc. There is need for the library professionals in India to look at Agriculture Library Resource Development in wider perspective to cope with the changing role of library services and the need to adopt various tools and techniques of information technology, communication technology, library networking etc., to make library and information services user friendly and relevant to the parent organisation.

This paper examines the present status of agriculture libraries in India and suggests measures for their improvement to meet the challenges of the present developments with an aim to provoke further discussion and reflection rather than to sharply draw any conclusion.

AGRICULTURE LIBRARY ASSOCIATION

Library associations play an important role in development of libraries. It provides a forum to the
professionals to share experiences on continuous basis and to raise their voice against any grievances and to suggest new measures for development at national level. Associations can also play a vital role in conducting trainings and short courses for the library professionals in IT and other technological developments besides providing informal training through conducting seminars, workshops and conferences.

With regard to agriculture library associations, the Association of Agriculture Librarians and Documentalists of India (AALDI) was active until 1988 with the holding of AALDI seminar at G.B Pant University of Agriculture &Technology, Pantnagar. The 1988 seminar was perhaps the last one held by AALDI. AALDI was also actively bringing out a scholarly publication, the *Indian Journal of Library and Information Science* annually, which is now running behind schedule. The association has gone into a long dormancy due to lack of professional commitments [2].

There is thus a need to revive the functioning of AALDI to bring into focus the agriculture library and information science professionals and to suggest new measures to accelerate development of agriculture libraries in India.

Conference and seminars enable LIS professionals to share their views and also update their knowledge. A number of workshops, seminars and conference were held under the aegis of Indian Council of Agriculture Research (ICAR) until 1988 which has now become an event of the past. G B Pant University of Agriculture and Technology organised the first national level seminar on Agriculture Librarianship and documentation in 1988 [3]. After that, it is only in 2003 that Acharya N G Ranga Agriculture University, Tirupati, Andhra Pradesh organised a national level seminar on “Agriculture Information Resources and Services in Digital and Networked Environment in India”. There is a need for strong professional commitment by Agriculture LIS professionals to revive such activities again. At least one conference at national level needs to be conducted every year followed by state level seminars to discuss professional matters concerning libraries and information centres on the similar pattern of Indian Library Association (ILA) or Indian Association of Special Libraries and Information Centres (IASLIC).

**AUTOMATION AND NETWORKING OF AGRICULTURE LIBRARIES**

**Library Automation**

Automation of libraries and information centres has added new dimensions to the concept of automation and networking in agriculture libraries also. Networking can promote resource sharing among the libraries of agriculture institutes and research centres by collecting, organising and disseminating information to users and also enable them to acquire the documents not available in their library from other libraries in the network. The co-ordinated efforts on need based collection, development of bibliographical databases of books and journals and other specialist databases would reduce duplication of work. Besides it would enable to establish a referral centre for maintaining a central online union catalogue of library holdings. Networking at regional and state level universities and college libraries could co-ordinate with national and international databases.

Most of the agriculture libraries are in the initial stages of library automation to which IARI library is an exception by virtue of its national role. The in-house activities of computerisation are at nascent stages with only cataloguing and bibliographical services being automated. There is need for encouraging the development of Local Area Network (LAN) in libraries for management of complete house keeping operations. Emphasis is also required to be made on interlibrary loan services for resource sharing and electronic transmission of documents. The presence of agriculture libraries on the Internet should become prevalent, for which efforts should be made to make available the library catalogue, bibliographical details of journals articles, reports etc., on the website for use by the readers.

**Need for IT Strategy**

There is a need for a strong IT strategy for automation and networking of agriculture libraries.
The Agriculture Research Information System (ARIS) of ICAR established in 1995 is an encouraging step to strengthen the research and information base of agriculture for which the World Bank Development funds have been provided to the libraries for purchase of computers, and necessary infrastructure and for improvement of their collection under National Agricultural Technology Project (NATP). In order to modernise the libraries and information system a total budget of Rs 130 crores under NATP has been earmarked of which an amount of 94 crore has been allocated for ARIS and Rs,36 crore for the development of library components in information system development providing electronic connectivity and creation of management information system and computerised electronic databases of Indian research findings in agriculture and allied subject [4].

The ARIS Project has also plans to modernise agriculture libraries and to put the library information on ARIS Network. Agriculture Research Library Information System (ARLIS) is one of the modules of ARIS for library improvement and networking and has been developed under Information System Development Scheme (ISD). ARLIS envisages that the library services should be improved by means of network using computers and satellite communication technology so that the resources can be shared. Although this project has provided enough support to all SAUs and ICAR institutes for developing a network and a digital library accessible through out the campus and also Wide Area Network (WAN) if it is a multi campus institution. It has to be noted that the progress in this regard has been very slow, the State Agriculture Universities have not efficiently utilised the funds. A central monitoring team needs to be more active in this regard. The librarians should be empowered for automating and digitising the libraries and training the library professionals in fundamentals of information technology, automation, database creation and management.

NATIONAL LEVEL DOCUMENTATION CENTRE

It is disheartening to note that agriculture, being one of the largest sectors in India boosting the economy of the country, does not have a comprehensive Documentation Centre at National level. There is thus an urgent need for establishing a National Agriculture Documentation Centre similar to INSDOC now National Institute for Science Communication and Information Resources (NISCAIR) on scientific literature, DESIDOC on defence science literature, with regional centres, which would be the clearing house for Indian agriculture literature.

The centre would provide i) new technology, ii) training to staff engaged in library and information sciences, iii) promotes networking activity, iv) takes up project to help agriculture libraries in retrospective conversion and development of local database, v) provide access to several international online databases, vi) provide packaged agriculture scientific and technological information catering to the specific need of individuals, institutions and corporate bodies, vii) bring out scholarly publications like journals, Indian agriculture science abstracts, directory of agriculture scientific periodicals, etc., and viii) create national union catalogue of agriculture serials, Indian agriculture patent database etc.

The Documentation Centre can also be entrusted to develop a software package exclusively to meet the computerisation requirement of Agriculture libraries and Information Centres, in line with the software package developed by Information and Library Network (INLIBNET) of UGC and provide the same traditional universities. At present there is no such package available exclusively for agriculture libraries. The libraries in agriculture universities are either using CD/SIS / WINISIS or other commercial package available in the market.

LINKING LIBRARIES WITH AGRICULTURE CALL CENTRES

Call centres have been quite popular in the field of medicine and other areas. However, in agriculture call centre is a new concept introduced recently by the Government of India and is developing fast to provide quick information to the farmers which will enable them to dial a common toll free number to call centre with any query on
agriculture. For complicated problems they will be sent a response within 72 hours either through writing or a worker. Every university and agriculture college is likely to have a call centre for the benefit of the farmers. Agriculture libraries can play an important role in disseminating information indirectly to the farmers through call centres by creating a separate information unit in the library for providing information to call centres. For venturing in this field the agriculture libraries will first need to automate their activities, develop specialist bibliographic database on literature available on various crops /cropping system, diseases and their management and control, for example, a data base on potato varieties, diseases and pests affecting the crop will provide useful input to the call centres to answer the queries of farmers on potato related problems.

Networking of agriculture libraries state-wise would be an additional boon to the call centres for sharing information not available in their institutes library which can be shared from other universities.

**STANDING LIBRARY ADVISORY REVIEW COMMITTEE**

There is a need for a national level review committee to examine and suggest measures for improvement of agriculture libraries. In the past many committees were appointed to meet the challenges, viz. The Raridhawa Committee (1960); Indo American Agriculture Library Survey and Study team (1965) headed by Dr. Dorothy Parker (also known as Dorthy Parker Committee) Ramiah Committee (1969) and Edith Hess Committee (1997). The studies made by these committees created deep awareness among the library and administrators for better agriculture libraries. Most of the recommendations made by these committees have been since accepted by the ICAR. However, very few have been implemented till date. With the application of ICAR Model Act for Agriculture University and some recommendations of the Cummins Committee and Sulton Committee into Acts and Statues the Agriculture Universities went ahead of ICAR libraries in terms of pay scales under the UGC system with administrative and financial powers, however the pathos of ICAR institute libraries have been that most of the good recommendations of Indo American Agriculture library survey and study team were turned down by Ramiah Committee and the recommendation of Ramiah committee accepted by ICAR were never implemented [5] and so has been the case with the Edith Hess Committee in 1997. Therefore, making of committees without serious note for improvement is not going to have any results.

In order to see and press the authorities to implement the recommendations made by high level committees there is a strong need for the revival of the Standing Library Advisory Committee of the ICAR which consists of librarians of agriculture universities and ICAR institutes with Deputy Director General (DDG Education) as the Chair person.

It has to be noted here that the standing library advisory committee of the ICAR remained dormant for last 20 years. However, it was revived in 1995 after a couple of meetings and has again paralysed. There is a need for strong professional commitment by agriculture librarians to revive the standing advisory committee and meet at least once a year to review and discuss the problems and development of agriculture libraries in the country. Perhaps it is the lack of professional commitment that we have been unable to get the good recommendations made by the various high level committees, implemented by the authorities.

**PROFESSIONAL DEVELOPMENT OF LIS PROFESSIONALS**

Academic libraries in have undergone a radical change in their activities, presenting library professionals with new challenges and new roles in information management. In order to respond to the vast technological changes, the library professionals need to train themselves in application of information and communication technology. According to latest study only 35.96% of staff in agriculture libraries have computer literacy [6]. There is a strong need of training the staff in order to cope with the technological advancement taking place. Although Indian Council of Agriculture Research (ICAR) has been conducting trainings in
various disciplines of agriculture, however there has been very few trainings for LIS professionals exclusively in information science and computer application until recently with support from World Bank through National Agricultural Technology Project, (NATP) the Indian Council of Agriculture Research embarked upon training the manpower in libraries as a pre requisite to implement library automation and networking programme in Agriculture India.

A series of training programme were organised in 2003 at the Information and Library Network (INFLIBNET) Center, Ahmedabad, under the title ICAR-INFLIBNET training programmes for Agriculture Libraries on Networking and E-Resources Management.

**Continuing Education Programmes**

The LIS professionals in addition to performing their primary jobs are expected to take active responsibility for their professional development. They should be allowed to participate in continuing education programs like refresher courses, foundation courses, short programs, training etc. like the other scientists and teaching personnel. Budget provisions should be made for the Library Professionals to travel abroad or other developed countries to have first hand information in the highly developed agriculture information services and new technologies in these countries. ICAR in collaboration with some foreign mission in India should develop schemes to help in the programs and funding of such visits. Besides formal courses and training the LIS professionals should be encouraged to take up research, publication and participate in professional activities like conferences, workshops, seminar etc. for achievement of professional competitiveness.

**Project Works**

Many libraries particularly the IIT libraries have been actively involved in taking up projects on automation of libraries, CD-ROM networking etc. The IIT Library at Kharagpur developed its library automation programs, electronic library, CD-Net etc., under the projects sponsored by Ministry of Human Resource Development (MHRD) and All India Council of Technical Education (AICTE) etc., On similar lines agriculture libraries too may be encouraged to take up project on developing electronic libraries, CD networking etc. The Central Library of Kerala Agriculture University has done a remarkable work by developing multimedia compatible Library Automation System. Indian Council of Agriculture Research (ICAR) could play an important role in funding these projects as is being done for Agriculture projects under National Agriculture Technology Project.

**PROFESSIONAL STATUS OF AGRICULTURE LIBRARY PROFESSIONALS**

There has been a vast disparity in the status and pay packages of library and information science professionals working in the agriculture university libraries and the Institute libraries of Indian Council of Agriculture Research. The ICAR Institute libraries have been placed under the technical staff cadre and do not have the pay parity with the teachers and research officers working of these institutes. Also they do not enjoy adequate administrative and financial powers to develop their libraries. Whereas the Agriculture university librarians have the status of professor and scale under UGC system with financial and administrative powers. Assistant librarians and deputy librarians are at par with the assistant and the associate professors in universities. Better scale and pay parity would serve as a motivating factor to attract better professionals.

It is suggested that ICAR institutes should provide scientist scale and status to the library and information professionals too like the DST, BARC, ISRO etc. and faculty status in deemed universities like IARI, New Delhi, IVRI Izatnagar, etc. It is suggested that library and information sciences courses too may be included in Agriculture Scientist Recruitment Board like the computers sciences and other disciplines of Agriculture Sciences. This would provide scientist cadre to LIS professionals at the entry level and all other avenues provided to scientist under ICAR system.

**CONCLUSION**

Strong professional commitment is needed towards the improvement of agriculture libraries in the country. There is need to revive the Agriculture
Library Association, hold national level conferences and seminars to share professional ideas, and problems. There is also an urgent need to formulate an IT strategy to automate and bring all agriculture libraries into one network although progress has been made by Agriculture Research Information System (ARIS) of ICAR under the ARLIS module, the work is too slow. It is suggested that librarians and information officers of SAUs and ICAR Institutes be empowered to automate their libraries and submit progress report to the central monitoring team appointed by the ICAR.

In order to boost the computerised bibliographical development of databases in various disciplines of agriculture; provide training to LIS professionals in latest technologies; development of software packages for agriculture libraries; publication of LIS journals exclusively on agriculture libraries and information centres etc. there is an urgent need for a National Documentation Centre on Agriculture Sciences on pattern of DESIDOC and INSDOC. Besides in order to streamline the functioning of libraries in the country, the National Library Advisory Committee of Agriculture needs to be revived. The Advisory Committee can also play an important role in conducting/recommending continuing education programmes, training etc. in universities or ICAR institutes having good infrastructure for promoting human resource development in tune with the latest technologies.

REFERENCES
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