

# FARMER FIELD SCHOOLS FOR SOIL PRODUCTIVITY IMPROVEMENT, CONSERVATION AGRICULTURE AND NUTRIENT MONITORING

## Introduction

A group of governmental, non-governmental, research and academic organizations recently developed a partnership programme to adapt, validate and test the farmer field school (FFS) approach for improved land management. The programme will operate in eastern Uganda in Busia, Mbale, Pallisa and Tororo districts where soil productivity levels are low and continue declining. The experiential learning approach of FFS will enable farmers to be better equipped to understand the problems of soil productivity.



Source: Amoud R. Braun

Bagoni FFS group during a group dynamics exercise, Busia district, Uganda

Three programmes/projects make up the partnership.

### 1. *Piloting farmer field schools for soil productivity improvement*

This programme aims to strengthen and equip farming communities, farmers and service providers [extensionists, facilitators and non-governmental organizations (NGOs)] with better rainfed land management skills and decision-making capacity to overcome soil productivity limitations, and to enhance sustainable and economically viable land management practices.

### 2. *Piloting conservation agriculture for improved land management and livelihoods of smallholder farmers*

The main purpose of this FAO Technical Cooperation Programme pilot project is to introduce conservation agriculture (CA) principles as an integral part of improved land management and livelihood strategies of smallholder farmers.

### 3. *Integrated nutrient management to attain sustainable productivity increases in East African farming systems*

This research and development project will combine quantitative and qualitative research approaches within the framework of farmer field schools, specifically in the area of integrated nutrient management.

These programmes/projects were initially designed separately but, owing to the commonalities in the intended approach, the partnership programme was established. The idea is to develop the approach and FFS curriculum across Uganda and not to restrict the work to the initial programme districts.

## Capacity building

One critical success factor that has been identified for the FFS approach for improved land management is the need for capacity building of facilitators and curriculum development, especially for farmer-led FFS that are seen as the key to scaling-out the approach. Therefore, service providers (farmer group facilitators, extension providers, NGOs, etc.) need supportive materials to illustrate good soil and water management practices that can be tested through participatory technology development and demonstrations, and to help in identifying the most appropriate options for different farm types and contexts. They also need information to highlight and understand aspects of decreasing soil productivity and its' improvement.

## FFS curriculum 'toolbox'

There are many examples of different tools that are available but most of these are limited in terms of what is needed to support farmer learning for improved land management and to integrate farmer knowledge in this area into the research and development activities of different stakeholders. Therefore, there is a gap in our ability to provide extension agents, NGOs and researchers with the tools they need to work effectively with farmers on improved land management. Many extension and other materials are available but not in a user-friendly or client-targeted format. Such materials



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need to be less prescriptive and stronger on the process side (effects of practices on the functioning of the system) to help farmers understand and refine their own experimental and management approaches.

This programme will develop a FFS curriculum 'tool box' to enable farmers to develop and implement appropriate natural resource management techniques. This could include diagnostic methods for crop nutrient deficiencies and toxicities, including simple bioassay methods to demonstrate for example procedures for effective fertilizer placement methods, and crop residue management for soil, water and nutrient conservation.

### **The main activity areas include:**

- ▶ awareness raising and demonstrations/field days of suitable technologies with stakeholders;
- ▶ training of trainers: subject matter specialists, extension staff and farmers groups;
- ▶ participatory technology development with farmers' groups;
- ▶ monitoring and validation of technologies with farmers and other stakeholders;
- ▶ assessment of technical options and their socio-economic implications; and,
- ▶ development of larger-scale follow-up programme.



Source: Arnould R. Braun

Facilitators undergoing on-the-job training, Busia, Uganda

## **Programme areas of intervention**

Busia, Mbale, Pallisa and Tororo Districts, Eastern Uganda

### **Programme partners**

The programme is supported by:

- ▶ the Rockefeller Foundation;
- ▶ the Land and Water Development Division and the Technical Cooperation Programme of the Food and Agriculture Organization of the United Nations;
- ▶ the INCO programme of the Directorate-General XII (Science, Research and Development) of the Commission of the European Union; and,
- ▶ the International Programme of the Dutch Ministry of Agriculture, Fisheries and Nature Management.

### **Technical partners**

- ▶ Africa 2000 Network (A2N), Kampala, Uganda;
- ▶ District Departments of Agriculture, Busia, Mbale, Pallisa and Tororo Districts, Eastern Uganda;
- ▶ Seven civil society organizations operating in Eastern Uganda in the areas of food security and technology transfer;
- ▶ Soil Science Department, Makerere University, Kampala, Uganda;
- ▶ Kawanda Agricultural Research Institute (KARI) and Agricultural Engineering and Appropriate Technology Research Institute (AEATRI), National Agricultural Research Organisation, Kampala, Uganda;
- ▶ Land and Plant Nutrition Management Service of the Food and Agriculture Organization of the United Nations, Italy; and,
- ▶ Tropical Soil Biology and Fertility Institute of CIAT, through its officers/programme in Kampala, Uganda.

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