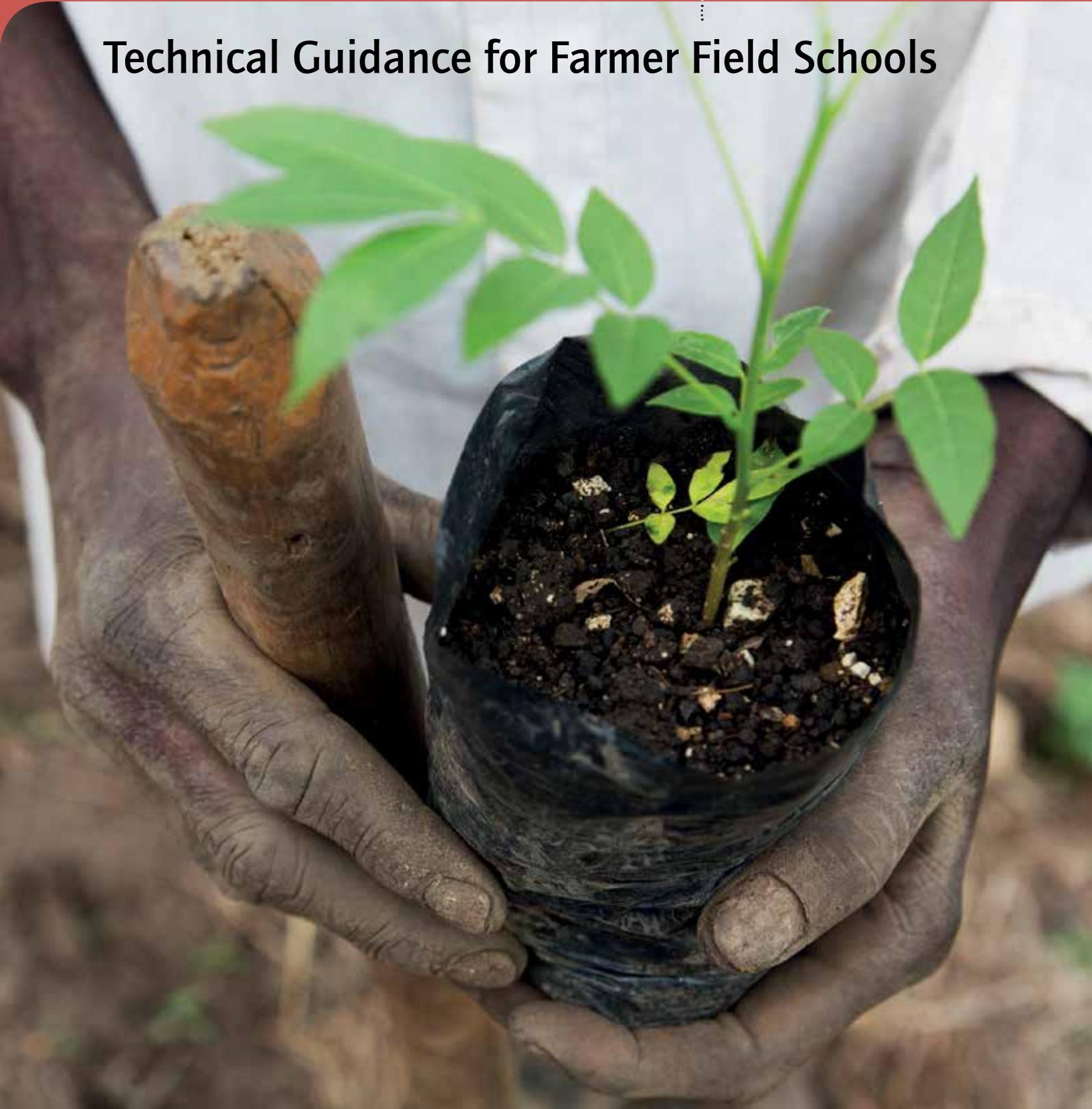


Learning that Lasts

Technical Guidance for Farmer Field Schools



The Technical and Operational Performance Support (TOPS) Program is the USAID/Food for Peace-funded learning mechanism that generates, captures, disseminates and applies the highest quality information, knowledge and promising practices in development food assistance programming, to ensure that more communities and households benefit from the US Government's investment in fighting global hunger.

Through technical capacity building, a small grants program to fund research, documentation and innovation, and an in-person and online community of practice (the Food Security and Nutrition [FSN] Network), The TOPS Program empowers food security implementers and the donor community to make lasting impact for millions of the world's most vulnerable people.

Led by Save the Children, The TOPS Program is a consortium program drawing on the expertise of its partners: CORE Group (knowledge management), Food for the Hungry (social and behavioral change), Mercy Corps (agriculture and natural resource management), and TANGO International (monitoring and evaluation). Save the Children brings its experience and expertise in commodity management, gender, and nutrition and food technology, as well as the management of this five-year (2010–2015) US\$20 million award.



Photograph: Andrea Aragon

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Photograph: Sean Sheridan



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Why Farmer Field Schools are important

This guide expands on these points, giving practical advice on running an FFS and key resources for further reading.

Providing opportunities for learning that lasts

Farmers need to get the most out of the land they farm.

To do this, they need to keep their knowledge and skills in both farming and business up to date.

Farmers need practical understanding of which methods are right for their local situation, not just general knowledge. Methods that work for one farmer may not work for another, so they need to know how to make the right choice.

Farmers in remote locations and those with low levels of literacy need better opportunities to learn about farming and how to adapt farming methods.

Farmer Field Schools

● **Bring the learning to the farmer's local area**

Teaching is adjusted to be relevant to the context and provided by people from the local area where possible.

● **Provide hands-on learning**

Farmers learn new farming techniques by trying them out on demonstration plots over a full crop-production cycle.

They can see which methods are promising for them, decide which to use and how to adapt them for their local conditions.¹

They remember what they have learned in this way.²

● **Bring local farmers together**

Farmers learn in groups of 15 to 30, so they can pool experiences and share ideas when they need to solve issues that come up.

● **Reach hard-to-reach farmers**

Localized learning at an FFS can be particularly useful for women, people with low literacy levels and farmers with medium-sized land holdings.³

It can also be effective for remote farmers.

● **Offer learning that can be passed on**

Each farmer at an FFS can be a teacher in the future, or an example for other farmers, so the learning spreads.

Most programs funded by Food for Peace incorporate learning. A Farmer Field School (FFS) provides a key opportunity for learning that lasts.

Key field tools

Technical manual – Farmer Field School approach Sustainable Agriculture Information Initiative/ GIZ, Nairobi 2010. Very practical how-to guide for running an FFS.

Farmer Field School implementation guide: Farm forestry and livelihood development FAO in-depth guide for Farmer Field Schools.

CARE Farmer Field School guide An FFS guide developed by CARE USA staff from Mozambique, Sierra Leone, and Liberia.

Keeping the learning centred on the farmer

Effective learning is based on practical, hands-on experience

Localized learning

Learning is most effective when it is based on **practical, hands-on experience** on **demonstration plots** in farm fields.⁴ New methods and materials can be tried with **consistent extension support**, and training can include many additional topics such as farm management, literacy, and financial services.

There are a number of important differences between the localized on-farm approach and the model of an FFS based at a central location. Experience shows that a local on-farm FFS is a better way to engage farmers.

Local on-farm FFS	Central FFS
<ul style="list-style-type: none">● A farmer hosts a small demonstration plot on their land.	<ul style="list-style-type: none">● Demonstration plots are maintained at a central place or training center.
<ul style="list-style-type: none">● Neighboring farmers can be FFS trainees, observing and contributing to demonstrations throughout a full crop production cycle or growing season, from preparing the land to harvesting the crop.	<ul style="list-style-type: none">● Farmers have to be brought to the center for training for short periods of days or weeks; too short to cover a full growing season.
<ul style="list-style-type: none">● Farmers can participate without much risk or disruption to their own farming workload.	<ul style="list-style-type: none">● Farmers need to leave their own farm work unattended.
<ul style="list-style-type: none">● Financial incentives are not needed to motivate farmers to participate.	<ul style="list-style-type: none">● Travel per diems are needed, which can motivate farmers more than the learning itself.
<ul style="list-style-type: none">● Farmers believe that the demonstrations are authentic as they are in typical farm conditions, with training provided by local farmers.	<ul style="list-style-type: none">● Many farmers do not believe that the demonstrations are authentic because they are in an artificial, well-equipped environment with training provided by center trainers.
<ul style="list-style-type: none">● Farmers can decide which methods to use and adapt for their own farming.	<ul style="list-style-type: none">● Farmers may remain unsure about which methods they can use and adapt themselves.
<ul style="list-style-type: none">● New trainees can meet and learn from more experienced learners.	<ul style="list-style-type: none">● It may not be practical to arrange for new trainees and experienced learners to meet at the center and learn from each other.
<ul style="list-style-type: none">● Demonstrations are low cost.	<ul style="list-style-type: none">● External funding is needed to maintain training centers.

Minimum standards for an effective FFS

- The FFS is led by a local individual, preferably known in the area.
- The leader has technical farming knowledge and adult education skills.
- Participatory surveys of local farmers' needs, and analysis of any barriers to learning and adopting, determine the training topics covered.
- The FFS trial plots are on real farms in typical conditions.
- The FFS absorbs the cost and risks of demonstrations so that host farmers and trainees do not risk losing part of their food supply.
- The FFS does not use false incentives such as daily allowances, food, free tools, or seeds.
- Local farmers decide for themselves if they want to become FFS trainees.
- FFS trainee groups are between 15 and 30 farmers.
- FFS trainees work hands-on in the demonstration plots and participate directly in discussions about materials used and lessons learned.
- FFS trainees meet every two weeks throughout the crop production cycle and more often when work on the plot and training is at its peak.
- The FFS measures output and cost summaries from demonstration plots (for example yield and profit calculations).
- The FFS assesses levels of satisfaction with results and FFS trainees say whether and how they will use new methods learned on their own farms.
- The FFS connects trainees with private sector suppliers of the inputs and equipment they will need to use new methods in their own farming.



Photograph, Nancy Farese

How to ensure an FFS is effective

The FFS leader must be local and preferably known in the area

The skills and responsibilities of the FFS leader

An FFS leader needs to be a **local individual**, preferably known in the area, with technical farming knowledge and adult education skills.

They must know the local context, including the:

- land
- climate
- people
- crops
- markets
- relevant technical issues.

The FFS leader can be supported by a co-leader with other skills and experience if the training in the FFS includes subjects that the leader cannot cover, such as:

- post-harvest conservation
- business or group management
- literacy.

The FFS leader's tasks and responsibilities include:

- Planning and organizing training schedules (with help from local farmers).
- Providing materials and information.
- Prompting and supervising discussions during planning and training.
- Providing brief lessons before activities begin.
- Providing a timetable for field activities and getting activities started.
- Ensuring that activities are completed on time by helping farmers to agree a shared way of working together.
- Supervising the measurement and recording of results.
- Using discussions as a way of helping farmers to see what they have learned from working on the demonstration plots.
- Encouraging farmers to share their ideas or plans about applying and adapting what they have learned on their own farms.



Photograph Benny Manser

Designing the training course (curriculum)

The first step in designing an FFS training course or *curriculum* is to **learn what farmers themselves feel they need**. A participatory survey⁵ should be completed, which asks farmers directly about their experience and the problems they face.

Farmers may not know what possible solutions exist for their problems, so solutions may need to be proposed by the FFS. Solutions should always respond to the needs farmers have identified. Before they are built into an FFS training course, **solutions should be tested** with focus groups to see if they are acceptable and that there is enough interest in them.

It is important to know what might prevent farmers from applying new methods on their own farms. Identifying and understanding these issues, or barriers, is called *barrier analysis* and it can be included in the preparation work for the training course.

The FFS course must provide mainly **practical hands-on learning** for farmers, so it needs to be designed to allow them to try out methods for themselves on the demonstration plots and other field locations. Farmers will learn more from doing activities themselves, discussing the experience, and seeing the results of their work than from listening to an FFS trainer.



Photograph: Sean Sheridan

The FFS leader should include relevant **technical and economic information** to support the hands-on learning. This is particularly useful at the start of a course and can be shared with farmers wherever they can gather to listen and talk, and see any teaching materials the leader may need to use. Information might include expected yields, production costs, net benefits, and constraints that may limit the results farmers can achieve.

Identifying host farmers and FFS trainees

An **FFS host farmer** can be any farmer in the FFS area who has the time, motivation, and resources to be involved for a full production cycle.

An **FFS trainee** can be any farmer who wants to learn how to increase what they produce on their land and how much they can earn from it.

Trainees to choose for themselves whether they want to join an FFS course and should not be persuaded to join by being given daily allowances, supplies, or food.

Any supplies a trainee needs for their training, such as seeds or tools, should be arranged before the training starts so that they are not seen as an incentive to participate. Trainees should preferably get supplies from agro-dealers or directly through a different program to the FFS. Trainees should also not be awarded any supplies at the end of an FFS course.

The most effective learning group size is between **15 and 30 trainees**. This is small enough to allow everyone to share in the work of the demonstration plot and join discussions, and large enough to be cost effective and achieve the Food for Peace project's own targets for numbers of farmers reached.

Choosing a site for an FFS

The land used for an FFS should be **typical of the area** and accessible to the trainees.

The host farmer is likely to be relatively prosperous and less risk-averse, to be able to take the risk of providing some land for the demonstration plots and cope with regular visits from trainees throughout the production cycle.

Despite this, an FFS site should represent the type of land used by the majority of farmers in the area. It should not be on exceptionally fertile or well-watered land for example. Even poor land can be used, as it offers a good opportunity to learn how effective new methods can be.

To minimize the risk to the host farmer, demonstration plots are between 0.10 and 0.25 hectares to begin with. This is important because most smallholder-farmers have narrow margins for survival.



Providing resources for demonstrations

The FFS usually provides the small amount of inputs needed (for example seed and fertilizer) for the demonstration plot. This is because the plots are trials and there may be some doubt in the minds of the farmers involved.

If it is difficult to find a farmer who is prepared to be a host, a project may commit to paying a host farmer if the demonstration crop fails to cover them for the cost of the crop they have given up. It is not recommended that this is extended to trainee farmers.

Trainees should pay for the inputs used on their own farms if they take up the methods from the demonstration plots.

The calendar and timetable of an FFS

An FFS training course has the same timespan as a normal planting season because the demonstration plot follows a normal crop production cycle. This means that the times when there is most work to do are the same on an FFS demonstration plot as a trainee's own farm. The small size of the FFS plots reduces the impact of this, but the training course calendar and the timetable of sessions should be planned to keep time clashes to a minimum.

The best time in the calendar to hold sessions to share **technical information** is just before the planting season begins, so that trainees have time to attend. It also means they will know what they need to in time for the beginning of hands-on practical sessions on the demonstration plot when the weather allows.

Training sessions usually last from a few hours to half a day, so they don't take trainees away from their own farms for too long. In the parts of the planting season when workload is lightest, sessions can be fortnightly for tasks such as weeding, fertilizing, pest control, and monitoring the progress of the demonstration plot.

Around harvest time an FFS should hold a **field day** and invite the broader farming community to come and see the results of the demonstration plot. FFS trainees should answer any questions that come up on that day.

End of dry season

- Discussing methods
- ▼ Preparing the land

Rainy season

- ▼ Planting
- ▼ Re-seeding
- ▼ Fertilizing
- ▼ Spraying
- ▼ Weeding
- ▼ Fertilizing
- ▼ Spraying
- ▼ Weeding
- ▼ Discussing progress

Start of dry season

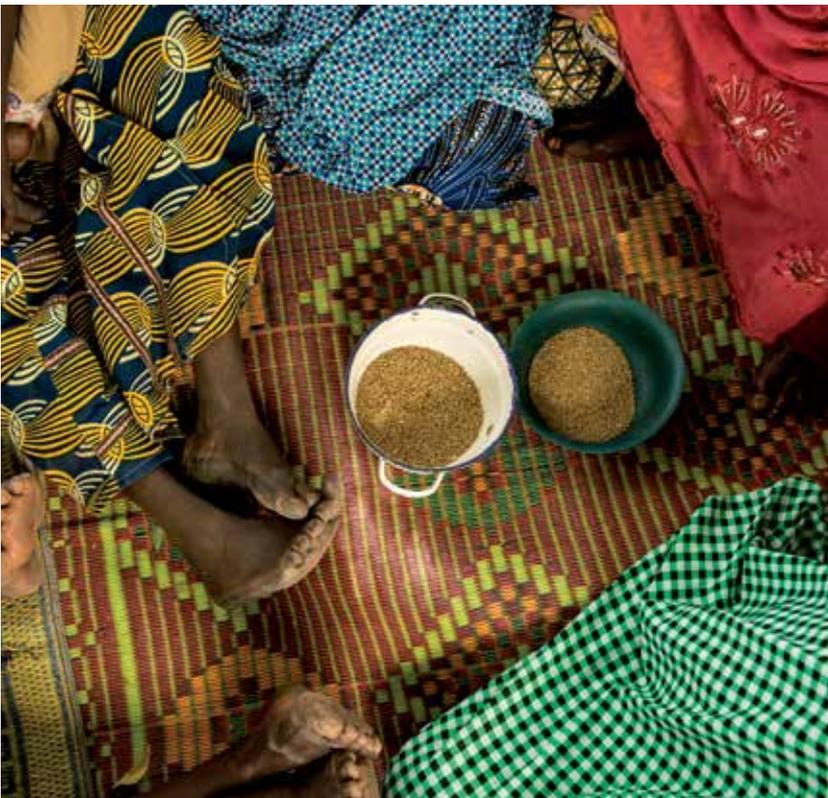
- ▼ Harvesting
- ▼ Threshing
- ▼ Winnowing
- ▼ Weighing
- Assessing

Involving FFS partners

There are a number of people who might be partners of an FFS. The FFS leader should ensure that the trainees can connect with them during their training course. Possible partners include the following.

- **Private agro-dealers** who can provide inputs such as seed and fertilizer and might supply some of the inputs needed for the demonstration plot. The connection between agro-dealers and trainees is essential for trainees to apply the new methods on their own farms because inputs are not provided by the FFS beyond the time of the training course, so agro-dealers should be invited to talk to trainees during their course.
- **Government extension agents** who can learn the methods being demonstrated and promote them in the future.
- **Neighboring farmers and livestock keepers** who can provide local land-races of seeds and animals, and manure.

The choice of possible partners should reflect the priorities of the project that an FFS is in. For example, if a particular project focus is on sustainable inputs, then the FFS leader should ensure that partners include people who can provide manure and organic inputs.



Photograph: Sean Sheridan

Learning from results and taking it forward

The difference between demonstration and traditional yields will convince farmers

Photograph: Benny Manser



The most important stage of an FFS training course is when the harvest is assessed and trainees can see the results of their work.

All trainees should join in the weighing and measurement of the yield of the demonstration plot, and the discussions of why they got the results they did.

If the demonstration goes as planned, the difference between demonstration plot yields and traditional yields is what will convince trainees about the effectiveness of the new methods.

Whatever the yield of the demonstration plot, the trainees should discuss it and share ideas for getting better results. The FFS leader should ask trainees about their plans to apply the new methods on their own farms and whether they need to know anything more to help make the methods work for them in the future.

Some farmers will decide not to apply the methods they have learned. There will also be some who do not perform well.

Occasional technical follow-up in the crop production cycle after the FFS training course can:

- help farmers to adopt the new methods they have learned
- provide reminders of technical information and opportunities to discuss challenges
- monitor and evaluate farmers' success with new methods as a part of measuring the effectiveness of an FFS and the project it is in.

This is dependent on a project having the resources to provide follow-up.

Mercy Corps Farmer Field Schools in Nepal

Mercy Corps Nepal ran an FFS program as part of its Safety Nets Supporting Agriculture Productivity (SNAP) project between 2010 and 2012 in Nepal.

The main topic of the FFS training course was the **System of Wheat Intensification** (SWI) a modified method of growing wheat which requires less seed and labor but still increases yields. The demonstration plots compared SWI with traditional methods, and two other methods.

Mercy Corps-Nepal were applying their *Farming as a Business* (FAAB) guidelines, so the FFS courses included business planning and marketing.

- Two thousand households were involved over two years.
- Over 600 farmers took part in 16 learning groups, which were formed in November (before the sowing season).
- Each FFS site used SWI, traditional planting and two from the following:
 - seed priming (soaking seeds in water before sowing)
 - sowing in rows
 - optimal plant density
 - improved seed varieties.
- Trainees monitored the demonstration plots throughout the growing season and discussed progress at monthly meetings, supervised by SNAP field staff.
- Results were compared between the four different approaches at harvest.
- All activities were supported by District Agriculture Development Officers of the Nepalese government.

Prashanta Raut, Mercy Corp-Nepal's SNAP program officer, reported the following results.

- The SWI method yielded 91.3% more grain and required 20% less labor than traditional methods
- The business and marketing skills gained at the FFS enabled farmers to analyse the costs and benefits of the new method and sell their surplus
- Farmers were able to make informed decisions about the SWI method for the future.



Photograph Miguel Samper

Endnotes

- 1** *TOPS Promising Practices Paper*
<http://fsnnetwork.org/resource-library/ag-nutrition-health-linkages/tops-review-promising-practices-food-peace-development>
- 2** Rola, Jamias and Quizon. 2002. "Do Farmer Field School Graduates Retain and Share What They Learn?"
Journal of International Agricultural and Extension Education
www.iaee.org/attachments/article/256/Rola%209.1-8.pdf
- 3** Davis et al. 2010. "Impact of Farmer Field Schools on Agricultural Productivity and Poverty in East Africa"
IFPRI www.ifpri.org/sites/default/files/publications/ifpridp00992.pdf
- 4** The term "demonstration plot" is sometimes replaced by "technical observation plot" or TOP
- 5** FAO: Participatory survey methods for gathering information.
<http://www.fao.org/docrep/w8016e/w8016e01.htm>

Photograph Benny Manser





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