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INSIDE THIS ISSUE

Farmer Field
School
Approaches

Adaptive
Management and
Learning

Partner Profile:
Churches Action in
Relief and
Development, Malawi

Welcome
to John
Mbae

Farmer Field School Approaches

Neil Rowe Miller and John Mbae, Agriculture and Livelihoods Technical Advisors for Eastern Africa

The Farmer Field School (FFS) approach grew out of rice Integrated Pest Management work in Asia in the 1980s. By 2016, the FAO estimated that over 12 million small-holder households had participated in, and graduated from, an FFS. The FFS concept has since been extended to livestock owners ([Pastoralist Field Schools](#)) and marketing promotion ([Farmer Marketing Schools](#)). CFGB Members and Partners are increasingly using FFS approaches in their food security programs, yet we still get lots of questions about what an FFS is, and the most effective FFS approaches.



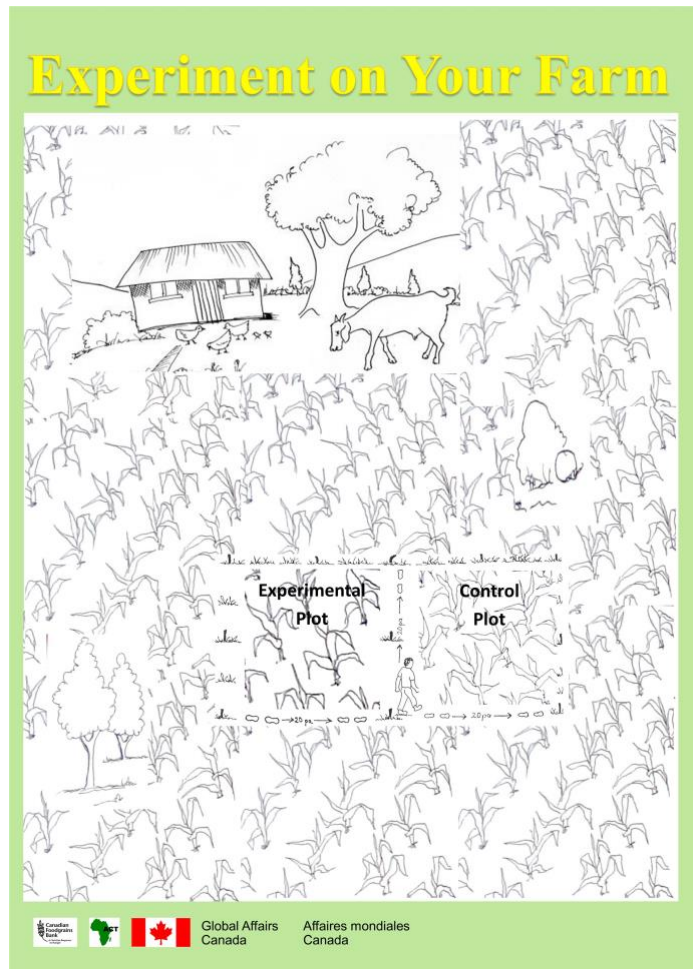
Side-by-side comparisons on individual farmers' fields are more convincing than group demo plots.

WHAT IS A FARMER FIELD SCHOOL?

The essence of an FFS is a group of farmers who use their own field, or fields, as a real-world classroom. They meet regularly, usually with the guidance of a facilitator, and carry out experiments designed to test potential innovations which they have chosen (e.g. new varieties, new management systems, etc.) The role of the facilitator is not to teach or provide answers, but rather to help the group identify their priorities, conduct trials, and come up with their own conclusions and solutions. Test plots are generally small (e.g. 20 m x 20 m) and always laid out with a control plot of the same size for comparison. For more on FFS organization and facilitation, consult the FAO's [Farmer Field School Guidance Document](#).

KEY LESSONS FOR FFS SUCCESS

- **When farmers are encouraged to experiment, they identify appropriate and sustainable solutions.** When farmers lead, rather than following someone else's set agenda, they inevitably guide the process toward practical, relevant solutions. They may need help identifying potential techniques and/or technologies to test, but they know their context and resources better than anyone else. When they participate in identifying their own solutions, they own the results, and they are empowered to continue improving and innovating long into the future.
- **Use test plots on individual farms rather than on group-managed plots.** In the classic FFS model, a single garden is managed by the whole group through a contracted agreement with the owner. Farmers decide, based on the results of the group plot, what to implement on their own fields. An alternative model, being used by many CFGP Partners, is for each group member to test the innovations on their own farm instead of in a group plot. Group meetings are rotated from one farm to another, thus creating a social incentive for each member to perform to standard. ***This rotating classroom approach has generally resulted in much higher adoption rates than the classic approach which centers on a group garden.*** It also allows for greater diversity and creativity on the part of individual farmers, which leads to greater overall learning for the group.
- **Build on existing groups whose main objective is farming.** Groups which already meet together because of family, religious, or business ties (e.g. Village Savings and Lending Associations) are more likely to carry out sustained FFS activities than groups which are formed from scratch for the sole purpose of project participation. FFS activities can add value by building on the historical trust and collaboration of such existing groups, and they are more likely to continue FFS activities after the project has ended.
- **Start small and simple, but plan for expansion.** Initial experiments should include just one or two innovations plus a control plot. This enables farmers to get used to the process and to generate the confidence that they can, in fact, identify their own solutions before expanding to other issues.
- **Plan together with the farmers.** The facilitator should use a curriculum calendar to guide the group through their learning activities at the appropriate times when they can be implemented during the season. FFS meetings shouldn't be planned on market days or when some members (especially women) are busy with other duties.
- **Ensure follow up and mentoring visits.** Farmers learn at different paces, and results may differ from one farm to another. The facilitator should provide technical back-up through visits to individual farms, preferably with the help of a Lead Farmer.



Training materials prepared by ALTAs include a module on how to conduct experiments on farmers' fields. [Download a copy here.](#)

- **Keep thorough records:** Farmers should be expected to keep track of planting dates, inputs, labor, yields, their perception of results, etc. This information should then be compiled by the project and disseminated for wider learning.

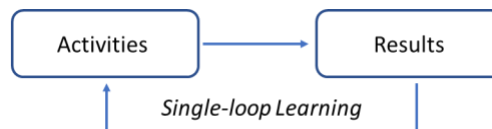
The FFS approach is clearly one of our most powerful tools to engendering agricultural innovation and food security. The “classic” FFS model may need some tweaking for maximum effect, but its underlying tenant of empowering farmers to discover their own solutions is exciting and enduring.

Adaptive Management and Learning

Mike Salomons, Agriculture and Livelihoods Technical Advisor

A key to improving the quality of agricultural development programming is learning from what has gone well, or not so well, and making changes to project implementation in response. This process is referred to as *adaptive management*. Put another way, adaptive management is an intentional process of changing the path we take to achieve project goals in response to continuous learning and information about project performance and the external environment. In this article, we will focus on how to use learnings to improve project design.

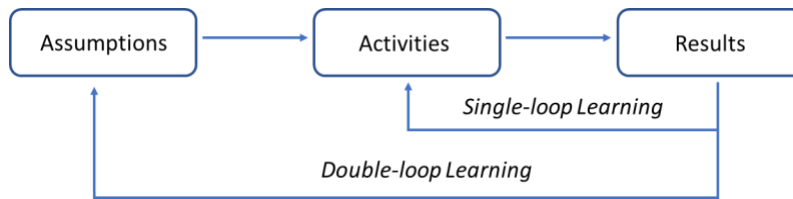
At its simplest, adaptive management is about being flexible with project planning and implementation. For example, if a community experiences an unexpected food shortage, this might be solved by providing food assistance. Or if a desert locust outbreak occurs, we might launch an insecticide spray campaign. This simple approach to adaptive management is described as *single-loop learning*:



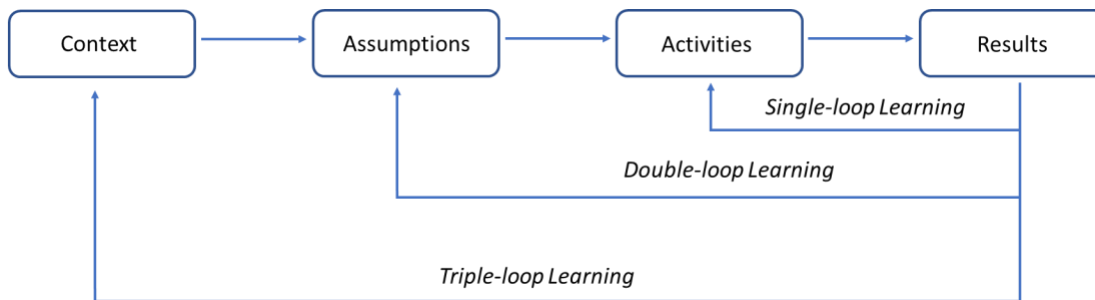
Single-loop learning is usually all that is required for “simple” problems. Simple in this sense does not mean that they are easy problems to deal with, only that they are solvable, and that there is general agreement amongst project stakeholders on the best solution. The main question for single-loop learning is “Are we doing things right?”

Take, for example, an agroforestry project in rural Malawi. Single-loop learning might involve the project team studying their community tree nurseries, and discussing how to make these activities more effective (for example by increasing the number of trees planted or by moving the nursery to a location more convenient for farmers). Single-loop learning takes place frequently during project implementation, usually on a monthly or at least quarterly basis, and sometimes (especially in environments where there is a lot of change going on) more often than that.

Double-loop learning includes not only learning about the activities you are doing and how they can be improved, but also questioning the assumptions you are making about how change happens. The main question for double-loop learning is “Are we doing the right things?” The project team might look at specific activities (for example, the community tree nurseries in the above project) and ask if these are actually the best ways to grow and distribute tree seedlings. They may decide, for example, that it is more efficient and effective for each farmer to have their own individual tree nursery. Double-loop learning takes place less often than single-loop learning, usually on an annual basis (or sometimes as part of a mid-term evaluation or project review).



“Complex” problems are not solvable but only manageable. (i.e. the problem cannot be solved completely, but the situation can be made better). Furthermore, different stakeholders often have different (and sometimes conflicting) ideas on how best to address the problem. Improving the agricultural system of the above rural community in Malawi is an example of a complex problem for which there are many possible “solutions” (for example green revolution technologies such as fertilizers, hybrid seed, and agro-chemicals; or agroecological methods such as compost and agroforestry). A complex agricultural system will never be made perfect but will always require ongoing management and adaptation. Projects dealing with complex problems require more robust systems of adaptive management.



Triple-loop learning involves taking a step back from the project in order to ask “Is this the best solution?” and “What haven’t we thought of?” For example, the project team from Malawi might ask themselves if the promotion of agroforestry is actually the most effective way to improve the agricultural system, or whether other activities could be added to make the project more effective. Triple-loop learning is done infrequently; usually when designing a second phase of a project, or as part of an assessment process when applying learnings from previous projects to a new context.

CFGB strongly encourages its Members and implementing Partners to develop a culture of learning. Over the life of a project we *expect* that changes will need to be made to project plans, and as long as there is sound reasoning behind the proposed changes, we welcome them as a sign of a strong, healthy organization. For more on information on adaptive management, download the [Pact Adaptive Management Guide](#). What kinds of learning are you applying in your project? If you are only applying single-loop learning in your programming, what activities could you do to integrate double and triple loop learning into your project cycles? We would love to hear from you on this, including if you would like any assistance in designing a more robust learning strategy for your programming.

Partner Profile: Churches Action in Relief and Development, Malawi

Lilian Zheke, Agriculture and Livelihoods Technical Advisor for Southern Africa

Churches Action in Relief and Development (CARD) is a Christian, non-governmental organization that implements humanitarian interventions, development work, and advocacy initiatives. The organization was started in 1995 and was registered in Malawi in 1997. CARD’s mission is to support vulnerable communities with innovative solutions that build their capacity to adapt and respond to challenges in the environment.

CARD began partnering with CFGB through the Presbyterian World Service and Development (PWS&D) in 2016. Their first CFGB/PWS&D-supported project was *A Response to El Nino-Caused Drought Emergency Project in*

Balaka, which provided access to food for households affected by drought in Balaka District. As a follow-up, CARD began the *Strengthening Production and Marketing Capacity of Smallholder Farmers in Balaka Project* in 2019. This project seeks to enhance food security among 750 households by increasing food crop production through promoting Conservation Agriculture (CA) and other good agronomic practices, increasing awareness of weather forecasts, and improving access to markets.

In promoting CA and other good agronomic practices, CARD uses a Lead Farmer approach, through which peer farmers, who were slow to adopt, have been convinced by the performance of the Lead Farmers' fields. Farmers have also been organized into groups to increase the economic empowerment of women and households by facilitating linkages to more profitable markets and value addition.

The project has led to to increased adoption of CA and increased cultivation and marketing of cash crops such as cowpea and pigeon pea. Women have increasingly taken up leadership positions as Lead Farmers and in marketing committees. The project's work with the youth in savings and lending groups and entrepreneurship has helped them develop a culture of saving towards income generating projects.



CA Lead Farmer and peer farmer admire mulched field



A marketing committee chairperson addressing community members.

Welcome to John Mbae, ALTA for Eastern Africa

We are very pleased to welcome John Kimathi Mbae as our 4th Agriculture and Livelihoods Technical Advisor (ALTA). John joined the ALTA team in January, and will work together with Neil Rowe Miller to support Canadian Foodgrains Bank and Tearfund programming in eastern Africa. He is based in Nairobi, Kenya and works out of the TF Nairobi hub office.

John worked for MCC/CFGB as the Kenya Conservation Agriculture Technical Specialist in the Scaling Up Conservation Agriculture project for the past five years. Prior to this, he worked for the Centre for Training and Integrated Research for ASAL Development for 11 years. He earned an MS in Urban and Regional Planning and a BS in Animal Production, and continues to develop his family farm near Meru, Kenya. John is an active Catholic Christian, and we are blessed to have him in our team!

