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Farmer Field School: An Innovative Approach to Educate and Empower Farmer Communities

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ABSTRACT

Farmer Field Schools (FFS) is a group-based adult learning approach that teaches farmers how to experiment and solve problems independently. Unlike farmers' training, Farmer Field School is a training method that provides hands-on practical experience in the farmer's field for one day in a week and continues every week throughout the cropping season. The essence of farmer field schools (FFS) is to empower farmers to learn, understand, and make informed decisions. The FFS approach challenges conventional agricultural extension approaches, which are based on top-down delivery of technology packages.

Keywords: Farmer Field School, FFS, Agro-ecosystem Analysis, Farmers' Empowerment

Introduction

"Knowledge without action is useless. Action without knowledge is futile".

You need to put your newly acquired knowledge into action immediately so that you reap benefits out of your acquired knowledge. Any knowledge would be useful and remain with you only when you put it to immediate use and subsequent practice. Merely acquiring knowledge is useless, if you do not use it. Knowledge needs to be at the center of all your actions for socio-economic growth.

Before I start, I would like to make two pints clear on how knowledge gets generated and how advisories are made and disseminated to farmers.

First, usually, in farm advisory services, farmers are given a set of recommended practices in a top-down approach. These recommended practices are a result of several agricultural research experiments conducted, in controlled conditions, in the fields of agricultural research station or agricultural university. The results of these experiments are summarized to arrive at a set of recommended practices and given as farm advisory information services to farmers, and farmers are expected to accept and adopt

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these recommended practices. Such a set of recommended practices may or may not be applicable, suitable and compatible to complex, diverse and risk-prone conditions of farmers' fields. So, farmers may or may not adopt them. Farmers are blamed for not adopting recommended practices.

Second, usually farmers under agricultural extension services, are given training at the beginning of crop season, *i.e.*, before sowing season starts. We expect farmers to remember all knowledge and use it as and when required during crop season. Do you think this is possible? No. Farmers may forget some and may not remember some crucial information. Then, we blame farmers for not adopting improved cultivation practices, even after being trained.

Farmer' Field School

The situations, as mentioned above depict the usual conditions in farmers' training and adoption of improved farm practices. But here is an innovative teaching and training process that addresses and solves these two questions faced by farmers and that is Farmer Field School.

In Farmer Field Schools, the set of recommended practices get generated, not in a field of far-away research station, but in the farmers' own fields in the villages, so that farmers in the village can adopt them in their own fields.

Instead of following recommended practices, farmers are enabled to generate their own knowledge based on observations, experiments, analysis in their own fields and take appropriate decisions on what to do and what not to do in their crops. So, no attempts will be made to convince farmers on the recommended practices. Instead, farmers are facilitated to generate their own understanding of agro-ecosystem and based on their observations, they take their own decisions independently. Thus, an empowerment process sets in among farmers in Farmer Field School.

In Farmer Field School, relevant knowledge is generated within farmer's fields. Farmer Field School is an innovative method of generating the knowledge in the farmer's fields, through observation, analysis, reflection and taking decisions based on agro-ecosystem analysis and putting this knowledge into action for the next one week. Through Farmer Field School, farmers are given regularly and frequently small capsules of information that is readily usable by them.

Unlike farmers' training, Farmer Field School is a training method that provides hands-on practical experience in the farmer's field for one day in a week and continues every week throughout the cropping season. So, a Farmer Field School runs usually for 14-15 weeks depending on the crop duration.

Farmers are trained to generate their own knowledge, assisted by facilitators.

What is a Farmer Field School?

Farmer Field School (FFS) is a group-based adult learning approach that teaches farmers how to experiment and solve problems independently. Farmer Field School approach was based on the fact that farmers learn optimally from field observation and experimentation. It started by developing IPM in rice farming in 1989 in Indonesia. Sometimes called "schools without walls", in these schools, groups of farmers meet regularly with a facilitator, observe, talk, ask questions, and learn together. Farmer field schools as an approach was first developed to teach integrated pest management (IPM) techniques in rice farming, but it has also been used in organic agriculture, cultivation of all crops, animal husbandry, and also non-farm income generating activities such as handicrafts and many more.

Philosophy and principles

The Farmer Field School approach is based on the fact that the best learning takes place by doing, rather than telling & listening. The facilitator does not lecture the farmers, but helps them to learn by asking questions and building on their experience and observations. Farmers are encouraged to make their own discoveries and draw conclusions. As an extension approach, Farmer Field School differs from the traditional, top-down "transfer of technology" method. Farmers interact with researchers to ask for help only when they cannot solve a problem by themselves.

Implementation

A typical Farmer Field School consists of 12-15 weeks of hands-on farmer experimentation and non-formal training during a single crop growing session. Farmers are expected to attend weekly classes over one crop growing season.

Steps involved in implementation of FFS

1. **Identifying the focus of the FFS:** This is the most critical step in preparing for Farmer Field School activities. It is important to spend sufficient time on this initial step. The selection of the Farmer Field School activity depends on farmers' needs, interests, and the problems that they are currently facing.
2. **Identifying participants for FFS:** Depending upon the focus of the Farmer Field School activity, identify a learning group of around 30-40 farmers who share a common concern or interest in the topic. They must be able to attend all sessions, and willing to work together as a team and share ideas. Selecting more numbers of farmers initially helps as the group is likely to shrink after the first few sessions. It is also okay to select

already-established groups like self-help groups, youth, and/or women's groups. The facilitator's familiarity with the village, its local leaders, history of the community, its cultural practices, gender relations, and potential areas of conflict are important elements in the selection process. Groups may consist of only men, only women, or mixed gender depending upon the culture and topic.

3. **Identifying the learning site**: Any Farmer Field School requires a location to hold meetings and a study object i.e. a field crop. The site must be suitable for the FFS activity in a given season and must be representative of the problems in the area. It must be easily accessible, and ideally the farmer owning the plot should be present for most of the time in the FFS sessions.
4. **Training of Facilitators:** The role of a facilitator is central to the Farmer Field School process. Each FFS needs a facilitator who takes participants through a series of hands-on exercises. Because it is not a typical extension approach, facilitators must undergo a special two to three-week training program. Facilitators can be extension staff of government or non-governmental organisations, community resource persons, or graduates of a previous Farmer Field Schools.
5. **Developing the curriculum:** Once the FFS group is formed the facilitator develops the curriculum based on the main problems identified by the group. Together with the group, the facilitator decides which activities to take up in order to further explore the problems, test the solutions, and identify what kind of help or resources are needed. FFS follows the natural cycle of a crop. Key activities include agro-ecosystem analysis, field comparative experiments, group discussion, and learning exercises. Sometimes field visits to other FFS sites might also be included. If the curriculum is not sufficiently tailored to suit the needs and resources of farmers, they are likely to lose interest.
6. **Conducting FFS Session:** Each activity is well structured, i.e., has a procedure for action, observation, analysis, and decision-making. The emphasis is not only on "how" but also on "why". This helps to cover all aspects of the subject and link up with what is happening in the farmer's own field so that the lessons learnt can be

applied directly. A typical day's schedule is given here.

Table 1: Typical FFS session in the original Indonesia programme:

Time	Activity
7.30	Opening (with a prayer where applicable); Attendance; Introduction to day's activities.
8.00	Go to field in small teams; make observation, take notes. Facilitator points out new developments.
9.00	Return to shade. Begin making drawings of sketches pf agro-ecosystem analysis, and discuss within small groups and arrive at management decisions by consensus.
10.00	Each team presents results and the group arrives at a consensus on crop management needs for the coming week.
11.00	Tea/ Coffee break
11.15	Energiser or group-building exercise (group-dynamics)
11.30	Special study topic or second crop, or something else of special interest to the group.
12.30	Closing (often with prayer)

Source: Gallagher (2003)

In each session, agro-ecosystem analysis is followed by preparing charts in small groups, presenting their observations and conclusions and participating in discussions and arriving at a set of activities to be implemented in the current week in farmer members' own fields.

Key Principles of Farmers' Field School are:

1. FFS is a school without walls. FFS is conducted in open field and under the shade of trees.
2. Farmer study the plants and their agro-ecosystem. A small group of 5-6 farmers observe and record various aspects of agro-ecosystem: sun, cloud cover, rainfall, humidity, temperature, water/moisture levels in field, etc.
3. Farmers discuss their observations in a small group, diagnose, the field, analyse and take their own decisions.
4. Farmers learn by doing better through more learner activity and experimentation, rather than through passive listening to lectures.
5. Farmers learn from mistakes. Each person's experience of reality is unique and valid. Some learn slow while others learn faster.
6. FFS teaches farmers learning how to learn. Farmers build their capacities to observe, analyse, reflect and draw conclusions and make decisions independently. Usually, farmers on seeing the damaged leaves and plants, immediately rush to nearest

pesticide shop, seek his advice and buy a chemical pesticide and spray on the crop. They are dependent on pesticide seller for protecting their crop. But with FFS, their way *of looking at and understanding pests,* changes.

7. Farmers are usually at the end of the chain of transfer of technology. They are given some recommended practices to follow. They were never taught the reason and logic behind the recommendation. This package of practices is decided at the top and sent to bottom - the farmers for compliance. But, FFS teaches farmers – the *transfer of science* by giving the details of the reason and logic behind the practices. In fact, scientific experiments are conducted to provide a learning situation for farmers to undergo a learning experience of observing, analysing, reflecting and taking their own decisions. Farmers are also taught through *transfer of learning* – understanding the process of how to learn and then to experiment more and learn more.
8. Farmers are taught problem solving skills Identification a problem, studying if deeply, understanding the causes and process of problem, farmers learn to solve the problems. They develop an orientation to perceive problems as challenges and not as constraints
9. Farmers field is the learning ground and they learn to solve real problems in their own fields. Usually, the recommended practice come from the fields of research station, which may not be representative of farmer's fields, so this recommended practice may not work successfully. But if the solutions are coming from farmers own fields, they seem to be move relevant, useful and practicable to farmer
10. Unity is strength Farmers in a group speak relevantly as they observed the agro-ecosystem of the farmers field and drawing their own conclusion through discussion and debate among farmers. Hence, they possess more power than individual farmers. As FFS follow a systematic training process the key steps are observation, group discussion, analysis, decision making and action planning
11. Understand the life of cycle of insect pests is the focus of FFS. Usually, you see symptoms of damage caused by insects or you see a caterpillar eating away the leaves. Now you ask - Is it sufficient to kill this caterpillar by spraying a chemical pesticide? No -you understand where this caterpillar came from and its life cycle. More than 15 different plant protection methods are available to keep the insect under check at all stages of life cycle.

12. In case of plant disease, the farmers are taught to act faster if there is an outbreak of a disease It hardly take 3-5 days to completely destroy the crop if all the three things in the disease triangle and present the inoculum, the conducive environment and the susceptible host.

Farmer Field School relies heavily on constructivist learning theory of teaching and learning. Constructivist teaching focuses on how to create successful learners. Constructivist teaching is about making good learners as opposed to simply giving information to learners. Farmer Field School focuses on teaching farmers *'How to Learn'*.

Give a fish to a man
He will go no hungry. He is fed.
Come next day, give him a fish.
He is fed. He is happy.
Come next day, he expects fish
Then teach him how to fish
Then he is fed for life.

Instead of giving information, as a dole, teach farmers the skills of learning, he or she will keep learning and keep surviving in life. Merely giving will make him complacent, but make him learn to seek, the world is there waiting to be sought and cherished.

A Special Note to Master Trainers

In order that farmers get benefit out of farmer field school, master trainers need to conduct the farmer field schools every week with utmost zeal, sincerity and enthusiasm. Following pointers may be treated as guides.

- Farmers' perceptions, past experiences, field observations, and their understanding interact in constructing farmers' knowledge. Facilitators need to strengthen this interaction and get farmers' knowledge enriched.
- Reviewing should be taken up as the first and foremost step every week regularly in farmer field school. Reviewing helps to assess the effect and impact of last week's decisions and actions, analyse current week's data on agro-ecosystem and helps devise this week's decisions. Reviewing will also help to foresee any new developments in next week and help us to prepare and take any pro-active actions and decisions. Regular reviewing would also reinforce farmers' key learning and strengthen knowledge generation process among farmers. Thus, reviewing helps in empowering and enabling farmers in farmer field school.
- Farmer Field School can be used as an effective educational tool by the Master Trainers and Facilitators in transforming the teaching-learning process for farmers.

Role of Facilitators and Capacities required

The effectiveness of FFS depends largely upon the facilitator's role and attitude.

She or he is expected to encourage participants to ask questions and reach their own conclusions. It helps if the facilitator has farming experience. More than technical knowledge or higher educational degrees, it is important for facilitators to have good leadership skills, the ability to listen, be sensitive to group dynamics, and be well versed with participatory techniques. In order to hone their skills, it is recommended that each facilitator guides at least three FFS per year.

In the longer term it is desirable to have a team of farmer facilitators (community resource persons) who have the advantage of knowing the community and the area well, and are likely to be accepted better by other farmers who speak their local language. Moreover, being local, they require less transportation and financial support, and can operate independently. Farmers who are interested in becoming facilitators can be identified in course of the FFS process. These "FFS graduates" are usually given special farmer facilitator training of 10-14 days to improve their technical knowledge and develop organisational and facilitation skills.

CONCLUSION

Farmer Field School is a non-formal educational tool for teaching farmers to make keen observations in the fields, analyses the ecosystem and record notes and then based on the recorded data, take decisions on crop management.

FFS focuses on developing skills among the farmers and master trainers as both of them learn every week from one another through participatory learning processes. The most essential activity of FFS is reviewing, a process that needs to be taken up regularly every week as an essential and mandatory activity. During the review, as assessment of effects of last week's actions and decisions will be done to guide this week's actions. Farmers are encouraged to share their experiences of last week in their own fields. After analysing current week's data reviewing helps in taking pro-active actions for the next week and prepare for any eventualities in crop management. FFS encourages farmers to make their own studies of field situations and then take appropriate decisions and actions and not rely on someone else's recommendations

FFS enables farmers to develop their own (farmers') knowledge based on the farmers' perception, past experiences, field observations and understanding the processes and rationale and then take decisions suited to the field situation. Farmers' knowledge gets enriched through this interaction of farmer's perception, observations and understanding.

FFS needs to be taken seriously by the Master Trainers and Facilitators as this is the best tool for educating, enabling and empowering

farmers. FFS needs to be executed systematically and thoroughly as it would help farmers gain new understanding of crop management and also would empower their skills.

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