

# Part I: Key principles of Farmer Field School

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### What is Farmer Field School?

The FFS approach is an innovative, participatory and interactive learning approach that emphasizes problem solving and discovery based learning. FFS aims to build farmers' capacity to analyze their production systems, identify problems, test possible solutions, and eventually encourage the participants to adopt the practices most suitable to their farming systems (FAO, 2003 c). FFS can also provide an opportunity for farmers to practice and test/evaluate sustainable land use technologies, and introduce new technologies through comparing their conventional technologies developed with their own tradition and culture.

FFS is usually a time bound activity (generally one agricultural production cycle or a year), involving a group (commonly 20-30) of farmers. It is facilitated by extension staff or – increasingly – by farmer facilitators (FFs). The method emphasizes group observation, discussion, analysis, presentation, and collective decision making and actions. The basic component of FFS is setting up of a Participatory Comparative Experiment (PCE), commonly referred to as Participatory Technology Development (PTD), whereby the farmers put the FFS concept into practice. A PCE can be developed using subjects of agriculture, livestock, forestry, agroforestry, livelihoods and others.

Presentation of PCE findings by participants is a key activity in the FFS's learning process. It encourages participants to present their findings, experiences and knowledge in front of other FFS members while defending their opinions on findings and decisions made. Such process builds self confidence, particularly for women, poor

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household members, or minority group members. Another key outcome, although it is not an explicit FFS objective, is the development of leadership. An FFS must have an appointed group of leaders composed of a Chairperson, Deputy Chairperson, Secretary, and Treasurer. In addition, the FFS membership is divided into four to five sub groups and each sub group has a leader. Through managing the FFS group and sub groups, these appointed leaders as well as the rest of the members build up skills of group management and leadership. Furthermore, FFS encourages cohesiveness among members and develops team work. Although FFS is a time bound project activity, many FFS groups continue after the FFS learning cycle is completed for self motivated study of other subjects, development of collective marketing of agricultural produce, and to establish cooperatives.

**BOX 1** FFS and Increase of Community Coherency

The communities of the SLDP target area in the Mau Forest Complex were severely disrupted after post election violence in 2008. Examples of SLDP in the Mau Forest Complex demonstrate that FFS activities can increase cohesion of a mixed membership community including several ethnic groups. Initially, the project was not able to form FFS groups due to its policy not to favour particular ethnic groups and its aim to bring different ethnic groups back together. Different ethnic groups wanted separate groups composed of members of their own ethnic group. The project held several meetings with such communities to convince them to form a group including people from different ethnic groups. The allocation of leadership posts was another obstacle after forming the FFS groups. With perseverance the project can now successfully demonstrate how FFS can alleviate tension between people from different ethnic groups.

## What are the Core Principles of FFS?

The following are the core principles and components of the FFS approach:

- **The field is the learning place.** Learning takes place in the field, usually on a host farm where a PCE is established and all learning sessions are held. Participants observe and learn from the field work instead of from textbooks and lectures from extension workers. Improved farm practices must be suitable for the local context, which is usually influenced by local ecological and socio-economic conditions as well as farmers' preferences.
- **Facilitation, not teaching.** The role of the facilitator is crucial for successful learning and empowerment because FFS does not focus on teaching but on guiding FFS members through the learning process. To foster the learner centred process, the facilitator remains in the background, listening attentively and reflectively, asking questions and encouraging participants to explore more in the field and present their ideas. The facilitator must stimulate FFS members to think, observe, analyze and discover answers by themselves.
- **Hands-on and discovery-based learning.** The process of learning adheres to principles of adult education and "learning by doing". Adults tend not to learn and change behaviour by passive listening, but as a consequence of experience. Through learning by doing in a discovery based manner, group members cherish ownership over their knowledge and gain confidence in what they have learned.
- **The farmer as expert.** The FFS approach recognizes community members as the experts within their particular contexts, and considers indigenous and local knowledge an important source of information to be used within the FFS learning process. Through the process, FFS members learn how to improve their own abilities to observe and analyse problems, and to develop practical and relevant solutions. The approach inspires members to learn continuously by exploring and educating themselves on issues and topics that affect their livelihoods.
- **Equity and no hierarchy.** An FFS is designed for all to participate on an equal basis. FFS supports no hierarchy between farmers and

facilitators, group leaders and ordinary members, diploma holders and those who do not read and write. All are equal partners in the FFS learning experience.

- **Integrated and learner-defined curriculum.** The FFS curriculum is defined by the learners and is unique for each group, though much of learning enterprises are pre designed under the mandate of FFS implementing agencies. The basic principle for any FFS is that all topics must be related to what is important to the group members and aim to fill their particular gaps in knowledge.
- **Comparative experiments.** Knowledge is gained through practical experiments where different options are compared with each other. The trials are regularly observed and analyzed. Issues are discussed as they occur — in reality. This aspect of the approach dictates the “duration” of an FFS cycle that has to match the life cycle of the enterprise being studied, i.e. from “(planted) seed to (harvested) seed”, or from “egg to egg” in the case of poultry.
- **Agro-ecosystem analysis.** The agro ecosystem analysis (AESA) is one of the cornerstones of the FFS approach. AESA is practiced by all FFS members through all stages of FFS cycle. It involves observation, analysis and presentation for synthesis and discussion. This activity enhances participants’ analyzing skills as well as their presentation, thereby improving knowledge based decision making in addition to their communication capabilities.
- **Special topics.** The focus of special topics is decided on by the group and plays a central role in FFS. Special topics can cover a wide range of topics and can be multi sectoral. It is part of the FFS curriculum and learning experiments. The selection of special topics should be demand driven, usually addressing wider livelihood issues. These special topics can also be facilitated by external resource persons rather than by the FFS group facilitator.
- **Team building and social animation.** Aspects of team building, group dynamics and social animation are important components of learning sessions. Through song, dance and drama people share knowledge and culture, build cohesion, and learn communication and leadership skills. This also creates a platform for dealing with difficult subjects such as abuse, gender and HIV/AIDS.
- **Participatory monitoring and evaluation.** While preparing the FFS curriculum, participants develop a plan for monitoring and

evaluating progress to later assess whether they are achieving the agreed objectives.

## How does FFS benefit Farmers?

### 1. Strengthening observation capability and increasing knowledge ownership through discovery based learning.

FFS does not rely mainly on information and techniques brought by extension agents and transferred to farmers. Instead, it aims to encourage farmers' systematic observation and informed decision making based on discovery based learning so that new knowledge and practices are generated by the farmers themselves. This process stimulates ownership of the learning process and ensures local adaptation. The main role of extension workers is to enhance farmers' skills in practicing new ideas, discovering their own solutions, and developing coping strategies to deal with ever changing situations. Technologies practiced under FFS usually are site specific and suitable to the farmers who use them because the FFS participants themselves set up learning sites and put technologies into practice. As a result, adoption rates are usually high among FFS members. Transfer of knowledge to neighbors is also common in FFS since learning results are based on farmers' experiences applicable to their neighbors.

### 2. Building self-confidence and enhancing decision-making capacity.

FFS is not about transferring and teaching knowledge and techniques, as it is the case in conventional extension. The FFS approach empowers farmers in various aspects through confidence building and decision making exercises. Unlike in other extension approaches, farmers in the FFS approach are facilitated to take a lead in learning sessions under a participatory manner. Every FFS session allocates time for presentation of field observations followed by group discussion. In addition, participants

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in FFS are divided into sub groups and discussions among sub group members are encouraged. These exercises involving tangible field results usually provide a foundation for participants to “own” the learning process, build their confidence and personal skills, and thus become empowered in their farming activities and collaborating with other farmers in finding solutions.

### **3. Minimizing risks in experimenting with new practices.**

It is risky for subsistence farmers to switch from their conventional land use practices to new ones based only on information or short training sessions provided by extension workers. They simply cannot afford crop failures when trying out new systems.

FFS provides farmers with the opportunity to try out new practices on a group farm where risks are minimal, and potential losses would be shared by group members. Learning sites are usually very small in size; sufficient only to test and compare new technologies and farmers' own conventional farmers' practices. They need only to contribute a half day per week of their time to participate in FFS, while they can continue working on their own food crops using their conventional farming methods. FFS does not promote new methods in isolation from regular farmer practices; rather it provides an opportunity for the participants to test and compare alternatives in a relatively risk free environment with measurable figures for discussion and debate among participating farmers. FFS is therefore a less risky approach for subsistence farmers compared to most conventional extension methods.

### **4. Changing deep-rooted beliefs and practices.**

Farmers have a wealth of knowledge, which is usually based on their experience. It is also true that they are sometime based on misconceptions. Wrong ideas or false deep rooted impressions cannot be easily swept aside through short term training or field visits.

FFS provides an analytical structure and season long regular interactions with the field, facilitators, and other FFS members, which

enables participants to learn firsthand the benefits of testing new technologies in PCE and to understand the behaviour of introduced crops. The FFS experience can as well assist them to recognize misunderstandings and avoid errors in farming practices or beliefs.

## 5. Developing problem-solving capabilities.

A farmer is an agricultural entrepreneur who has to deal with constantly changing natural and socio economic circumstances. To be successful, a farmer needs a range of skills including natural resource management, accounting, marketing, negotiation, problem solving and conflict management. Without such capacities, farmers may be unprepared for uncertain events caused by political and economic unrests as well as climate change.

Any one off training event cannot provide solutions for all farm related problems, nor can it provide the broad range of skills needed to support improved productivity at the farm level. However, FFSs offer integrated learning opportunities for a period of one year in which participating farmers acquire problem solving capabilities that can encourage pro active behavior and positive attitude towards an often uncertain future.

## How does FFS help Development Agencies?

The following are some of the reasons for development agencies to incorporate FFS into extension services.

### 1. Structured implementation process.

FFS provides a structured extension platform, which makes implementation and M&E easier as listed below:

- **Regular meeting days.** Regular group meeting days make FFS easier to monitor. The management team knows when and where FFSs are carried out. This allows random checking by managers, whose visits are not announced in advance.

- **Fixed timetable and planned programme.** Every FFS session is conducted according to a fixed timetable and each activity planned during the previous group meeting and agreed among members. This simple standard session format simplifies planning and preparation for future sessions.
- **Fixed annual and event schedule.** The annual FFS programme must be fully synchronized with rainfall and other environmental patterns, with clear benchmarks and key events including exchange visits, field days and graduation.
- **Standardized FFS inputs and budget.** Inputs for FFS including learning materials, costs for events and allowances for facilitators can be standardised under a project. The budget for each FFS will vary depending on the length of the FFS implementation period, material to be provided, travel distance of facilitators, and reporting required from farmers.

## 2. Facilitating inter-sectoral collaboration.

FFS requires collaboration among various government ministries for the delivery of "special topics", which cover not only agriculture, livestock and agroforestry related issues, but also life skills such as prevention of HIV/AIDS, cooking, nutrition, and other requests according to demand from the FFS participants. Special topics, which deal with multi sectoral issues, are a crucial element to keep the group interested and active. This arrangement requires FFS facilitators to actively search for help from other government agencies or NGOs which, as a result, makes FFS a multi sectoral platform.

## 3. Empowering extension officers.

FFS empowers both farmers and extension officers. Through FFS implementation extension officers must adapt their normal role of lecturers to become facilitators. An equal communication platform requires them to change their attitude to listen more to the farmers. Clearly identified working targets and a structured approach ensures they are better prepared and more disciplined. Frequent communication socializes them to become local coordinators.



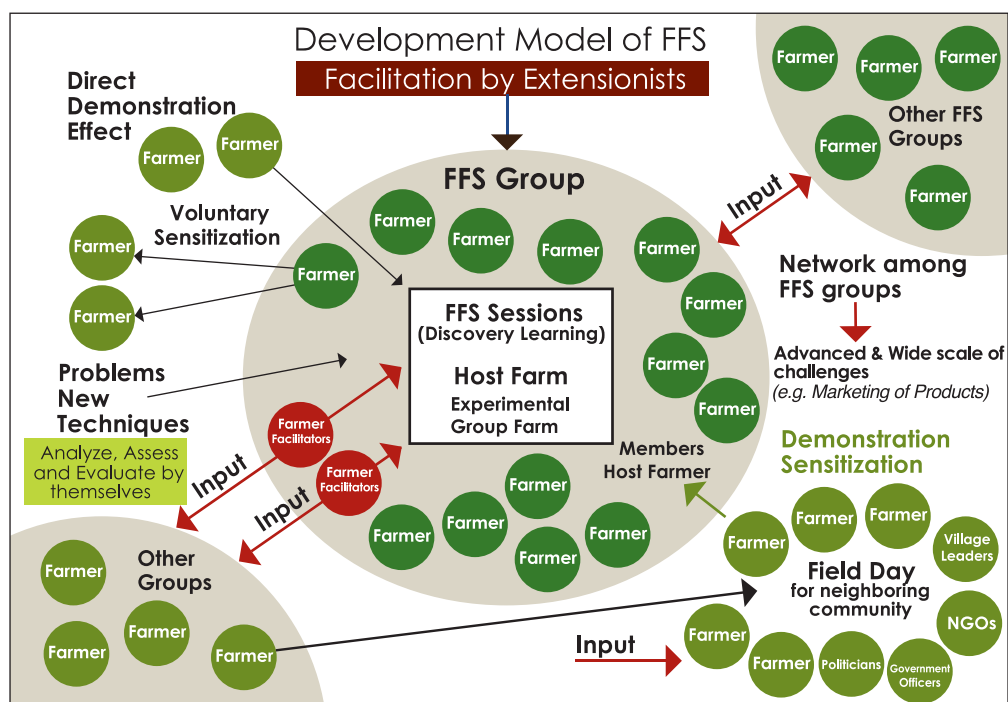
In addition, tangible field results and respect from farmers increases their self confidence and job satisfaction.

#### 4. Expanding results effectively.

An overview of the expansion strategy of the FFS approach is illustrated in Figure 1. FFS employs two types of facilitators; (i) extension facilitators, who are recruited by the government or projects and have received the required training as facilitators, and (ii) farmer facilitators (FFs), who are FFS graduates.

Expansion of FFS is usually constrained by the limited number of government and/or project paid extension workers who normally also have other duties to perform. However, the selection and training of suitable farmer candidates during the initial period of “extension led FFS” can provide additional locally available human resources for future expansion of FFS (for details see Part II).

Figure 1. FFS Expansion Strategy



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## 5. Joining the global FFS network

By 2009, the FFS approach has been practiced in more than 92 countries (Arnoud Braun, personal communication). A large knowledge base on the approach is available in the form of reports, manuals, guides, videos, podcasts and case studies (largely available in the FFSnet database<sup>5</sup>). This allows new FFS projects to benefit from a wide range of project and country experience, and avoid previous pitfalls. However, the FFS approach remains to be learned in a training context with the presence of experienced (master) trainers – it cannot be (easily) learnt simply by reading resource materials.

### What are the Weaknesses of FFS?

There are several key planning and managerial issues in implementing FFS. The FFS planners must address the following points in preparing an FFS programme.

#### 1. FFS requires having a group of experienced FFS facilitators.

Experience shows that FFS must be implemented according to its key principles and can not be applied simply on the basis of knowledge of extension methods. FFS facilitators must have at least two weeks of intensive FFS facilitation training TOF delivered by experienced FFS master trainers, which must be followed up with continuous backstopping to maintain the quality of FFS during field application by the trained facilitators.

**What happens in an area where there are no master trainers?** The lack of master trainers is the major bottleneck in many FFS programmes, and undermines the quality of FFS. Contracting master trainers from another country or area may be expensive, but there are few options if FFS is to be correctly implemented. The JICA supported FFS project in Ethiopia arranged for four master trainers from Kenya to visit the project and conduct the TOF. In the Philippines, the Philippine Rice Research Institute (PhilRice) at

5. [www.infobridge.org/ffsnet/](http://www.infobridge.org/ffsnet/)

Nueva Ecija conducts a season long FFS training course. Every year it produces about 40 to 50 experts, who promote FFS in rice production. However, the trainees stay at the institution for the entire one crop (rice production) period and the cost of such training is high.

In order to cope with the shortage of master trainers in Kenya, FAO provides a master trainers course with experienced FFS facilitators. The cost of this programme is approximately USD 35,000 for 13 trainees over a period of 7 months. Each month these trainees leave their regular work and are trained for a period of one week including field exercises.<sup>6</sup>

## **2. Appropriate fund release mechanism and effective logistics.**

FFS is carried out according to the crop cycle, and must start according to the planting season. An FFS programme must be carefully planned to ensure that study material and inputs for the particular FFS activities can be delivered in a timely manner. An appropriate fund release mechanism is also essential to enable timely procurement and delivery of materials and inputs. Methods for procurement of materials in bulk may need to be supplemented by a cash account (and appropriate procurement processes) for each FFS for small scale expenditure of essential items. Timely payment of allowances to facilitators is important to ensure they remain motivated and are able to purchase fuel for their motorcycles.

Many unperformed FFS programmes are found under government programmes that suffer from slow bureaucratic procedures that delay procurement of learning material and payment of allowances to facilitators.

## **3. Quality Control.**

FFS requires effective backstopping by experienced FFS facilitators to maintain the quality of FFS. In Ethiopia, many FFS sites were inaccessible by car and in some cases facilitators were required to

6. For more detail information, contact at Investment Centre@fao.org

walk for more 10 hours to reach remote FFS locations. As a result, FFS backstopping became less frequent and the quality of the FFS process was affected.

#### **4. Cost.**

The cost per FFS varies according to the duration of the crop cycle, accessibility of FFS sites and the allowances paid to facilitators. Typically the cost ranges from USD 1,000 to 1,700 per FFS per year. (see details in Part II). This is equivalent to USD 40 to 70 per person for one FFS cycle assuming 25 members per FFS. In addition, experience in implementing FFS shows that a monthly meeting with facilitators, experience sharing workshops, and exposure of facilitators to new technologies are essential to maintain a dynamic relationship between the project management, facilitators and FFS members. Such activities are important to successful FFS outcomes. If budget is a constraint, it is preferable to reduce the scope of the programme (i.e. the number of target FFSs) than to compromise on FFS quality.

#### **5. Monitoring of FFS.**

Generally the monitoring of extension activities is difficult to conduct. However, the FFS platform allows project management to undertake random spot check monitoring because of the fixed date and place of FFS activities. Nevertheless, effective performance monitoring of all FFSs under a programme can be a challenge. Traditional methods which require facilitators to provide weekly or monthly reports on FFS performance, have proved to be difficult to implement effectively; facilitators do not provide timely reports and/or reports are lost in somewhere along the chain. Such methods do not effectively monitor the performance of the facilitators themselves and do not easily allow for timely project management intervention if required. The use of phone communications with FFS chairpersons has improved the detection of management issues, but it tends to be costly.

A promising innovation being tested on a number of FAO projects is the use mobile phones as a monitoring tool. The system is designed in such a way that FFS data are sent by mobile phone to a web based database which automatically processes and aggregates the summary data for presentation through the project's website (for details see Part II).

