



## Learning about no-till methods through farmer-to-farmer dissemination

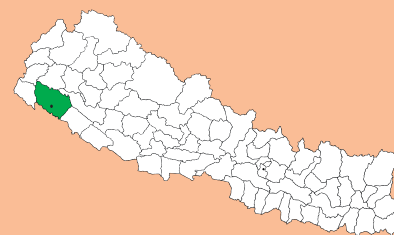
Nepal: किसान-किसानबीचको प्रसारद्वारा खनजोत नगरिकन खेति गर्ने तरिकाको अध्ययन

### Farmer to farmer dissemination of information on no-till methods for garlic cultivation technology

Farmers can learn about alternative or newer methods by sharing their experiences with one another. In this approach, farmers shared information and knowledge on no-till garlic cultivation technology. Since no-till methods are not widely known in the area, the approach aimed to increase awareness of the many features of the technique and its benefits. Through farmer-to-farmer dissemination, communities can learn about the various aspects of no-till for crop residue management, resource use, and how it can reduce labour costs. These discussions highlight the environmental and social benefits of no-till methods especially with respect to moisture retention, soil and water conservation, and climate change adaptation. In 2009, Local Initiatives for Biodiversity, Research, and Development (LI-BIRD), piloted and validated no-till farming in Nepal as a measure for soil and water conservation through the Western Terai Landscape Complex Project (WTLCP) and the Promoting Local Innovation (PROLINNOVA) programme. The dissemination was multi-faceted and the farmers remained engaged throughout the discussions, which included both talks and group participation. Farmers' groups, community-based organizations, biodiversity conservation groups, and development committees at the village level were given training and technical inputs. This community-level interaction encouraged farmers to discuss with one another as well as to head out to the field for demonstrations and observations. After no-till garlic cultivation was successfully piloted, it was widely adopted by farming communities and especially the indigenous Tharu communities of western Nepal.

**Left:** Villagers gather for a focus group discussion on no-till garlic cultivation; it is not unusual that a majority of the participants are women (Krishna Lamsal)

**Right:** Villagers often continue their discussions in smaller groups throughout the day. (Krishna Lamsal)



**WOCAT database reference:** QA NEP 39

**Location:** Gadariya VDC, Kailali District, Seti zone, Nepal

**Approach area:** 1–10 km<sup>2</sup>

**Land use:** Annual cropping

**Type of approach:** Innovative; this is a local initiative started about 10 years ago

**Focus:** Mainly on conservation with other activities such as agriculture and livelihoods

**Related technology:** No-till garlic cultivation (QT NEP 39)

**Compiled by:** Krishna Lamsal, LI-BIRD

**Date:** June 2011, updated March 2013

The technology was documented using the WOCAT ([www.wocat.org](http://www.wocat.org)) tool.

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WOCAT

## Problems, objectives and constraints

### Problems

- Lack of awareness about low cost soil and water conservation technologies that address farmers' needs
- Initially there was weak institutional support for organizing discussion sessions

### Aims/objectives

- To disseminate information and know-how on no-till methods
- To increase awareness among the farmers on the benefits of no-till methods and crop residue management
- To increase awareness of the environmental and social benefits of no-till methods and the role that it can play in adaptation to climate change

### Constraints addressed

Major	Constraint	Treatment
Social/cultural	No-till methods are not widely known in the area	The group was readily convinced of the economic benefits of no-till methods (especially for garlic production) and this was essential in persuading them to accept the technology.
Minor	Constraint	Treatment
Financial	Financial resources lacking; this group does not have links to financial institutions.	Farmers used their own resources.
Other	Water availability is poor.	No-till methods help to conserve moisture in the soil.

## Participation and decision making

### Stakeholders/target groups



Land users  
individual/  
group



### Approach costs met by:

Mostly by the land users; capacity building activities and field demonstration costs were borne by LI-BIRD.	100%
<b>TOTAL</b>	<b>100%</b>

**Decisions on choice of the technology:** Made collectively by farmers in the group and facilitated by discussion with specialists.

**Decisions on method of implementing the technology:** Made by farmers in the group and facilitated by discussion with specialists.

**Approach designed by:** LI-BIRD on the basis of information from the literature and on experience with other groups. LI-BIRD piloted the technology and found it to be a good measure for soil and water conservation, as well as being approximately 25% less expensive to implement than the traditional technology for garlic production. It promoted use of the technology and encouraged scaling up to more communities through dissemination by different means including local FM radio stations.

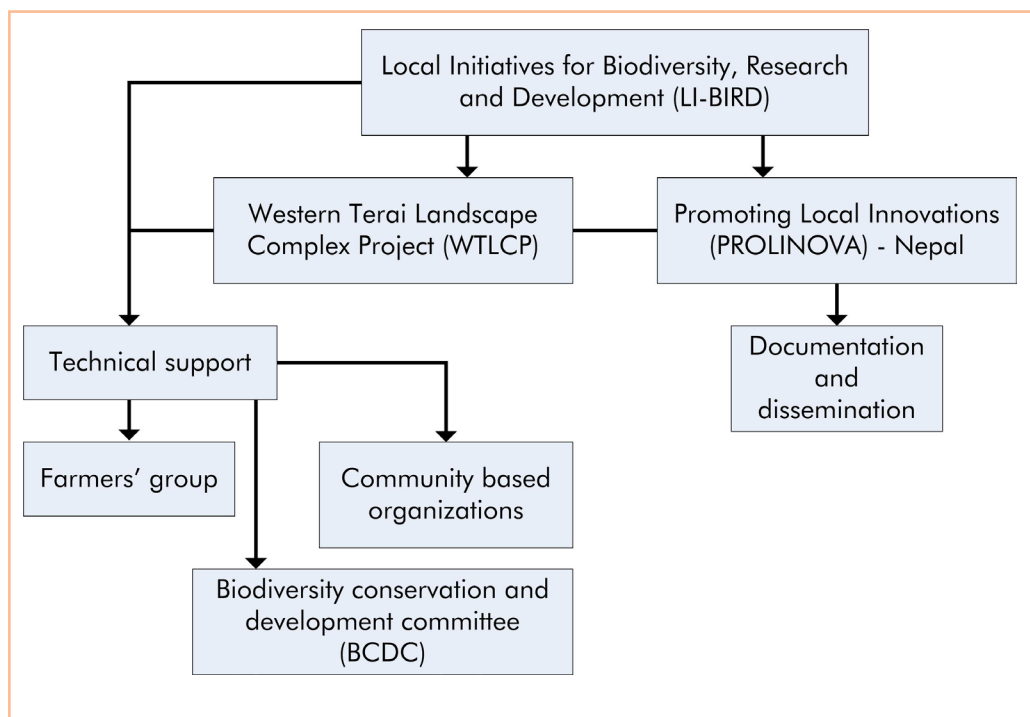
**Implementing bodies:** The initial dissemination of the technology was driven by the land users themselves. At the local level, community-based organizations, farmers groups, and local NGOs were all involved.

### Land user involvement

Phase	Involvement	Activities
Initiation/motivation	Self-mobilization and interactive	Community meetings organized to discuss the new technology and how it could be implemented locally
Planning	Interactive	Interactive discussion groups and focal groups organized in the community
Implementation	Self-mobilization and interactive	Individual farmers implemented the technology on their land without external support. LI-BIRD provided in-kind and technical information and support.
Monitoring/evaluation	Self-mobilization and interactive	LI-BIRD monitored the implementation of the technology and helped to evaluate the outcome. They collected and analysed data in order to highlight the soil and water conservation aspects of the no-till method and disseminated this information.

**Differences between participation of men and women:** Yes, moderately; about 60% of those who attend meetings are women. Most of the field activities such as planting and harvesting are performed by women.

**Involvement of disadvantaged groups:** Yes, the indigenous Tharu communities are adopting this technology.



### Organogram

LI-BIRD piloted and validated no-till farming in Nepal as a measure for soil and water conservation through the Western Terai Landscape Complex Project (WTLCP) and the Promoting Local Innovation (PROLINOVA) programme. Technical support was extended to farmers' groups, community-based organizations, biodiversity conservation groups, and development committees at the village level.  
(A. K. Thaku)

## Technical support

**Training/awareness raising:** Land users and community mobilizers from the indigenous Tharu communities were given training on no-till method and crop residue management. Disseminating information on resource use and on the multi-faceted environmental, social, and climate change adaptation benefits of this technology is an important component of this approach. Participatory methods and approaches were used in order to enable participants to learn about the technology. **Advisory service:** Capacity building took place through site visits and extension materials as well as through discussions and exchanges

**Research:** None

## External material support/subsidies

**Contribution per area (state/private sector):** None

**Labour:** None

**Inputs:** None

**Credit:** None

**Support to local institutions:** LI-BIRD supported farmers groups, biodiversity conservation and development committees, and community-based organizations by providing hands-on training and technical support.

## Monitoring and evaluation

Monitored aspects	Methods and indicators
Technical	Regular observations by technical staff from LI-BIRD jointly with representatives from biodiversity conservation and development committees, farmers groups, and community-based organizations
Socio-cultural	Regular observations by the land users and LI-BIRD technical staff
Economic/production	Regular observations by technical staff from LI-BIRD jointly with representatives from biodiversity conservation and development committees, farmers groups, and community-based organizations

## Impacts of the approach

**Changes as result of monitoring and evaluation:** Several changes were observed. People learned both through discussions and by taking a hands-on approach. An initial attempt to replicate the method ended in failure. However, through discussions and technical inputs, the farmers were eventually able to replicate the method and it is now well understood.

**Improved sustainable land management:** Yes, moderately. No-till and better use of crop residues has contributed to improved land management; more moisture is now retained in the soil. Water is in poor supply and vegetable production in this area is limited by the amount of moisture in the soil.

**Adoption by other land users/projects:** Yes, many. Community-based organizations, as well as members of other communities and neighbouring districts, have either adopted the method or expressed an interest in learning how to implement it.

**Improved livelihoods/human wellbeing:** Yes, moderately; mainly due to increased income from garlic production and reduced labour costs associated with no-till.

**Improved situation of disadvantaged groups:** Yes, moderately. The indigenous Tharu communities now have some increased cash income from selling their garlic crop.

**Poverty alleviation:** Yes, a little, mainly due to increased income from garlic production and reduced labour costs. Studies showed a 25% increase in crop yield and reduced labour requirements.

**Training, advisory service, and research:** The training was instructive not only to transfer the no-till technology but also to make land users and community members at large aware of the importance of moisture conservation.

## Concluding statements

**Main motivation of land users to implement sustainable land management:** Increased profitability, reduced workload, and improved wellbeing and livelihoods

**Sustainability of activities:** This technology has a high probability of being sustainable because it is cost effective and requires minimal technical input (farmers can do it on their own); moreover, it helps with soil conservation.

Strengths and →how to sustain/improve	Weaknesses and →how to overcome
Farmers can easily learn no-till techniques through community participation. The approach is sustainable because it is easy to implement and it appeals to farmers because they appreciate it as a way of reducing labour and increasing crop yields. → Continue to give some minor technical support and encouragement.	Market linkages are poor and the scope to scale up is also small. → The establishment of stronger market linkages would motivate farmers to attempt commercial cultivation.
The approach focused on building capacity by using a hands-on approach similar to how farmers traditionally transfer know-how between themselves. Farmers can adapt and modify the technology as needed to deal with changing conditions in the environment. Financial inputs by external organizations are not needed. → Continue to give some minor technical support and encouragement.	

**Key reference(s):** None

**Contact person(s):** : Krishna Lamsal, Local Initiatives for Biodiversity, Research and Development (LI-BIRD), P.O.Box 324, Gairapatan, Pokhara  
Tel: +977 61 5535357/5526834, 9841483937 (M); Fax: +977 61 5539956, Email: info@libird.org, klamsal@libird.org, naturekrish@gmail.com ; www.libird.org

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