Country Report - Sri Lanka

Prepared for the meeting of the Programme Advisory Committee (PAC), Ayutthaya, Thailand, November 2001

L. Amarasinghe[1] and G.W. Liyanage[2]

Introduction

Rice as the staple food constitutes the single most important crop occupying nearly 29% of the total agricultural land in Sri Lanka, and rice accounts for 25% of the total employment and 12% of the GDP. About 1.8 million farm families are engaged in rice cultivation. Hence, the improvement in rice production and income of rice farmers have received top priority in all governments since Independence. Even though, average rice yields have been stagnating around 3.5-3.8 t/ha during the last decade and net returns have been low due to rising costs of cultivation. Therefore, the government is promoting every effort to increase rice yields with a simultaneous increase in the net returns for farmers. Since IPM has repeatedly demonstrated a significant increase in rice yields while reducing input costs it has been included in the National policy strategy formulated to improve rice productivity in Sri Lanka.

Management and other related activities with respect to rice production in Sri Lanka is demarcated mainly on the availability of irrigation facilities and decentralisation of autonomy. Three organisations are responsible for National rice production. First, the Provincial Councils are responsible mainly for rainfed and minor irrigated areas. Second, the State Department of Agriculture is responsible for major irrigation schemes in designated 'inter-provincial areas'.

Third, the Mahaweli Authority is responsible for the construction of irrigation and other facilities and settlement programmes including post-settlement agricultural development activities in the Mahaweli designated areas. The downstream areas of the Mahaweli Project are divided into Systems. Each System is considered as an agro-socio-economic entity that is the responsibility of an administrative structure composed of a resident project manager, block managers and unit managers. The total extent cultivated is 92,000 ha and nearly 90% of this area is under rice during the wet season, contributing 25% of the National rice production. Until 1994, Mahaweli used the T&V approach of agricultural extension. But from 1994 there was a change towards a participatory approach. The farmer field schools of the IPM project fitted into this approach.

---

[1] Deputy Director, Plant Protection, Department of Agriculture
[2] Director, Agricultural Development, Mahaweli Authority

1. Organisation and Funding

1. The National IPM Programme is coordinated by the Department of Agriculture (Seed Certification and Plant Protection Division) under the Ministry of Agriculture, in collaboration with FAO. The DOA also supervises the technical training for master trainers.
2. The programme operates through its partners at the Provincial Councils, the Mahaweli Authority (accounting for up to 25% of National rice production) and local NGOs. Planning and implementation of field training activities is conducted separately by eight Provincial Councils and by the Mahaweli Authority, which are responsible for extension. The programme still has limited activities in the designated Inter-Provincial areas which come under the DOA.
3. Plans and budgets are proposed each season at IPM evaluation & planning meetings in the Provinces and Systems.
4. At the District level or System level, a team of 3-8 Master Trainers implements the programme, together with Farmer Trainers. Monitoring of field activities is conducted by selected master trainers and senior agricultural officials. Monthly extension meetings are held at the District or System level for the coordination of field activities.
5. Project funds have been provided from 1999-2000 from the Australia Component and, from 2000-2001, with funds from the Norwegian Component of ICP. In 2001, additional funds (Au$ 68,000) were received from the Australian High Commission in Colombo to sponsor field activities in three provinces. The total level of funding for field activities and training-of-trainers was US$ 36,000 in 1999, $47,000 in 2000, and an estimated $120,000 in 2001.
6. Funds for field activities are distributed directly to the Provincial Directors of Agriculture and to the Mahaweli irrigation Systems.
7. In addition to Project funds, several provinces and the Mahaweli Authority have contributed their agricultural funds towards conducting additional FFS and follow-up activities. Moreover, several NGOs have sponsored an unknown number of FFS activities conducted by DOA and Mahaweli trainers.
8. There are several NGOs who have been actively involved in IPM training in Sri Lanka. The SEEDS division of the National-level NGO Sarvodaya, has been conducting IPM FFS with their own funds. Other NGOs who are conducting small numbers of FFS are Gemi Seva Sevena, Total Development Association and Isuru Development Centre; the latter two have just started.

2. Training achievements

1. From 1999 to 2001, the programme expanded in terms of human resources, number of field activities and the variety of activities (Table 1). The expansion was most pronounced in the Mahaweli irrigation Systems; this is in line with the recommendations of the mid-term review. Farmer field schools had on average 21 participants.

Table 1. Number of achieved field activities by season from 1999-2001.

	Activity	Yala 99	Maha 99-00	Yala 00	Maha 00-01*	Yala 01*	Maha 01-02**
1	Season-long training of trainers	0	1	0	1	1	2
2	Farmer field school by trainer	30	34	43	44	65	102
3	Farmer field school by farmers	4	26	16	22	30	86
4	Evolving FFS with local funds***	121	101	87	52	51	?
5	Farmer field school, other crops	5	7	4	0	1	0
6	Farmer TOT	4	10	6	7	6	12
7	Farmer trainer workshops	0	0	0	0	2	18
8	Participatory planning	0	4	11	6	6	32
9	Farmer studies	0	0	0	0	6	47
10	IPM Clubs	0	30	14	13	19	51
11	Cross visits for farmer groups	0	29	10	8	11	53
12	Farmer congress	0	0	1	1	1	13

* Achievements fell short of target due to drought; ** Target;
*** FFS conducted increasingly by master trainers, especially in the Mahaweli Systems; the figures include FFS by NGOs

2. Although the programme is operating in all eight provinces and in 6 Mahaweli irrigation systems, human resources and training activities are concentrated in the priority project areas with extensive rice cultivation. Table 2 presents the cumulative number of activities which were conducted separately by the Provinces, by the Mahaweli Authority and by NGOs.

Table 2. Number of master trainers and cumulative number of key field activities by different of partners in the National IPM Programme during July 1999- October 2001.

	Activity	Provinces	Mahaweli	NGOs
1	Master trainers	76	48	10
2	Farmer field school by trainer	134	86	18
3	Farmer field school by farmers	93	0	1
4	Farmer TOT	31	2	0

3. The training continues to help farmers save on pesticide inputs by an average of Rs 1,800 per acre (US$ 50 per ha) while at the same time increasing yield by an average of 19% (Table 3).

Table 3. Savings on pesticide inputs (in Rs/ac) and percent yield increase in IPM plots relative to Farmer Practice plots at farmer field schools in the Districts, as reported by master trainers. The grand average is taken over all districts. Results of questionnaire survey, 2001.

	Average per district	
	Range	Grand average
Savings on pesticide inputs (Rs/ac)	800 - 2,500	1,800
Percent yield increase	0 - 50%	19%

Human resource development

4. Three season-long training-of-trainers courses (TOT) on rice IPM were conducted between 1999 and 2001, bringing the present total at five TOTs training 164 master trainers. Two more TOTs are being planned for the coming Maha season starting November 2001 (one for Field Assistants from the Mahaweli Authority and one for Agricultural Instructors from the Provinces). Nine NGO staff attended the TOTs. The TOTs prepared the participants for their role as facilitator of farmer field schools, while methods on two follow-up training activities for farmers (participatory planning and farmer experiments) were also included in the training.
5. Recognising the potential for community-level development of IPM, as emerged at several sites, the programme introduced methods for several types of follow-up activities to help FFS-graduated farmers to better address their local problems and to study their farming situation. Several technical workshops were conducted to train master trainers on conducting follow-up activities involving farmer studies, participatory planning, soil ecology and pesticide-health aspects.
6. Training on pesticide-health effects has been conducted for selected trainers who subsequently conducted health surveys among farmers.
7. Training on soil-related issues has been conducted and is now being incorporated in the FFS curriculum by Mahaweli and the Provinces.
8. By 1999, farmers in several places had spontaneously begun to conduct their own farmer field schools. In response, a workshop was conducted to initiate the training of farmers to become FFS facilitators. Farmer TOTs (10 d each) were conducted in the districts and were improved after two evaluative workshops on farmer-to-farmer training, training a total of over 400 farmer trainers to date.

Field training activities

9. The number of farmer field schools increased alongside the number of master trainers. The severe drought during the Maha season 2000/01 and the Yala season 2001 affected the farming situation and caused the achievements of training activities to lag behind the set targets. Despite the drought, however, there was an increase in training activities.
10. Modest but increasing numbers of farmer field schools-by-farmers were conducted, with regular monitoring and support by the master trainers. Farmers

appear to be able to facilitate the FFS, while barriers of status and background are removed.

11. The number of field schools with Provincial funds declined from 2000, due to the worsening National economic situation. Moreover, field schools on other crops (vegetables and chilli) were halted from the Maha season 2000/01 in line with the recommendation of the mid-term review to concentrate on rice.

12. Several types of follow-up activities were conducted. Participatory planning tools were introduced to help FFS alumni to identify and address problems within their farming communities. Farmer studies were conducted to help FFS alumni compare or improve their farming practices and to address technical problems.

13. Numerous IPM Clubs were formed throughout the country, which consisted of groups of FFS alumni who, after the FFS, vowed to work closer together. Also, the programme supported cross-visits of FFS farmers and farmer congresses for the exchange of experience and knowledge.

Figure 1 Farmer groups in Udawalawe Irrigation System mapping their community (left), and consolidating data and drawings in the exercises of agroecosystem analysis (right)

3. Policy Developments

1. As the programme expands, a decentralization is taking place of project management and planning from the central level to the Provinces. A similar decentralization occurs within Mahaweli Authority from the central level to the System level. Seasonal evaluation & planning meetings are now being conducted at the level of Province or irrigation System, and are commonly attended by the director/resident project manager, his deputies and other staff. These meetings clearly strengthen the motivation and coordination of local programmes.
2. Limited local funds allocated for IPM due to the worsening economic situation remain a problem for the sustainability of the programme after phase IV. Even though, the unit costs of field activities in Sri Lanka are the lowest in the Asian Region.
3. The DOA is presently planning the incorporation of the FFS into its ongoing block demonstration programme for rice intensification. Synergies have been observed in terms of the FFS raising the motivation of participating farmers while the block demonstrations providing continued support for three seasons. The incorporation of FFS will require more officers to be trained in the near future. This training will likely involve short between-season courses in combination with on-the-job training at ongoing FFS.
4. Market liberalisations have caused an increase in input costs and a reduction in prices, and thus reduced the profitability of rice cultivation, which emphases the need for IPM training.

4. Developments in Community IPM

1. The farmer field school often has a visible effect on group building which results in better cooperation at planting and harvest and a better access to the services from government organisations that were not available to them in the past.
2. FFS graduated groups of farmers frequently embark on new collaborative activities after forming an IPM Club, for instance to initiate production of seed paddy.
3. Participatory planning and farmer studies as follow-up after the FFS help farmer groups to address local problems. In addition, farmer congresses and exchange visits stimulate the interaction and sharing between FFS alumni groups from different locations.
4. Successful marketing of pesticide-free rice has been developed by IPM Clubs in Moneragala and Galle Districts. There has also been coordination between FFS-alumni groups in these districts regarding the scaling up of pesticide-free rice production.
5. Despite a large number of farmer trainers (farmers who became FFS trainers) the number of FFS organised through the Project remains modest. This is due to problems of coordination by the master trainers. A recent workshop addressed

these problems. The number of farmer trainers who are active in their areas without Project involvement is unknown.

5. Other Developments

1. To further enhance decentralization of project management, an 18-mo project was developed and has received funding from the Australian High Commission, Colombo, in 2001. The project helps three provinces (Southern, North-western and North-central) to increase their role in implementation and future planning of local programmes.
2. In addition, an 18 mo pilot project on the incorporation of Integrated Vector Management into IPM training and community programmes is expected to start in December 2001 with funding from UNEP Chemicals (US$ 43,000). Farming decisions made in rice (e.g. regarding early-season spraying or alternate wet-dry irrigation) also affect mosquito vectors of human diseases which breed in wetland rice. The project will be implemented by the National IPM programme in cooperation with the International Water Management Institute.
3. Future core funding for IPM after Phase IV of Community IPM remains uncertain.
4. The Special Programme for Food Security of FAO will soon have funds for training on rice crop management (including FFS type activities) available for several provinces.
5. Mahaweli organized 20 FFS for 500 school children above grade 10, mostly conducted in the weekends. The response was encouraging. Several additional school FFS have been conducted by the Provinces.

6. Future Plans and Priorities

1. The National IPM programme will continue to operate in the Mahaweli, Provincial and Inter-provincial areas where lateral spread will be emphasised. IPM has been identified as a factor contributing to increased yield and benefits.
2. The present block demonstrations aimed to increase productivity of rice will continue to incorporate a strong component on IPM, which will increasingly be adopted through the FFS approach, in particular in the Mahaweli and Provincial areas. The ultimate aim of this programme is a self-sustained farming community. As highlighted in the mid-term review of the programme in Sri Lanka, the block demonstrations commonly merge with farmer field schools at the field level.
3. The Provincial Councils and Mahaweli Authority are much interested in continuing the IPM programme, and have been allocating their own funds towards IPM. Both organisations expect to expand the implementation of its IPM activities in the near future. However, the availability of local funding remains uncertain due to the present economic situation. The availability of State government funds for IPM training in the Inter-provincial areas is also not quite certain.

4. The Mahaweli Authority has developed a proposal for a five-year project, which aims to increase the coverage of field activities, including of farmer field schools (41-257 units p.a.), farmer-to-farmer training (16-207 units p.a.) and follow-up activities (60-600 units p.a.). Other project developments have been mentioned in Section 5.

Figure 2 Field Day presentation by FFS graduates to expose IPM methods to a broader section of the community