Training Needs of Agricultural Extension Agents in Myanmar

Khin Mar Cho, Ph.D. Student
Institute of Rural Sociology and Extension
Justus-Liebig-University Giessen, Senckenbergstr.3, 35390
Giessen, Germany
khinmarcho@hotmail.com

Abstract
This paper examines the training needs of extension agents in Myanmar agriculture, specifically, the practice of different extension approaches, activities, methods and principal problems of extension agents in their fieldwork. The purposes of this paper are 1) investigating the training needs for extension agents to perform their work effectively, 2) suggesting the suitable extension method for the present agricultural extension service in Myanmar, and 3) identifying the primary functions and major problems of extension agents in Myanmar. None of Yezin Agricultural University and all State Agricultural Institutes in Myanmar had introduced courses on Participatory Extension Approach (PEA), Participatory research, Participatory Technology Development so far, although different aspects of agricultural extension education have been included in the curriculum recently. These institutions have a vital role to play in the development of knowledge concerning PEA and other issues of sustainable agriculture. Therefore, these institutions should work in collaboration with Myanmar Agriculture Service, Agricultural Extension Department and research centres introduce courses concerning participatory extension in their curricula and conduct research activities. Agricultural trainings for the extension agents held in Myanmar were mostly crop production oriented trainings and agents have little knowledge and experience in extension education. According to the centralized administration, the extension workers have being practising mostly the training and visit system in a top-down manner. Due to the non-involvement of local people in the extension program planning, implementation, and decision-making process, the extension service developed inefficiently. Therefore, the extension workers, researchers, and local farmers should cooperate in the extension work, especially in the planning, implementation, and evaluation of the extension program to develop the extension service in Myanmar Agriculture. The local farmers should be involved in the decision-making process because they are really facing the problems in their field. All extension workers and subject matter specialists are now interested in implementing PEA in the future in the agricultural extension service in Myanmar.
Introduction

Myanmar is an agriculturally based country and the agriculture sector is the backbone of its economy. Agriculture sector contributes 34% of GDP, 23% of total export earnings, and employs 63% of the labour force. The agriculture sector remains basic in the national economy of Myanmar. About 75% of the total population reside in rural areas and are principally engaged in the agriculture, livestock, and fishery sectors for their livelihood. And the progressive achievements in the agriculture sector covering production, services and trade, accrue to national development. The Ministry of Agriculture and Irrigation (MOAI) is well set up with 14 institutions so as to successfully and systematically develop the sector. Myanmar Agriculture Service (MAS) is one of institutions of MOAI, which composed of 9 divisions. Agricultural Extension Division (AED) absorbs a larger portion of total strength of MAS.

The agricultural extension service in Myanmar was started in 1927 by the department of agriculture. It has two main functions, to transfer appropriate and adaptable agricultural technologies to farmers and to collect information on field problems encountered by farmers and find solution for these problems. The MAS follows the national administration format, therefore, the Agricultural Extension Division (AED) plans the extension programs from divisional to township, and township to village tract levels.

In the process of developing agriculture sector, conducting training and offering educational program of international standard for the development of human resources are crucial. The number of students annually graduated from the different educational institutions may be seen as follows:
- 300 students from Yezin University of Agriculture (YUA) and they hold B.Agr.Sc. Degree
- 1500 students from 7 State Agricultural Institutes (SAIs) and they hold Diploma in Agriculture

Agricultural University and all agricultural Institutes teaches agricultural extension subject just only for the final year students. Many of the students who are graduated from University and SAIs are becoming extension workers of MAS.

In addition to the different types of in service trainings in the area of crop production technology, weed and pest control, post- harvest technology etc. have been conducted at the Central Agricultural Research and Development and Training Centre (CARTC) and Vegetables and Fruits Research Development Centre (VFRDC) and Central Agricultural Research Institute (CARI). The irrigation-training centre and agricultural mechanisation-training centre are offering regular training of their own related subject matters. The level of technical know-how of each area is also being up-graded through overseas training. The extension workers who received those training are doing utmost to diffuse the technologies among farmers by means of demonstrations, field days and field visit.

Problem Statement

In 1976, World Bank project in Ayeyarwady division (lower Myanmar area) introduced Training and Visit system (T&V) and it was successful by providing subject matter specialists and mobile facilities. At the end of project time this activity began slow down, because of the less of resource persons and mobile facilities. From 1978-79 to 1986-87, Selected Concentrative Strategy (SCS) was implemented in special high yielding rice production program. The country’s economic system was adopted market oriented economic
system in 1988. After 1988, the country’s pulses sown area reached to 3 million hectares and export volume increased up to 0.8 million Mt.

Before 1992-93, the domestic consumption and export of rice mainly relied on only monsoon rice production. In 1992-93, summer rice production was introduced by providing irrigation facilities and nowadays, the summer rice sown area reached about 1.5 million hectares. However, the country’s rice export didn’t significantly increased except the year of 1994-95 (1.63 million Mt) due to the more consumption of increasing population, low productivity and low quality. For extension education, radio and television are used for seasonal crops and distribution of weekly agriculture newsletter. The present extension approach is based on SCS and T&V system. The concepts of these two approaches are almost nearly the same but SCS has being used especially for high yielding rice production areas.

Although there are agricultural trainings at University and Institutes and in service trainings for extension agents at CARTC, VFRDC, and respective departments and enterprises of the ministry, the training concerning extension education was scarce. Therefore, the lack of skilled and well-trained personnel in agricultural extension is the serious problem of agricultural extension service in Myanmar. Special teams, including subject matter specialists (SMS), go to the districts and townships and then presented a lecture for each subject, discussion with farmers and extension agents during the crop production period. However, they have done this on a small scale due to the inadequate amount of SMS and extension agents compared with the larger amount of farmers and cultivated areas and poor infrastructure. Nowadays, most of the extension agents and subject matter specialists in Myanmar are interested in implementing a participatory extension approach instead of SCS and T&V system in their extension programs.

**Objectives of the paper**

The overall objective of this paper is to enable to improve the Myanmar agriculture sector by implementing new Participatory Extension Approach in agricultural extension service. Based on the problems mentioned in the above section concerning agricultural extension service in Myanmar, the study has following specific objectives.

1. to investigate the training needs for extension agents in Myanmar agriculture to perform their work effectively
2. to determine the suitable extension method for the present agricultural extension service in Myanmar
3. to identify the primary functions and major problems of extension agents in Myanmar

**Theoretical framework**

*The participatory approach emerges*

In the late 1980s, it was realised that most technologies developed by researchers alone were inappropriate for smallholder farmers (AGRITEX, 1998). Farmer participatory research became the approach to adapt technologies to farmers’ conditions and by the 1990s to develop technologies together with farmers. Farmers were now seen as partners in research and extension, and the key players in the innovation process. This led to an understanding that the main key to agricultural development is to enhance farmers’ capacities to develop and diffuse new technologies and techniques themselves from farmer to farmer (see Figure).
The key elements described here contrast with the basic principles underlying the technology-transfer model. Shifting the focus from teaching to facilitating, from hierarchical, top-down to participatory bottom-up approaches, from centralised to decentralised decision-making will put institutions under pressure for change as well. Thus governmental and non-governmental organisations are important actors in the learning process (AGRITEX, 1998). The following Table provides a summary of some main differences between the two approaches:
### Table: Comparison of “Transfer of Technology” and “Participatory Extension”

<table>
<thead>
<tr>
<th></th>
<th>Transfer of Technology</th>
<th>Participatory Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main objective</td>
<td>transfer of technology</td>
<td>empower farmers</td>
</tr>
<tr>
<td>Analysis of needs &amp;</td>
<td>outsiders</td>
<td>farmers facilitated by</td>
</tr>
<tr>
<td>priorities</td>
<td></td>
<td>outsiders</td>
</tr>
<tr>
<td>Transferred by</td>
<td>“commandments”</td>
<td>principles</td>
</tr>
<tr>
<td>outsiders to farmers</td>
<td>messages</td>
<td>methods</td>
</tr>
<tr>
<td></td>
<td>package of practices</td>
<td>basket of choices</td>
</tr>
<tr>
<td>The “menu”</td>
<td>fixed</td>
<td>according to choice</td>
</tr>
<tr>
<td>Farmers’ behaviour</td>
<td>hear messages</td>
<td>use methods</td>
</tr>
<tr>
<td></td>
<td>act on commandments</td>
<td>apply principles</td>
</tr>
<tr>
<td></td>
<td>adopt, adapt or reject</td>
<td>choose from basket &amp;</td>
</tr>
<tr>
<td></td>
<td>package</td>
<td>experiment</td>
</tr>
<tr>
<td>Outsiders desired</td>
<td>widespread adoption of</td>
<td>wider choices for</td>
</tr>
<tr>
<td>outcomes emphasis</td>
<td>package</td>
<td>farmers enhanced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>adaptability</td>
</tr>
<tr>
<td>Main mode of</td>
<td>extension worker to</td>
<td>farmer to farmer</td>
</tr>
<tr>
<td>Roles of extension</td>
<td>teacher</td>
<td>facilitator</td>
</tr>
<tr>
<td>agent</td>
<td>trainer</td>
<td>searcher for and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>provider of choice</td>
</tr>
</tbody>
</table>


### Methods and Data Sources

This paper is based on field research conducted in January to April 2001. The field survey was done in seven areas, Ayeyarwady, Yangon, Bago, Magway, Mandalay, Sagaing Divisions and southern Shan State of Myanmar. These areas are agro-ecologically different and agriculture production was being developing. To conduct the study, quantitative and qualitative research methodologies were applied. There are two instruments for the field study, distribution of questionnaire to 70 extension agents and personal interviews with 60 extension agents from these selected areas. This paper is part of the author’s Ph.D. thesis.

For the questionnaire, the author emphasised the training needs of extension agents in six general areas namely, (1) agricultural extension philosophy, organisation and administration, (2) sociological factors, (3) educational process and human development, (4) program planning, (5) communication in extension and (6) research methods and evaluation of extension programs. The author got the idea for these training areas from the Ph.D. dissertation of Ochapa Chiko Onazi (1973).

For the personal interview, the author focused on the understanding and knowledge of extension agents concerning existing extension approaches and their attitude towards change new participatory extension approach in Myanmar agriculture and the further training needs of extension agents. Furthermore, the author asked the primary functions of extension agents and their main problems in their fieldwork through interview as well as questionnaire.
Results and Conclusion

Among the 130 extension agents who were interviewed and questioned, 70% are educated from agricultural University and another 30% hold Diploma in Agriculture from SAIs. Most of the respondents have more than 10 years field experience in agricultural extension and only 15% of the total respondents have 4 to 10 years of experience in extension.

The responses of extension agents on their primary responsibilities expressed that 16.6% of total work for the special crop production programs, 15.9% for the crop demonstration programs, 14.6% for writing reports and records, 14.2% for the distributing fertilizers and seeds to farmers, 12.4% for the rural community development programs, 11.3% for the collecting research data, 10.4% for the assisting farmers with marketing of farm products, 2.2% for the pure seed production and multiplication programs and 1.9% for the assisting farmers’ credit. All extension agents have done more farm and home visits than group meeting, field demonstration, and conducting training course for farmers.

The most important problems of extension agents in their fieldwork are concerned with “inadequate knowledge in agricultural extension”, “lack of proper extension program for the needs of local community”, “poor transport facilities”, “and lack of suitable market and price insurance for farm products”. These four problems were rated considerably higher than other problems. These are followed by “lack of farmers’ finance”, “no crop damage insurance for farmers”, “inadequate extension staff”, “no cooperation of local people in program implementation”, “assignment of non extension activities”, “illiteracy of farmers”, “reluctance of farmers to accept new practices”, and “too many farmers to advice” orderly.

Responses from all extension agents, who were interviewed expressed that they have participated 60.96% of total duration of their training 3627 days in the subject area of crop production, 11.19% in crop protection, 5.87% in agricultural economics, 3.72% in agricultural extension and 18.25% in soil and water management during the year 1995-2000. The agents participated 955 days in abroad trainings and 2732 days in domestic trainings. The results indicated that agents have more experience and knowledge in the area of different crop production technology than in agricultural extension and agricultural economics.

Responses of extension agents who were interviewed on their needs of further training in different areas are analysed and presented in the following table. This table shows that the training about extension education is the most immediate need for the extension agents in Myanmar. All the respondents placed high emphasis on trainings related to major crops production technology, post-harvest technology, and market information for these products. They expressed little need in training about plant protection and farm mechanisation.
### Table: Responses of extension agents on their needs of further trainings

<table>
<thead>
<tr>
<th>Areas of Training</th>
<th>Rank order</th>
<th>Mean Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension education</td>
<td>1</td>
<td>3.80</td>
</tr>
<tr>
<td>Rice production technology</td>
<td>2</td>
<td>3.77</td>
</tr>
<tr>
<td>Market information service</td>
<td>3</td>
<td>3.65</td>
</tr>
<tr>
<td>Pure seed production technology</td>
<td>4</td>
<td>3.60</td>
</tr>
<tr>
<td>Post-harvest handling and storage</td>
<td>5</td>
<td>3.58</td>
</tr>
<tr>
<td>Pulses and oilseed crops production technology</td>
<td>6</td>
<td>3.52</td>
</tr>
<tr>
<td>Cropping system</td>
<td>7</td>
<td>3.48</td>
</tr>
<tr>
<td>Industrial crop production technology</td>
<td>8</td>
<td>2.70</td>
</tr>
<tr>
<td>Plant protection technology</td>
<td>9</td>
<td>2.42</td>
</tr>
<tr>
<td>Farm mechanization</td>
<td>10</td>
<td>2.17</td>
</tr>
</tbody>
</table>

Source: Field survey results

Responses of agents who completed the questionnaire on their needs of training in the following six general areas listed in order of priority were:

1. Program planning
2. Educational process and human development
3. Research and evaluation in extension
4. Agricultural extension philosophy, organisation and administration
5. Communication in extension
6. Sociological factors

Extension agents responded that they need more training in the area of extension program planning, educational process and human development, research and evaluation in extension, and agricultural extension philosophy, organisation and administration than the trainings concerning communication in extension and sociological factors.

The responses of all extension agents expressed that they preferred to be trained by the way of training workshop. Most of respondents were also not interested in training by distribution of written materials, because they have not enough time to learn and read and they could not understand easily the concepts of new technology just only by reading. Opinions of all extension agents on the farmers’ general altitude towards change expressed that most of farmers in Myanmar were interested to participate in planning, implementation, and monitoring and evaluation of programs. All respondents said that if farmers have a chance to participate in program planning and decision-making processes, they might be very happy and they could participate willingly in implementation of new participatory methods.
Summary

It is clear that as the country is under centralised administration for a long time, farmers have no chance to participate in program planning and decision making process. Just only extension workers brought farmers problem to research centre and the decision-making was done by researchers alone. Sometimes extension workers try to solve farmer’s problem as much as they can. Real problems of farmers could not be solved in time and basically because there was no relationship between farmers, who are actually facing with the problems and researchers, who are trying to solve the farmer’s problems.

There are seven SAI, in which students can receive diploma in Agriculture in three years, and only one Agricultural University (YAU), in which students can receive higher degree on agriculture (B.Agr.Sc./M.Agr.Sc) in Myanmar. None of these SAIs and YAU introduced courses on Participatory Extension Approach (PEA), Participatory research, Participatory Technology Development so far, although different aspects of agricultural education have been included in the curriculum recently. These institutions have a vital role to play in the development of knowledge concerning PEA and other issues of sustainable agriculture. Therefore these institutions should work in collaboration with MAS, AED and CARI and introduce courses concerning participatory extension in their curricula and conduct research activities.

Once again, the in-service training for extension agents held at CARTC, VFRDC, and respective departments of the Ministry of Agriculture and Irrigation (MOAI) were also mostly crop production oriented trainings and all the extension agents experienced in crop production technologies, but they have very little experience in extension education. Therefore the in-service training centres under the MOAI should introduce the trainings concerning participatory extension methods.

Responses of all extension agents expressed that general knowledge concerning agricultural extension, working capacity of the extension department and teaching and training methods for extension workers are now in positive situation, but these are not enough and they need further training for effective and efficient execution of their work. At present, the equipments required for extension education both for extension workers and farmers are not enough. Moreover the finance for extension service is also insufficient.

It is obvious that the situation of agricultural extension service in Myanmar is considerably good in general but there are still some weak points to be settled. Therefore, they all wish to promote and develop the Myanmar agriculture extension service in future.

Recommendation

Based on the findings of the study, the following points are suggested and recommended for the development of better agricultural extension strategies in Myanmar.

1. A new extension approach should be set up in Myanmar based on a participatory concept by cooperation of government agencies and local people. All the extension methods and activities should be implemented with the new approach as soon as possible.
2. To boost up successful implementation of extension activities in Myanmar, there is an urgent need to set up the citizen participation in the extension programmes planning, implementation, evaluation, and decision-making processes in a bottom-up manner.

3. Local farmers, related government agencies, Non-Government Organizations (NGOs) and the Myanmar Agriculture Service (MAS) should be equally and actively involved in these most important processes. This will bring more detailed information and will result in more realistic and transparent extension working plans for every district.

4. The best way to overcome the constraints, which were investigated in this study, might be the implementation of a new Participatory Extension Approach (PEA) instead of practicing the existing extension approaches in Myanmar Agriculture. Government extension agencies, especially the Agricultural Extension Department (AED), should start to implement the new PEA in its own extension programmes.

5. It is very important to introduce the new courses concerning PEA to the curricula of Agricultural University and State Agricultural Institutes. Once again PEA training for the agricultural extension workers should be introduce at the in-service training centres and respective departments of the Ministry of Agriculture and Irrigation.

References


