



AGRICULTURAL INFORMATION SYSTEMS IN DIGITAL AGE

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ABSTRACT :

Today, libraries and data focuses are assuming an extraordinary job in quality advancement in each organization. The agricultural libraries have served the country since the beginning of farming colleges and foundations. The greater part of the horticultural libraries have been a long ways behind in embracing the new innovations because of restricted assets being rancher cordial and absence of preparing to library staff etc3, There is requirement for the library experts in India to take a gander at Agriculture Library Resources Development in more extensive point of view to adapt to the changing job of library administrations and the need to receive most recent instruments and strategies of IT, library organizing and so on, to make easy to understand library and data administrations. The present examination endeavors to assess and look at the present status of Library and Information benefits in agrarian Libraries in India and propose measures for development to address the difficulties of the present advancements lastly plan an appropriate Networking Model of horticultural Library and data framework in the nation.



KEYWORDS : Agricultural Information System:ICT: agricultural information dissemination: Indian agricultural information systems; ARIS:ICAR

1. INTRODUCTION :

Rural Science presently, isn't restricted to cultivating alone. The subject is widened to incorporate partnered sciences, for example, Animal Husbandry, Veterinary Science, Sericulture, Fisheries Science, Forest Science and Horticulture. Further the Agricultural Science is multidisciplinary in nature as it incorporates certain applied sciences, for example, Entomology, Botany, Environmental Science, Chemistry, Chemical Building, Soil Science, Genetics and Technology. Thus the writing of rural science spread over different types of these subjects.

Agrarian libraries have a fundamental task to carry out giving important and opportune data sources and administrations to the examination researchers, educators, subject authorities, understudies, ranchers, agribusiness associations and other people who are effectively occupied with meeting the proceeding with challenge of individuals for nourishment and craving.

2. DEFINITION AND MODEL OF AGRICULTURAL INFORMATION SYSTEMS

An agricultural information system can be defined as a system, in which agricultural information is generated, transformed, transferred, consolidated, received and fed back in such a manner that these processes function synergistically to underpin knowledge utilization by agricultural producers (Roling, 1988).

Accordingly, an agricultural information system consists of components (subsystems), information related processes (generation, transformation, storage, retrieval, integration, diffusion and utilization), system mechanisms (interfaces and networks) and system operations (control and management). Agricultural information is considered as an essential input to agricultural education, research and development and extension activities.

Different kinds of information are required by different kinds of users for different purposes. The potential users of agricultural information include government decision-makers, policy-makers, planners, researchers, teachers and students, program managers, field workers and farmers (Zaman, 2002). Figure 1 gives an illustration of the flow of agricultural information.

3. THE ICT REVOLUTION AND ACCESS TO AGRICULTURAL INFORMATION

There is need to bring in innovation to enhance use of mobile technology for farming as is what happens to banking through e-banking services. There are a number of programmes aimed at empowering disadvantaged rural farmers through mobile technology, tele centres and community multimedia centres. Through mobile phones, This has helped to provide convenient services to students and researchers involved in agriculture and other academic pursuits. Mobile technologies also facilitate access to agricultural information thus replacing traditional agricultural marketing based on radio and message boards according to Aker and Mbiti. Through mobile technology, ICT's afford a platform where farmers can exchange agricultural data and information directly from source to destination It should be noted that access to mobile technology enhances participation in social media.

4. AGRICULTURAL RESEARCH INFORMATION SYSTEM (ARIS) OF ICAR

It is essential that scientists in the Indian National Agricultural Research System (NARS) should have a quick access to and free exchange of information at local, national and international levels. NARS through its vast network of 30,000 scientists working at ICAR's 49 Central Institutes, 10 Project Directorates (PDs), 27 National Research Centres (NRCs), 86 All India Coordinated Research Projects (AICRPs), 261 Krishi Vigyan Kendras (KVKs), 29 State Agricultural Universities (SAUs), 120 Zonal Research Stations (ZRS), one Central Agricultural University (CAU), numerous (1000 plus) regional stations and other research centers has been catering to the agricultural research and information needs of the farming community.

The ICAR during eight Five Year Plan embarked upon a project called Agricultural Research Information System (ARIS) to bring the power of information technology to the NARS. Its implementation started with the financial aid from World Bank under National Agricultural Research Project (NARP). 3. The proposed Agricultural Research Information System Network Keeping in view the total agricultural and rural development system, constraints and limitations, and information requirements at different levels, following objectives are proposed in formulating a comprehensive information system² (Fig 2.) for collective agricultural and rural development: - Improved research and planning - Checking the duplication of research and extension projects and programming - Dissemination of research findings 2 Report on strategy for development of an agricultural research information system (ARIS) for the Indian Council of Agricultural Research in cooperation with ISNAR, October 1994. Appropriate Information Technology Improved Information Management Stronger Research Planning, Monitoring and Evaluation Better Research More benefits to Farmers 228 - Improvement of feedback mechanism - Better coordination and linkage between and among different rural development agencies and banking institutions like Department of Agriculture (DA), Department of Rural Development (DRD), NABARD, lead banks, NGOs, and private sector - Evolving effective information sharing mechanisms - Electronic interface among scientists, development agents and farmers.

The project "Agricultural Research Information System (ARIS)" is being implemented to bring information management culture to National Agricultural Research System (NARS) so that agricultural scientist can carry out research more effectively by having systematic access to research information available in India as well as in other countries; for better project management of agricultural research; and

for modernization of the office tools. The basic infrastructure required for linking all ICAR institutes has already been created. The E-mail connectivity has been established to 72 out of 86 ICAR institutes by linking through dial-up including six institutes with VSAT connectivity using NICNET and ERNET services. 4. Agricultural Research Information System Network

5. AGRICULTURAL INFORMATION SYSTEMS: CHALLENGES AND OPPORTUNITIES

Durrani (2009:21) bemoans that the agricultural information systems that exist in third world countries have evolved over many years in the course of social struggles. The author further notes that globalization has not helped in any way because third world agriculture and Agricultural information systems are increasingly being seen by transnational companies as fertile grounds for plunder through the commoditization of information. However, there is need to adapt to new technology and make use of it to benefit local communities. Chin's (2010:1-3) advise to medical practitioners is equally applicable to Information Managers and users of information, because incorporating social media in agricultural information services is an innovation, "A knee –jerk reaction to reject any new technology or platform that appears to threaten professionalism risks rendering practitioners irrelevant." Chin (2010:1-3) Bafana (2011) reechoes similar sentiments by stating that agricultural extension services in Africa also have connotations of colonialism reflected by their exclusive, elitist and anachronistic nature.

eAgriculture is an issue that is on the developmental agenda of government and also nongovernmental organisations, for example, Practical Action in its endeavor to provide access to ICT 's to urban and rural farmers, is experimenting with podcasting to record indigenous 15 knowledge relating to veterinary health, immunization, dehorning, castrating bullocks or controlling ticks on cattle. Systems Approach and Agricultural Information, Horticultural sericulture, forestry food and technology and so on

6. PROBLEMS OF AGRICULTURAL INFORMATION DISSEMINATION

There are some limiting factors and apparent constraints in agricultural information dissemination in many developing countries. One of the obvious constraints in the use of the broadcasting media in many cases in developing countries is poor reception quality and the area covered. The messages carried are not tailored to the information needs of rural populations. Even when the information is relevant, it is seldom aired at the proper time and so does not get to the targeted audience. Another major constraint is the use of print media: leaflets and newsletters as message carriers are of limited use in reaching illiterate farmers.

Technical language used in communicating information is incomprehensible to the farmers. Another major constraint to agricultural information dissemination is the inadequacy of existing extension programs2 . Some of these programs are conceived without well thought out plans and are prepared in a hurry without the farmers whose attitudes are to be changed making any input. Such agricultural information packages can neither sustain the farmers' interest nor effect the desired attitudinal 10 change. Farmers' interests are disregarded even more as most of the agricultural innovations are written and broadcast in English instead of the local language (FAO, 2005).

7. FUTURE OF INDIAN AGRICULTURAL LIBRARIES

In spite of some dark spots in the history of past 50 years of Indian agricultural libraries for different reasons, now they have sunny days and a bright future. The present trends of economic globalization have made agricultural globalization imminent and the second Green Revolution will be an event of near future. The agricultural libraries and information centres cannot be ignored and they will have to play a vital role in the service of the nation. It is emphasized again that ICAR, New Delhi planned to develop a nation-wide agricultural information network connecting all libraries of State Agricultural Universities and ICAR research institutes and it is being developed to all states of India. The ARIS cells will have connectivity with libraries also for bibliographic information. Thus Indian agricultural libraries with electronic platform will join information super highway –

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