

# Changing the strategies of Farmer Field Schools in Bangladesh

Hein Bijlmakers and Muhammad Ashraf Islam

The Farmer Field School (FFS) approach was developed in the late 1980s in Indonesia, as described in *LEISA Magazine* Volume 19.1 and many other publications. This agricultural extension method was originally designed to educate rice farmers about the concept of biological control, and to familiarise them with Integrated Pest Management (IPM). Following the successes of this practical and participative method of farmer education, it quickly spread to other rice growing areas in Asia. Within a few years, FFSs were also used for other subjects such as IPM in vegetables and cotton, animal husbandry, and even subjects that are not related to agriculture.

In Bangladesh, the first Farmer Field Schools were organised in the early 1990s, assisted by the FAO inter-country programme for IPM in rice. After initial positive experiences, several other donors (UNDP, CARE-Bangladesh and DANIDA) started projects to spread IPM to hundreds of thousands of farmers through IPM Farmer Field Schools. All these projects included season-long Training of Trainers courses to develop skilled FFS facilitators. Through this continuous support over the past ten years, Bangladesh now has a huge capacity to implement FFSs, especially in the Department of Agricultural Extension (DAE).

Initially, FFSs organised by DAE followed the “original” rice IPM FFS curriculum to a large extent, with a strong focus on managing pest problems and with the aim of reducing pesticide related problems. Over the years, however, the curriculum has been revised and improved several times. DAE is currently running a five-year programme to organise 8000 Farmer Field Schools for Integrated Crop Management, with financial and technical support from DANIDA. The Integrated Crop Management FFS curriculum differs in many aspects from the original IPM FFS curriculum. This article focuses on the reasons behind these changes, showing the experiences so far and the issues that still need to be addressed.

## Weaknesses and opportunities

The original IPM FFSs were successful in reducing pesticide related problems. IPM-trained farmers use less pesticides and often have small increases in yield compared to untrained farmers. However, even though the objectives of reducing pesticide use and increasing yields were reached, there were still issues to be considered in improving the livelihoods of these farmers.

### *Women as FFS participants*

Growing rice in Bangladesh is usually done by men, while women are involved in various post-harvest activities (threshing, drying, winnowing and storage). The original IPM FFSs, with a focus on pest management and a goal to reduce pesticide problems, therefore addressed almost only male farmers. It was indicated, especially by the donors, that more efforts should be made to involve more women in the FFS training programme. Initially, this was done by starting vegetable IPM FFSs, since it was expected that more women participants would then be included.

This was true – more women participated in the vegetable FFSs. However, it then became clear that the vegetable IPM

curriculum, which was very similar to the rice IPM curriculum, was not addressing the real needs of these women. Actually, these women were involved in homestead growing of vegetables, a low input situation with very little pesticide use. The commercial vegetable plots, with higher inputs of fertilizers and serious pesticide misuse, are usually grown by male farmers. It was clear that a move from rice to vegetables alone was not sufficient, and that the FFS curriculum would need more changes to address the actual needs of women. At the same time, there were a number of social barriers preventing more women being in the FFSs. This was particularly an issue in the more conservative communities, and it led to the idea that perhaps both the man and the woman from the same household should be invited to the training.

### *Soil fertility and fertilizer management*

One of the principles of IPM is to “grow a healthy crop”. The rice IPM curriculum is not only about pests and beneficial insects, but it also includes topics on seed quality, variety selection, fertilizer management and water management. After many years of IPM FFS implementation, it was concluded that the curriculum did not give sufficient attention to soil fertility and fertilizer management issues. Positive experiences obtained in another project were then used to include more soil and fertilizer related topics in the curriculum. Simultaneously, other curriculum adjustments were made to pay more attention to seed quality and seed production. As a result of all these curriculum changes, the name was changed from IPM to Integrated Crop Management (ICM), showing the more holistic approach to crop production.

### *Sustainability*

With the scaling up of the FFS programme in Bangladesh, a lot of attention was given to studying the impact of the training and to evaluating how farmers’ behaviour changed over the years. Results were quite positive and showed that several years after attending an FFS farmers still remembered what they had learned, and their practices remained better than those of untrained farmers. During these evaluations and impact studies it was also found that in some cases FFS farmers have continued working as a group and have formed a kind of farmers club. They continued meeting with each other, discussing their crop management problems, and trying to develop solutions together.

This was then seen as an opportunity for increased sustainability. Pilot activities were started to give support to these “IPM clubs”. Within a few years it became clear that these clubs can be much more than an extension of the FFS. Often these clubs grow and help spread the IPM message to neighbouring farmers. Some clubs even developed various income generating activities (not necessarily IPM or ICM related), or social activities that contribute positively to community development.

These positive experiences with clubs have led to an important shift in strategy. Forming long-term farmer clubs has now become one of the objectives of the ICM FFSs in Bangladesh. The FFS curriculum is now designed to work towards club formation, right from the start. When clubs are officially registered and properly organised they can even develop into community based organisations.

### The ICM FFS curriculum

Considering the weaknesses and opportunities described above, the original rice IPM FFS (with 25 male farmers and 14 weekly sessions) has gone through a number of revisions. In the current ICM FFS the participants are 25 male farmers (rice growers) and 25 women from the same household. The FFS curriculum has been expanded from 14 to 20 sessions and now includes:

- One inaugural session, for men and women together;
- Eleven sessions for men only, which follow a similar approach as the IPM FFS curriculum. During these sessions there is still a lot of attention to pest management, but with an increased emphasis on seed quality, soil fertility and fertilizer management and with several field studies related to these topics. The curriculum reflects a holistic ICM approach to crop production;
- Four sessions for women only, with topics that were specifically developed to address the needs of women and with the objective to improve the nutritional status of the household. These sessions include: creating awareness on a balanced human nutrition, developing homestead vegetable gardens, planting of fruit trees, the use of farm yard manure, and improved stoves;
- Four sessions for men and women together, which are used to develop farmer clubs. These clubs will continue the group work after the FFS sessions are completed, with new activities for men and women in the community; and

#### Box 1. Learning continues after the FFS

In the season after the FFS farmers form a club which receives some funding for additional training sessions. Topics are selected by the farmers and can include a wide range of subjects such as beekeeping, beef fattening, quality seed production, family planning, poultry rearing or grafting of fruit trees.



Photo: Hein Bijlmakers

An FFS session on rice-fish culture. The IPM club involved is planning to grow fish in small ponds attached to their rice fields.

- A field day organised by male and female participants of the FFS.

If the completed FFS has formed a club, there will be more support in the season after the FFS through a number of follow-up sessions. Topics for these sessions are selected by the farmers, while the FFS facilitators help in identifying resource persons to conduct them (see Box 1).

### Farmers as facilitators

Another development which has taken place in Bangladesh since 2000 is the involvement of farmers as facilitators. These farmer facilitators, often referred to as Farmer Trainers (FT), are farmers who proved themselves as capable to lead other farmers during an FFS. Various criteria are used to select potential candidates (see Box 2), who will always work together in pairs. After completing their FFS, they first receive an additional training of two or three weeks. During this time they learn skills that help them facilitate FFS sessions and organisational skills to manage an FFS. Then, for an entire season, they work with DAE facilitators as apprentices in an FFS in their locality. After this season-long practical experience they are then ready to organise their own FFS as a facilitator.

The FFS organised by farmer facilitators follows the same curriculum and operates with the same budget as an FFS organised by government extension facilitators. Although there was some concern about quality, it was soon found that in many cases the farmer facilitators even perform better than the government extension facilitators, provided that the selection of farmer facilitators is good. Another advantage of farmer facilitators is that they are attached to the farmer clubs, which means that apart from being involved in starting new FFS they also play important roles in supporting their own club activities.

### Remaining issues

We have seen that FFSs in Bangladesh in the past ten years have gone through a number of changes and developments, many of these contributing to better learning opportunities for men and women participants. But there are still many issues that need attention, and further improvements and developments will take place in the coming years. The present curriculum will be updated yearly, based on new field experiences. Here are some of the issues that still need attention:

- With each change in the FFS curriculum there is a risk of losing quality. Newly introduced topics need to be field tested and adapted until they can be presented in a participatory and practical way. Introducing new topics in the FFS can also create time constraints, reducing the time available for activities such as an agro-ecosystem analysis and participatory decision making.
- The current ICM FFS includes four meetings where 25 men and 25 women are present. This is a very large group, which makes it difficult to have real participatory discussions and decision making.
- Currently there are just four “women only” sessions in which a lot of different topics are covered, which all suffer from time constraints.
- The cost of training is an important issue and FFS have often been said to be too expensive. FFS in Bangladesh currently cost around 40 000 *taka* (425 euro) for the 20 sessions and a field day. With 25 men and 25 women benefiting from this training the cost is 8.5 euro per participant. In addition there is a 4000 *taka* (43 euro)



Photo: Hein Bijlmakers

A farmer facilitator conducting an FFS session in rice on the use of the Leaf Colour Chart.

### Box 2. Farmer Trainers

A large number of qualified FFS facilitators are needed to reach the millions of farmers in Bangladesh. Skilled and motivated farmers are now working as FFS facilitators side by side with government extension facilitators of the Department of Agricultural Extension. Many of these farmer facilitators are women. Farmer facilitators communicate easily with FFS participants because they often know each other personally.

Capacity building of farmer facilitators is a future investment for scaling-up processes. Therefore the selection of farmers is done in close consultation with government extension facilitators who are responsible for the area and they are interviewed by experienced master trainers based on criteria that should ensure their quality and

long-term commitment. A first criterion is that they have to be full-time farmers who live in the locality and who are members of an ICM club in their village. They should also have a very good understanding of ICM concepts. They should be literate, have good organising capabilities and leadership skills, and should show a strong interest in the social welfare of their community. They should be healthy and at least 25 years old.

Farmers who are selected to become farmer facilitators sign a contract in which they commit themselves to be available for a Training of Trainers course and to become active facilitators for organising new Farmer Field Schools.

support for farmer clubs to organise learning sessions in the season after the FFS, which is less than 1 euro per club member. While these costs are low in relation to the benefits, it is important to look at opportunities for cost reduction while maintaining quality. Some costs (a small snack during each session, and a cap for each farmer) could be saved without affecting the quality of the training, although these are highly appreciated by farmers.

- Season-long Training of Trainers courses to develop FFS facilitators are expensive, lengthy and time consuming. For DAE it is difficult to release their field staff for a period of three to four months to participate in these season-long courses. However, it is considered important that the training should cover an entire cropping season. Therefore, the programme is now piloting a new Training of Trainers system where two groups of participants rotate in spells of two weeks. During a TOT of 24 weeks, each participant would attend six blocks of two weeks. Experiences with this system will have to be evaluated if it delivers good facilitators.
- The FFS approach is also going to be adapted for fisheries and livestock in other government departments with support

from the programme. Collaboration between different departments will be one of the opportunities and challenges for the coming years.

The FFS model is based on experiential learning. The programme in Bangladesh has observed that running a large scale FFS programme is also an experiential learning process. Season after season adjustments are being made based on new experiences and on feedback from farmers and facilitators. ■

**Hein Bijlmakers.** Training and Extension Adviser, DANIDA, Agricultural Extension Component, Dhaka, Bangladesh. E-mail: hbijlmakers@gmail.com

**Muhammad Ashraf Islam.** Upazila Agricultural Officer, DAE, Agricultural Extension Component, Dhaka, Bangladesh. E-mail: kbd\_ashraf@yahoo.com

#### References

- Gallagher, K., 2003. **Fundamental elements of a Farmer Field School.** *LEISA Magazine*, vol. 19 no.1.
- Bijlmakers, H. (ed.), 2005. **IPM Farmer Field Schools: Refresh your memory.** DANIDA, Bangkok, Thailand.
- Callens, K. and K. Gallagher, 2003. **Incorporating nutrition in Farmer Field Schools.** *Food, Nutrition and Agriculture* no. 32. FAO, Rome, Italy.