AN OVERVIEW OF KARI'S FARMER FIELD SCHOOL PILOT PROJECT

The Soil Management Project (SMP) and the Legume Research Network Project (LRNP) were initiated in 1994 to combat soil fertility decline in smallholders' farms in Kenya. The projects were provided with financial and technical support by the Rockefeller Foundation. The SMP was implemented in two KARI Centers; the National Agricultural Research Center at Kitale and the Regional Research Center at Kisii. The SMP adopted the farmer participatory research (FPR) approach to implement research activities so that farmers and other stakeholders can participate actively in technology development and transfer. In addition to decline in soil fertility, farmers identified lack of suitable crop varieties and livestock feeding as important constraints limiting smallholder agricultural production that the project needed to address. The LRNP was began as a legume screening network to primarily screen suitable green manure legumes in eleven sites spread across the country from 15 m to 1900 m asl. The Network expanded its activities to include coordinated studies in legume residue management, evaluation of legume green manure as a component of integrated soil management and livestock feeding studies based on selected legumes.

The first phase of these projects ended in year 2000 after being on the ground for six years. At the end of the phase about ten technologies were identified as being ready for scaling up (i.e. wide scale dissemination in neighboring villages and regions having similar agro-ecological characteristics to the study sites). These technologies were,

1. Improved preparation, management and use of organic manures to improve soil fertility.
2. Different combinations of organic and inorganic fertilizers for maize, finger millets, forages and vegetables (kales and cabbages).
3. Soil improving green manure legumes.
4. Low cost soil conservation structures.
5. Bean varieties tolerant to beanfly infestation and root rot.
6. Food legumes other than beans for intercropping with maize.
7. Suitable forages for waterlogged soils.
8. High yielding forage species for milk production
9. Suitable crop varieties for different agro-ecological zones.
10. Plant extracts for control of crop pests (ITK).

The Farmer Field School (FFS) approach was one of the scaling approaches adopted by the two projects to disseminate the technologies. It was adopted because of the success it had had in Asia in scaling up IPM technologies for control of rice insect pests. The approach is a participatory approach that uses non-formal adult education methods based on experimental learning techniques and participatory training methods. It emphasizes learning by doing. The learning process takes place in the field and is normally designed to last for a full growing/cropping cycle. This enables farmers to participate fully in implementation of all components of the technology from planting to harvesting. The learning process accords farmers opportunity to observe and reflect the merits and demerits of the technologies and thereby make informed decisions of whether to adopt them or not.

The FFS approach was adopted on pilot basis for three years beginning March 2001 with the aim of incorporating FFS approach into the SMP and LRNP activities for disseminating promising technologies. The pilot project had four major activities namely;

a) a FFS sensitization workshop
b) a season-long ToT course for researchers and extensionists to be involved in the scaling up work,
c) development of farmer training curricula of the technologies to be scaled up and
d) development of participatory monitoring and evaluation tools for the FFS process and its outcomes

FFS sensitization workshop. This workshop was held from 6-8th March 2001 in western Kenya. Its primary objective was to sensitize senior managers of KARI and Ministry of Agriculture and Rural Development (MoARD), researchers and extensionists implementing SMP and LRNP, and farmers on the FFS approach for information transfer and scaling up of agricultural technologies. About 90 participants attended this workshop.

Training of Trainers (TOT) course in FFS approach. The aim of this course was to equip the SMP and LRNP staffs with methods, skills, attitudes and knowledge to design, facilitate and implement FFS in their project mandate areas. The participants came from KARI centers at Kitale, Kisii, Kakamega, Embu and Mtwapa. The course was conducted in two parts; the first part covered the theory of the FFS, planning and running FFS. The second part was a season long training in the field where participants initiated and ran FFS. FAO Kenya provided two facilitators to conduct the training. About 60 participants went through this training.

Development of farmer training curricula of the technologies to be scaled up. During part one of the ToT course participants developed draft training curricula of the FFS they were to initiate in their respective project areas. These draft curricula formed the basis for preparation of weekly lessons of the FFS.

The ToT participants met once a week to prepare the lessons for the following week and also improve the contents of the lesson of the previous week using feedback from farmers. At the end of the ToT the weekly lessons were to be compiled into a farmer training curricula for each of the technologies to be scaled up. Participants were encouraged to document different stages of the technologies being demonstrated which were to be used to enhance the quality of the curricula.

Development of participatory monitoring and evaluation (PM&E) tools for the FFS. This was to be done during a methodology development workshop and by four Msc. students who were expected to undertake research to refine the FFS process and test some tools developed during the workshop.

I) PM&E Methodology development workshop. The workshop aim was to jointly develop tools/frameworks for participatory monitoring and evaluation of the

effectiveness of FFS as an approach of up scaling of INM technologies and information. The specific objectives of the workshop were;

a) to expose participants to the basics of participatory M&E and help them identify the data needs for participatory M&E
b) to jointly design and develop participatory tools/frameworks for internal monitoring and evaluation of the effectiveness of FFS as an approach for up scaling adoption of technologies
c) to impart to the participants analytical and reporting skills for participatory M&E.

II) Support for three Msc. students. The Msc. training was included in the project so that the students could undertake research that would contribute to the development and refinement of M&E tools for the FFS process. They were also expected to evaluate the rate of technology spread and the impact it is likely to have on smallholder farming. Table 1 shows the students that are on Msc. training.

Table 1: Msc. students undergoing training through the support of FFS pilot project

Msc. student	KARI center	University	Course/Degree	Course Tutor	Commencement of fieldwork
Gideon Mwagi	Kisii	Egerton	Msc. Extension	Prof. Chris Onyango	May/June
David K. Bunyatta	Kitale	Egerton	Msc. Extension	"	"
Sally Rono	Kitale	Moi	M.Phl. Agric. development and policy	Prof. Mark Odhiambo	August
Micah Powon	Kitale	Egerton	Msc. Hort.	-	May/June

Farmer field schools initiated in the five 5 KARI centers. Seventeen FFS were initiated (Table 2) and most of them were to be terminated by the end 2002. It is hoped that double that number will be initiated in 2002 and a similar number in 2003.

Table 2: Current status of FFS by February 2002

KARI-center	Number of FFS	Participants of season long training			Participating farmers
		Researchers	Extensionist	Farmers	
Kitale	8	12	10	6	174
Kisii	6	13	5	6	213
Embu	1	2	1	1	35

Kakamega	1	2	1	1	38
Mtwapa	1	2	1	1	15
Total	17	31	18	15	475