



Farmer-to-farmer diffusion

Nepal: किसान-किसान कृषि प्रसार

Wider diffusion of sustainable soil management technologies through a demand responsive farmer-to-farmer diffusion approach

The Sustainable Soil Management Programme (SSMP) is spreading knowledge about sustainable soil management technologies through farmer organisations and government and non-government partners. These collaborating institutions are working closely with lead farmers in training and technology testing. These farmers in turn work in close collaboration with their local groups. Although this approach is successfully diffusing new technologies from lead to group farmers, and on to nearby farmers, it remains a big challenge to diffuse the technologies further to the wider community.

To increase the spread of the technologies, SSMP pilot tested farmer-to-farmer (FtF) diffusion in eight midhills districts in 2002, later expanding to an additional five districts. Firstly, district based FtF extension committees were formed. Their major function is to select and train experienced lead farmers (ELF); to identify demand farmer groups; to facilitate contact and agreements between ELFs and demand farmer groups; to assess these agreements; to approve and channel funds to accepted proposals, and to monitor and evaluate the services provided. The demand farmer groups both propose the training events and select which of the currently 500 ELFs they want to lead their training. Demand farmer groups may be any group of farmers. Their proposals need to be recommended by a 'demand actor' such as a non-government or government organisation, a local authority, or a development project. Once a demand proposal is approved, the FtF extension committee provides funds to the demand group to pay the ELF and the other costs of the training.

Experienced lead farmers play a pivotal role in this process. They are generally progressive farmers with long farming experience who have good leadership and communication skills, are motivated to bring about change, and are interested in serving disadvantaged groups. They are trained on sustainable soil management technologies to enable them to provide training and follow-up to farmers groups outside the areas of collaborating institutions and to disseminate technologies which have proven to be appropriate and successful under local conditions.

Left: A demand farmer group observing a cauliflower field (Christoph Morger)

Right: An experienced lead farmer showing his protected farmyard manure heap (Juerg Merz)

The Sustainable Soil Management Programme (SSMP) implements its projects in several midhills districts of Nepal (dark green: previous working districts; light green: districts in 2007)



WOCAT database reference: QA NEP1

Location: Nepal

Land use: Cropland

Climate: Humid subtropical

Related technology: Improved cattle shed for urine collection (QT NEP1); Legume integration (QT NEP3); Organic pest management (QT NEP4); Improved compost preparation (QT NEP7), Better quality farmyard manure through improved decomposition (QT NEP8)' Improved farmyard manure through sunlight, rain and runoff protection (QT NEP9)' Cultivation of fodder and grasses (QT NEP23); Urine application through drip irrigation for bitter gourd production (QT NEP24)

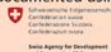
Compiled by: SSMP

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Problem, objectives and constraints

Problem

The Nepal government's agricultural extension system was widely dysfunctional during the recent conflict (1996-2006). Many agricultural service centres were disbanded and were therefore unable to provide essential services to local farmers. Many farmers, especially in the remoter areas, had nowhere to turn for technical help with their agronomic problems, often resulting in lower yields and less income.

Objectives

- Provide agricultural extension services with a particular focus on sustainable soil management
- Builds up an extension system that is functional outside of central government structures
- Sustainable learning from local farmer to local farmer
- Cost effective service delivery

Constraints addressed

Major	Specification	Treatment
Technical	Soil fertility decline and soil degradation	Sustainable soil management technologies
Institutional	Dysfunctional government extension services	Farmer-to-farmer exchange and learning
Financial	Lack of money for technical support	Reliance on local human resources

Participation and decision making

Target groups



Land users



Approach costs met by:

Development project (seeds, trainer)	50%
Farmers (labour, training costs)	50%
TOTAL	100%

Decisions on choice of the technologies: Made collectively by the demand farmer group and refined with assistance from experienced lead farmers. The main interest of demand farmer groups has been in farmyard manure management, legume integration, and vegetable production.

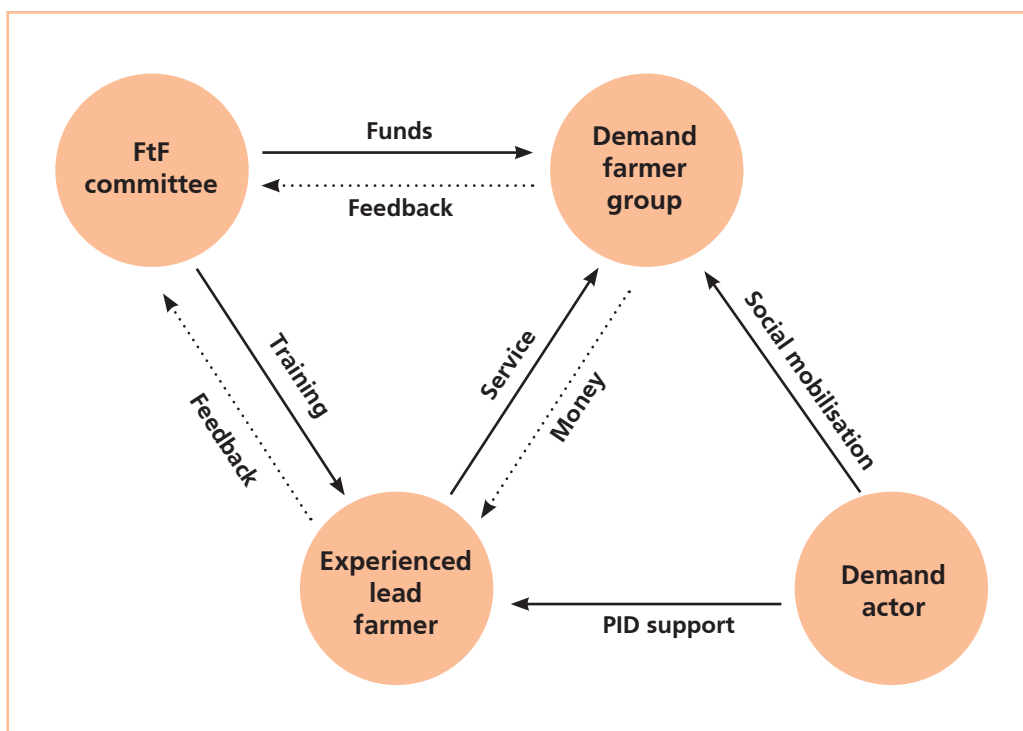
Decisions on method of implementing the technologies: Proposed by demand farmer groups with assistance from experienced lead farmers and endorsed by farmer-to-farmer committees

Approach designed by: Sustainable Soil Management Programme (SSMP) on the basis of experience from the literature and other projects of implementing agencies

Community involvement

Phase	Involvement	Activities
Initiation	Passive to interactive	Demand creation by demand actors and experienced lead farmers; in rare cases demand is created by demand farmer groups
Planning	Interactive	Preparation of demand proposals and submission to committee Proposal assessment by committee Selection of experienced lead farmer Fund disbursement to demand farmer group
Implementation	Interactive	Experienced lead farmer provides training in appropriate season on basic knowledge required The training is field based on the land of members of the demand farmer group The experienced lead farmer visits the demand farmer group two to three times after the training to provide follow-up and support
Monitoring/evaluation	Interactive	The demand farmer group pay the experienced lead farmer once they are satisfied with the services provided (= direct monitoring by clients); training report by experienced lead farmers to farmer-to-farmer committees including proposing potential new ELF's from amongst trainees; end of training monitoring by local monitoring person on behalf of the farmer-to-farmer committee.
Research	-	-

Differences in participation of men and women: Farmer-to-farmer diffusion is equally suitable for men and women. Equal participation of women should be ensured in mixed farmer groups. To date, about 33% of experienced lead farmers and about 60% of the members of demand farmer groups have been women.



Organogram of the farmer-to-farmer diffusion process

The detailed process is described in the operational guidelines (Paudel et al. 2002).

The committee is made up of:

- chief of the district agricultural development office (DADO) as chairperson
- representative of a collaborating institution (member secretary)
- programme officer of the district development committee (DDC) (member)
- one male and one female reputed local farmer (members)
- livestock and extension experts from the district livestock and agriculture development offices (members).

PID = participatory innovation development

Extension and promotion

Training: Training on the farmer-to-farmer approach was provided to different demand actors including non-government and government organisations, by resource persons closely involved in designing the approach.

Extension: The approach has been accepted by the government's Ministry of Agriculture and Cooperatives as part of its Agricultural Extension Policy (2007). Phase 3 of the Sustainable Soil Management Programme (2008 to 2010) will further support the institutionalisation of the approach at the operational level.

Research: Not applicable

Importance of land use rights: Not important for the success of the approach: it is only important for the technology that is diffused with this approach

Incentives

Labour: Own labour

Inputs: New seed and non-local inputs for demonstration purpose are provided for one season

Credit: Not applicable

Support of local institutions: Support only to local farmers groups

Long-term impact of incentives: Incentives provided by the programme are for demonstration only. If the technology is suitable to their circumstances demand farmer groups need to manage the required inputs themselves.

Monitoring and evaluation

Monitored aspects	Methods and indicators
Biophysical	suitability of the promoted technology
Technical	client satisfaction after the training
Socio-cultural	suitability of the promoted technology
Economic/production	suitability of the promoted technology
Area treated	none
No. of land users involved	regular recording of attendance during meetings/trainings/follow-up
Management of approach	monitoring of expenses; demand assessment

Impacts of the approach

Changes as a result of monitoring and evaluation: Regular monitoring and impact assessments have led to the continuous adaptation of the approach and its norms.

Improved soil and water management: Depends on the technology diffused to the group through this approach

Adoption of the approach by other projects/land users: The approach has been included in the government's Agricultural Extension Policy (2007); although it still needs to be implemented. In some districts, other development partners have expressed an interest in supporting this approach with their funds.

Sustainability: The approach is locally based and decisions are made by local institutions and farmers themselves. At present the approach is mainly financially supported by a development project with efforts being made to obtain more sustainable funding from local authorities, registered community groups (e.g. forestry, irrigation), and farmers groups' savings.

Concluding statements

Strengths and →how to sustain/improve

Both the service provider and the demand groups are local farmers; this programme therefore directly benefits only the local farming community

The service providers are directly accountable to the farmer clients, in contrast to using government and NGO extension workers who are only accountable to their institutions

Builds on farmers' field experience and communicates the technology through farmers' own words/terminology rather than through more technical extension messages from scientists

More cost-effective for wider dissemination in comparison with other extension systems

Especially effective in heterogeneous environments amongst non-literate farm communities

Technologies adopted through farmer-to-farmer diffusion are likely to be more stable and sustainable because experienced leader farmers will only disseminate successful technologies

This approach may carry messages and content on subjects other than sustainable soil management → institutionalise the approach as a general grass roots-based extension approach

Weaknesses and →how to overcome

Very small project agreements; wide scattered geographic area coverage; many proposals and difficulties in financial management and monitoring → operational guidelines need to be reviewed

The success of the programme depends mainly on the abilities and knowledge of the experienced leader farmers → need to put more focus on selecting appropriate candidate ELF's and better training them and more extensively exposing them to new technologies

The facilitation from demand actors for this process is important; but they are reluctant to do this since the institutions do not financially benefit from the process

Experienced leader farmers are reluctant to do paper work like filling in agreement proposal forms, maintaining a diary and preparing lesson plans

Difficulties in identifying demand groups according to the expertise of experienced lead farmers → increase awareness of the approach in rural areas through a comprehensive dissemination strategy using all media

Farmers' interest is mainly on technologies that are profitable in the short term and less on long term sustainable soil management → expand the farmer-to-farmer diffusion process to other topics and subjects as a part of agricultural extension

Financial support for the programme at present comes from a development project and will end when the project ends → efforts need to be made to institutionalise the approach and seek out local sources of funding

Key reference(s): Paudel, C.L.; Kaffle, B. R.; Bajracharya, B. (2007) *Training Manual on Farmer-To-Farmer Diffusion Process for Sustainable Soil Management Practices in Nepal* (in Nepali). Kathmandu: Sustainable Soil Management Programme ■ Paudel, C.L.; Regmi, B.D.; Schulz, S. (2005) 'Participatory Innovation Development – Experiences of the Sustainable Soil Management Programme in Nepal.' In Kolff, A.; van Veldhuizen, L.; Wettasinha, C. (eds) *Farmer Centred Innovation Development – Experiences and Challenges from South Asia*, pp. 109-126. Bern: Intercooperation

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