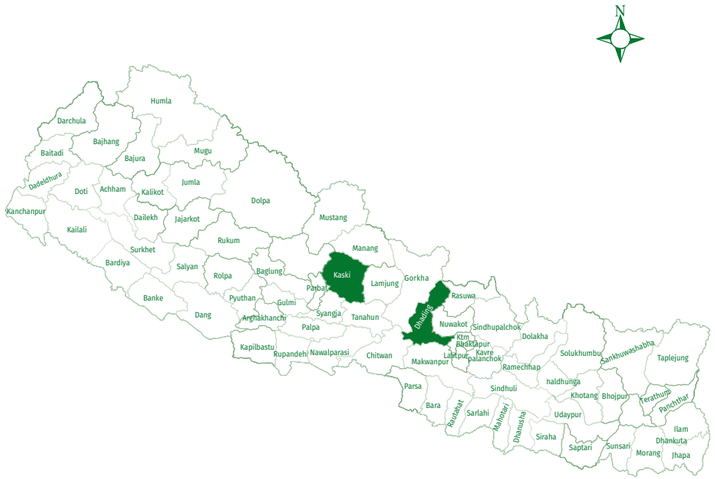
Project sites

For on-farm testing/piloting of SAKs interventions, the project will be implemented in two sites viz Majhthana of Kaski district and Jogimara of Dhading district. However, for marketing of SAKs products, the project will not limit itself to above two sites; rather the whole of Nepal and beyond will be its potential market.



Partnership and implementing modalities

'Nepal Terrace Farmers and SAKs' is an offshoot of an existing Canadian International Food Security Research Fund (CIFSRF) grant, which involved University of Guelph (UoG) and Canadian Mennonite University (CMU). Phase II of CIFSRF also includes Anamolbiu - a Nepali private seed company and Nepal Agricultural Research Council (NARC). UoG will provide technical assistance to implementing organizations, and lead laboratory experiments whereas LI-BIRD and NARC will verify the findings in local condition through on station and on farm trials. Anamolbiu and Third Party Companies/ organizations (from Canada and Nepal) will provide products and expertise for scaling up. CMU will support the project implementers by providing support for developing technological interventions and examining impacts of those interventions especially on women farmers.

Project duration

The project duration is 30 months starting on 1 August 2014 and ending on 31 January 2017.

Funding agency

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CELEBRATING 20 YEARS
Research & Development in Nepal
Diversifying Choices, Securing Livelihoods

Innovations for Terrace Farmers in Nepal and Testing of Private Sector Scaling Up Using Sustainable Agriculture Kits (SAKs) and Stall-Based Franchises

INTRODUCTORY BROCHURE

The Challenge

There are millions of terrace farmers in Asia. Some of the key challenges faced by terrace farmers are:

1. Limited land surface area for cultivation

2. Limited irrigation facility

3. Loss in soil fertility and deficiency in soil micronutrients

4. Excessive water runoff from sloping agriculture land and soil erosion

5. Shortage of farm labour and added workload to women due to male migration to cities

Considering these challenges the project 'Innovations for Terrace Farmers in Nepal and Testing of Private Sector Scaling Up Using Sustainable Agriculture Kits (SAKs) and Stall-Based Franchises (Shortly: Nepal Terrace Farmers and SAKs)' intends to introduce, test and upscale commercial but sustainable low cost technologies in Nepal that are available elsewhere around the world.

The Research

The project aims to test farmer defined Sustainable Agriculture Kits (SAKs) consisting of free or low cost purchasable interventions, that focus on income generation, reduce female drudgery, promote climate change resilience, reduce post-harvest waste, promote sustainable water and soil management and test the effectiveness of a private company as a vehicle for disseminating a toolkit of needs-based commercial technologies and information from around the world by using existing stall-based and agro-vet distribution networks. Specific research objectives are:

- Intensify terrace agriculture by utilizing terrace walls that comprise 20-50% of hillside surface area
- Contribute to reduce female drudgery on terraces through of SAK picture book, by helping illiterate women to understand and implement good practices
- Improving soil fertility by employing a patented University of Guelph biotech invention called GlnLux to maximize production of organic nitrogen by treating legume seeds by micronutrients and symbiotic Rhizobium bacteria
- Test low cost tools and practices that promote climate change resiliency and increase dietary micronutrients for women and children
- Test low cost techniques that promote empowerment and self reliance of local innovators/ farmers to diminish institutional reliance in remote regions
- Test the use of smartphone to convey useful messages (text or video) as mean of assessing farmer needs and collecting feedbacks to facilitate dissemination of technology in remote areas
- Test strategies for scaling up whereby the above technologies from Canada and Nepal can be sold as a part of inexpensive SAKs at household level or for rent at Community level, taking advantage of pre-existing stall based distribution systems

Methodology

The project has adopted the list of farmers needs defined by previous surveys. Taking into account the entire household/farm system, a toolkit of interventions has been nominated that come from commercial products or indigenous knowledge (locally or abroad). The project will assess if such interventions would be adopted or need modification, using participatory approaches especially focusing on women farmers.

After on-farm validation, the project will promote selling the components of the interventions as SAK products through stall-based franchises, using an NGO spin off private company (Anamolbiu). Names and address of consumers who purchased the SAKs products will be used to measure the success of the products and distribution network by conducting consumer satisfaction surveys.

Participatory testing of the interventions using on farm experiments will be carried out in split plot design, comparing traditional farmer practice vs intervention at the same place.

Farmers practice

Improved practice

Expected outcomes

1. 'A model to increase production from terrace agriculture by utilizing terrace walls and edges'
2. A method to minimize surface soil and nutrient runoff in sloping terraces
3. Better working condition for women especially while weeding, ploughing, sowing, threshing and grain shelling
4. A picture book of farming techniques for illiterate women farmer
5. A technique to improve manure at farmer/household level
6. Increased crop diversity to adopt to climate change and improve family nutrition
7. Data/Evidences on the value of low cost intervention for irrigation
8. A technique on maximizing legume yield by helping biological nitrogen fixation
9. Technology to reduce post-harvest loss of grains and vegetables
10. Increased income by production and marketing of hybrid maize seeds
11. Increased capacity of farmers to handle field experiment and compare the effectiveness of improved practices over traditional practices
12. A partnership model of civil society organization, private company and academic institutions for testing and scaling up of improved agriculture practices and technologies

Utilizing terrace wall

Jab planters for sowing seeds

Drip irrigation in water scarcity

Shaded pit for quality manure

Grain storage bag

Electric millet thresher