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*Theme : Forging partnerships between libraries and extension services
for improved access to agricultural information*

**Forging Partnerships between Libraries and Extension
Services for Improved Access to Agriculture
Information: A case study in Sri Lanka.**

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Abstract:

The paper describes the experiences of agricultural libraries in Sri Lanka in building up partnership with the extension services to improve access to information by farmers. The paper emphasizes the need for capacity building of small farmers. Presents an overview of agriculture extension services carried out by the Department of Agriculture. The Department is moving towards electronic services such as ‘cyber extension’ which is at its infancy stage and ‘toll-free telephone services’ for farmers. The shortcomings of the extension services are also outlined. The role of AGRINET (Agriculture Information Network) of Sri Lanka in improving access to information is presented with an outline of on-going programmes. The paper describes as to how AGRINET libraries initiated a joint extension programme for farmers at the Field Crops Research Institute of the DOA in the dry zone agriculture.

Introduction

Feeding the ever- increasing population of the world is a global issue, which is of great concern of heads of states and government policy makers. It is of top priority area on the agendas of international organizations such as FAO, (Food and Agriculture Organization) IFPRI (International Food Policy Research Institute) etc. There is a growing demand for improving agricultural production to meet the challenges of food security, especially in the developing countries where the gross national earnings of these countries are low, and they cannot afford for

food imports. On the other hand arable land for cultivation is also not possible. Hence agricultural development by means of introducing new technologies, inputs and improved farming practices are becoming increasingly important for the sustainability of agriculture as a promising and economical venture in the long run. As Pardey and Beintema (2001) point out the research funding for agriculture has substantially increased during the past thirty years, but the development is different in 1990s compared with the earlier years.

Agriculture Extension

Agriculture research is of little use if it cannot be adopted by the end users. Therefore it is essential that agriculture research to be directed towards farmers and their problems (Sivayoganathan and Wirasinghe 1992). Transfer of knowledge generated through research with the aim of acquiring useful information and changing attitudes and practices is meant by agriculture extension. As Sivayoganathan and Wirasinghe (1992) describe agriculture extension and research is a two way process. The research findings need to be transferred to farmers to solve their problems through extension services while farmer's problems and concerns need to be fed to the researchers. This linkage has to be fundamental, but in reality the practice is problematic.

Background

Sri Lanka is predominantly known as an agricultural country. The contribution of agriculture to GNP (Gross National Product) (19%) is declining in the past decade compared to the previous decade (Central Bank 2004), but agriculture is the main livelihood of rural people. Seventy two percent (72%) of the population in Sri Lanka live in rural areas, and 45% of them are engaged in agriculture at subsistence level (Dharmawardena 2001).

The agriculture sector of Sri Lanka is distinctly divided into two as plantation and non-plantation. The plantation sector covers cash crops predominantly tea rubber and coconut and holds a considerable share (37%) of cultivated lands in the country (National Policy Framework 1995). The non-plantation sector comprises crops grown mainly for domestic consumption, by small farmers in small pieces of land majority with less than one ha (hectare) of land. Rice is the major crop grown by farmers in this sector among a variety of other field crops such as maize, cowpea, mungbean, chillie, onion and vegetables.

Agriculture research and extension services are primarily carried out by state funded public research institutes which are listed below.

- Dept. of Agriculture
- Dept. of Export Agriculture
- Forest Department
- Tea Research Institute
- Rubber Research Institute
- Coconut Research Institute
- Hector Kobbekaduwa Agrarian Research and Training Institute
- Sugarcane Research Institute
- Veterinary Research Institute
- Institute of Post Harvest Technology
- National Aquatic Resources Research and Development Agency

- Sri Lanka Council for Agriculture Research Policy
- Agriculture Faculties of Universities

Plantation Sector

The extension services of the plantation sector are substantially carried out by the three key crop research institutes namely Tea Research, Rubber Research and Coconut Research Institutes.

Non-plantation Sector

The non-plantation sector where majority of farmers have their very basic level of education and have resorted to farming by their inheritances, need more capacity building through advisory and extension services.

Present Status of Agricultural Extension

Agriculture extension services for small farmers who cover the food crop sector for the domestic market is predominantly carried out by the Department of Agriculture (DOA).

The Department of Agriculture is the largest agriculture research institute in Sri Lanka with the largest number (43%) of scientists in the National Agricultural Research System (NARS) (INFORM 2002).

The Department of Agriculture carries out extension work covering two broad segments such as inter-provincial and provincial areas. The DOA is directly responsible for carrying out extension services at national level, for the inter-provincial areas where farmers engage in cultivation by making use of irrigation schemes, in the districts of Anuradhapure, Polonnaruwa, Amapara, Hasalaka, Monaragala and Hambantota.

At provincial level, the Dept. of Agriculture is responsible for providing expertise and guidance to carry out agriculture development activities, in the areas under the purview of the Provincial Directorates of Agriculture. The Provincial Departments of Agriculture were established in 1989 with the decentralization of administrative responsibilities in the provinces of Sri Lanka. Sri Lanka is geographically divided into eight provinces and twenty five districts, and the village is the smallest entity of the administrative structure.

Agriculture extension work in the eight provinces are coordinated by the Provincial Directors of Agriculture, the major shortfall in the provinces is the shortage of trained field level extension agents for extension work. A single Agriculture Instructor (AI) has to cover about 3000 farmers in the provinces which hinder the effectiveness of the service.

The Department of Agriculture coordinates extension services using two strategies.

- Updating and upgrading knowledge of extension agents.
- Dissemination of information to farmers directly through mass media

Updating and Upgrading Knowledge of Extension Agents.

In service training, pre-seasonal training, supply of extension literature, seminars/workshops and extension dialogues are the main strategies carried out by the DOA for extension agents.

Dissemination of Information to Farmers

Making scheduled visits to farmer groups, using mass media such as newspaper supplements, radio and TV programmes, video programmes, posters, printed materials, are the primary channels of information for farmers adopted by the Dept. of Agriculture. In addition to these services the three major research institutes in the Dept. of Agriculture (Rice Research, Field Crops Research and Horticulture Research) provide extension services to farmers, by means of field demonstrations (yaya), field clinics etc.

Cyber Extension

The Dept. of Agriculture is presently moving towards introducing electronic media for dissemination of information to extension agents as well as farmers. 'Cyber extension' is one such initiative where farmers could make use of e-mail and the Internet facilities to access information and communicate, particularly with the Dept of Agriculture to get advice and assistance to solve their farming problems.

The Audio-Visual Centre, of the DOA has produced a variety of interactive CD-ROMS mainly crop based, and web-sites for the use of extension agents and farmers. But the 'cyber extension' service is in it's infancy stage of development, and the use of this service is low due to lack of infrastructure, mainly the computer connectivity, ICT skills of extension agents, and language barriers of farmers.

Toll-free Telephone Service

The Audio- visual Centre of the DOA has initiated very recently (February 2006) a toll -free telephone consultancy service for the farmers to directly contact agricultural researchers for obtaining advice to their problems. This service is becoming popular among farmers but more publicity has to be given to reap the full benefits of it.

Shortcomings of the Extension System

Although the Department of Agriculture is developing their full potential to carry out various types of extension work, there are so many short falls, deficiencies and gaps in the system which hinder an effective macro level extension service in the country for increasing productivity, farm income and adding quality of life of farmers. Some important officials who are directly involved with extension work, whom were interviewed for the purpose of this paper, totally agreed upon the fact that there are large disparities in the extension work carried out in different areas and the weaknesses of the research-extension linkage of the country. According to Samarasinghe (2006), some of the major limitations for an effective extension service are noted below.

- Inadequate extension at field level
- Inadequate training for extension agents
- Limited finances
- Poor information flow from research to extension
- Low access for new knowledge
- Lack of coordination among DOA and Provincial Departments of Agriculture on utilizing mass media.

Libraries as Information Agents

The agriculture libraries in Sri Lanka holds a wealth of information resources, including masses of information generated by research carried out at various parts of the country focusing on local agricultural problems. The agricultural libraries are meant for agricultural researchers, academics, extension personnel at certain level, but it is common and an unfortunate situation in the world, that most of the libraries are not accessible for field level extension personnel and the farmers. Focusing on the agriculture extension services in the country, the agriculture libraries have an important role to play by joining with the extension services for making useful information available to farmers, in view of increasing their capacities.

AGRINET (Agricultural Information Network of Sri Lanka)

The AGRINET, a joint library network in Sri Lanka which is specifically geared to improve access to information by agricultural scientists has started building up linkages with the agriculture extension services in the country in view of strengthening the extension services with available information. The AGRINET was initiated in 1982, with the membership of about 30 participating libraries currently functions as a thrust area of the Sri Lanka Council for Agriculture Research Policy (CARP). The network activities are coordinated by an advisory committee consisting of eight (8) librarians from the AGRINET member libraries appointed by the CARP. The AGRINET presently carries out the following programmes at national level regularly.

Selective Dissemination of Content Page Service (SDCP Service)

The main objective of forming an agriculture library network was to share the information resources available in the country particularly sharing of scientific journal holdings, which are costly and unaffordable for duplication. Under the SDCP programme journal content pages are directed to the scientists in different institutes and they can request articles from the library that holds the journal. This is the oldest activity started at initial days, but it is still very popular and the journal content pages are the only current information source regularly available for researchers stationed in remote areas under extreme facilities for access to information.

Bibliographic Utilities

AGRINET produces the 'National Agricultural Bibliography' and subject bibliographies in print and in electronic media collating information fed by member libraries in the Network using a common bibliographic format developed on CDS/ISIS software. It will be available on the Internet in the near future.

User Seminars/Workshops for Scientists

AGRINET regularly conducts seminars/workshops for agricultural scientists to raise awareness about scientific information sources available in the country and to develop their skills in accessing and retrieval of information.

Access to information by using 'PERI' (Programme for the Enhancement of Research Information) services of the INASP (International Network for the Availability of Scientific Publications) available for scientists in Sri Lanka has been a regular feature of the workshops

for the past few years. These seminars are held in different research institutes located in different parts of the country with funding from the CARP.

Skill Development of AGRINET Librarians

AgriNET conducts training programmes for member librarians to develop skills in information management.

Linking AGRINET with Extension Services in the country

The AGRINET for the first time has laid a foundation to link with the extension services in the country for improving access to information by farming communities.

At the first meeting held for AGRINET librarians to plan out activities for the current year (2006), a proposal for establishing linkages with the extension services was discussed and recommended by the member librarians to include it as a regular activity.

At present the AGRINET has planned to establish linkages with the extension services under two areas.

1. Strengthening an extension programme carried out by the Dept. of Agriculture at a particular location, by provision of up to date information available in member libraries in print or electronic media, on the subject or the commodity that is on the agenda for enlightening of farmers. The librarians are expected to back up the programme with relevant information on posters for display and with leaflets, handouts etc. for distribution. Gradually the librarians are expected to promote the use of ICT to access useful information by farmers
2. Linking AGRINET libraries with the newly established toll-free telephone service at the Audio Visual Centre of the Dept. of Agriculture.

Farmers make use of this service to get instant solutions to their farming problems.

A panel of agricultural personnel with field experiences are available at the centre to contact farmers over the phone. Information packages including electronic media are available at the fingertips of the advisory panel.

When ever information is required by a farmer and if that particular piece of information is not available at the tele -centre, the mechanism is to contact the nearest AGRINET library for information. AGRINET libraries should be ready to provide the information electronically (scanned documents) or by fax or phone. All farmers' requests are recorded at the centre.

Three AGRINET libraries (DOA Library, Agriculture Library, University of Peradeniya and the Veterinary Research Library) are located with close proximity to the tele- centre which makes the link feasible.

How AGRINET linked-up with Extension Activities

The Field Crops Research Institute of the Dept. of Agriculture situated in the dry zone agriculture area at Mahalluppalama, in the North Central Province conducts regular programmes with farmers once a month. AGRINET librarians joined a farmer programme for the first time in the month of March 2006, with the assistance and cooperation of the research officer who coordinates the extension programmes at the institution.

Making contacts for the Programme

The librarian of the Dept. of Agriculture made the contacts with relevant officials at the Field Crops Research Institute for joining librarians for the extension programme.

Planning stage

Three AGRINET librarians who are in one area (librarians of DOA, Agric. Library, University of Peradeniya and Veterinary Research Institute) planned out the programme. Since the topics on the agenda of the programme for that day were 'Integrated pest management' (IPM) and 'Safe use of pesticides' the librarians decided to produce relevant posters for display, leaf-lets for distribution and a presentation by a librarian on how to access useful and reliable information.

Preparation of Information Materials

Posters with colourful pictures and photographs in the main spoken language (Sinhala) of that area were prepared with the help of technical support services of the Dept. of Agriculture. Some of the colourful posters on IPM were available in libraries, specially the posters which had been produced by IRRI (International Rice Research Institute) for the purpose of information dissemination through graphical media. Important messages on posters were taken into a leaf-let for distribution with due acknowledgement to the original producers.

A special leaf-let was produced for distribution, by listing out all sources, including personnel, mass media, electronic media, and libraries for accessing and obtaining useful information by farmers. The librarians made a special effort to include all radio and TV programmes giving the days and air times accurately. In addition, book-lets and leaf-lets produced by the DOA and Veterinary Research Institute for free distribution to farmers were included in the package prepared by librarians for farmers.

Announcement for Farmers

This was done by a research officer who coordinates extension work at the Field Crops Research Institute through their formal channels of contact with the help of field level extension agents.

Conducting the Programme

The programme was held at the auditorium of the Field Crops Research Institute. About twenty five (25) farmers were invited, but only twelve (12) were present as it was the harvesting time, and also the day was close towards a provincial council election. A total of about twenty participants including the field level extension agents participated for the programme.

According to the agenda the first two presentations were made by two research officers on 'Integrated pest management of aquatic weeds' and the 'Safe use of pesticides'. The third presentation was made by a librarian (Agriculture Library, University of Peradeniya) describing about the importance of getting accurate and reliable information for decision making of farmers, in their agrarian problems and how to access to useful information available to them.

It was a rewarding experience for the librarians to come in contact with a very enthusiastic group of farmers who will spread the message to others and help to build up the credibility of librarians in information dissemination.

Feedback

At the end of the programme a written feed back was collected from the farmer participants. The findings can be outlined as follows

- The farmers for the first time have come to know that libraries are places for obtaining information. It is a very disturbing issue, because libraries in Sri Lanka especially the public libraries have not reached the general masses effectively for their information requirements, although there is so much potential for catering to the needs of masses who are not regular library users.
- All farmers (100%) have commented that the programme was very useful for their activities.
- All farmer participants (100%) requested to have similar programmes in the future in their farm yards for more participation of farmers.

Experiences gained out of the Programme

- Building up strong links with agriculture extension services is vital and a challenge for librarians to develop joint programmes and to work together with the officials. Librarians have to maintain good relationships and make professional lobbying with the extension personnel attached to agricultural institutions, who have programmes with farmers in order to include information programmes by librarians on to their agendas. The librarians have to prove that they will only be a source of support for the extension services as they are not subject specialists.
- Once a link is established with an institution, the librarians need to have constant contacts with the officials to actively participate with their regular extension agendas.
- Generally extension personnel are responsible for delivering packages of information on subject matter the librarians have an avenue and potential to develop programmes for raising awareness about how to access to information at village level with special reference to ICT (Information and Communication Technology). Gradually librarians could assist extension agents for skill developments of farmers in using electronic media.
- It is essential that agriculture librarians to be aware of the types of extension services carried out by different agricultural institutions, and to which programme that they will be best fit into.
- New skills are required by the librarians to design and produce leaf-lets and posters by repackaging of information.
- Language skills in making verbal presentations, producing print materials by using localized words /terms and translation skills are essential for librarians for effective delivery of a service.
- Librarians working in networks, groups or consortia facilitates the partnership of agriculture extension services and libraries.
- Funding has to be an important item for consideration.

Future Joint Extension Programme of AGRINET

The second programme is planned for the month of May at the same institution (Field Crops Research Institute of the DOA). The subject on the agenda is 'Weed Control' as it is going to be the onset of cultivation of crops in the dry zone. The AGRINET librarians will demonstrate how to access the Internet for information by selecting a farmer focused web site such as 'Goviya' (The Farmer- A Sri Lankan website) and a web site relevant to the subject on the agenda.

Conclusion

The experience the AGRINET librarians gained through a joint extension programme conducted for farmers in the dry zone farming area has provided many avenues and opportunities for the librarians to play a significant role in improving access to information, with the broad objective of increasing agricultural productivity and adding quality to the lives of farmers. Further the link established, is seen as a positive and necessary development in recognition of librarians as stakeholders of information dissemination for the grass-root levels.

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