

Collaboration Across Sectors Strengthens Communities and Food Security in Nepal

A common saying, “*Khayo Makai, Nakhayo Bhokai*,” or “If there is no maize, there is nothing to eat,” often holds true for people living in the hilly regions of Nepal. Maize is the second most important food crop in the country after rice. For the majority of Nepalis living in the hills, maize cultivation is a traditional livelihood passed down through generations, and corn flour is used to make staple foods like dhedo and roti, two traditional breads in the region.

But while maize grown in the hills of Nepal makes up about a quarter of the national food grain supply, smallholder farmers struggle to meet demand for this important staple crop. They face a difficult terrain, climatic risks, and limited access to new information and technology that could help improve low and poor-quality yields. As a result, many families in rural Nepal endure chronic poverty, hunger and undernutrition.

Feed the Future is working in partnership with a network of government, research, NGO and community stakeholders in Nepal to equip smallholder farmers with the knowledge and tools they need to sustainably boost maize quality and production. A Feed the Future program managed by the USAID and co-financed by the Swiss Agency for Development and Cooperation focuses on 20 remote hill districts of Nepal and aims to improve food security and increase household incomes for 50,000 rural families.

One critical way the program is achieving its objectives is by supporting the development of community-based seed production groups in all 20 target districts. These groups benefit from groundbreaking agricultural research on high-yield; climate-resilient maize varieties conducted by national Nepali research centers supported by Feed the Future. Nepal’s district agricultural development offices disseminate these new varieties to local NGO partners, who then work directly with local farmers and community groups to plant improved seeds and implement better crop management techniques.

The program also empowers farmers to produce the improved seed varieties themselves over the long term, helping to build sustainable local seed markets. The community groups receive training on all aspects of seed production, from field inspection to certification and post-harvest management. To date, the program has improved the capacity of 207 community-based seed production groups, 31 of which are in the process of graduating into cooperatives, and several groups have even grown to become full-fledged private seed companies.



Dhal Bahadur Bhandari (above, right), a farmer from Nepal’s Sindhupalchowk district, is now the coordinator of Hariyali Community Seed Private

Company Limited, a company that started out as a community-based seed production group supported under Feed the Future. The company now produces, processes, packages and sells improved seeds across local and regional markets, providing services to about 1,800 people.

“Initially, due to lack of awareness, farmers would hesitate to purchase locally grown seeds. But after the successful harvest of the first crop, they slowly started adopting these new maize varieties and technologies. Thanks to the improved seeds, the farmers of Sindhupalchowk district are now producing four metric tons of maize per hectare compared to 1.7 metric tons earlier,” Bhandari says proudly. **“Our combined efforts have already started bearing fruit. It has improved the living standards of thousands of farmers and their families. Their children are going to school and most of them are food-secure.”**

As a result of this support under Feed the Future and its programs, the target districts in Nepal have produced a cumulative 3,000 metric tons of maize seed, generating nearly one million dollars in sales. To date, maize yields in Nepal have grown by 36 percent, leading to improved livelihoods and better nutrition among rural households in particular.

These visible impacts on food security led Nepal’s Ministry of Agricultural Development to design a new maize seed improvement effort of its own modeled on the success of the Feed the Future program. As a result, the Government of Nepal will invest \$650,000 in 19 other hill districts starting this year, providing subsidies and technical assistance to farmers for improved maize seed production.

*This article was published in the October edition of **Feed the Future Newsletter**, 2013.*

Rina Chaudhury of the rural Dang district in Nepal’s Mid-Western region has risen from the ashes of modern-day slavery to become a self-sufficient, empowered farmer. Rina was sold into forced labor as a little girl through Nepal’s notorious Kamalari indentured servant system. When she was finally freed, she was able to marry but had no skills to earn money. “I have always had to depend on my husband for money. Who else could I turn to?” she said. But now, thanks to help from USAID/ Nepal’s Education for Income Generation project (EIG), which increased water efficiency and taught marginalized people in Nepal’s Mid-Western region the skills to thrive, Rina is the proud owner of a booming vegetable business.

People in the Mid-Western Region, where poverty is rampant, face a number of challenges. Lack of physical infrastructure makes service delivery difficult, and farmers often do not have key inputs such as water. Over three-quarters lack access to improved sanitation. Consequently, over 10 percent of deaths of children under 5 are due to diarrhea.

At the heart of these problems is water – water for sanitation, water for growing food, and clean water for drinking. To simultaneously address these competing needs, EIG introduced multiple-use systems (MUS), a concept that USAID is increasingly employing around the world. MUS employs a multi-faceted approach that can meet domestic, agricultural, and sanitation demands, so water resources are efficiently and safely utilized.

Dr. Mary Renwick, who leads the MUS portfolio for EIG’s implementing partner Winrock International, said that with traditional single-use systems, “Irrigation canals may be used for bathing or people may water their livestock at a drinking water well.” This can lead to contaminated drinking water, inefficient use, and conflicts over water. “MUS is a way of avoiding those scenarios by strategically planning for people’s domestic and productive water needs, with the overarching goal of improving health and livelihoods sustainably,” Dr. Renwick said.

The new community water systems in Nepal consist of a single source pipe with dual storage and distribution systems for domestic use and for irrigation using drip and micro-sprinklers. The systems cost \$100- \$150 per household and are funded with investments from public and private sector sources within each community. They are particularly life changing for women, who are typically responsible for collecting water in

Nepal. As a result of EIG’s relatively small investments in MUS, women who once devoted vast amounts of time and energy to fetching water can channel those efforts into expanding their farms and growing high-value vegetables.

To ensure sustainability, USAID trained young people to manage the water systems and facilitated the formation of water user groups to ensure the community could maintain the systems. In addition, the project trained 74,000 people on literacy, hygiene, nutrition, agricultural productivity, and other life skills. The benefits of these trainings have reverberated as EIG alumnae have launched their own businesses and created jobs for their countrymen and women.

“The impact of the program on household well-being has been enormous,” said Anita Mahat, an economic specialist for USAID/ Nepal. “It addressed education, health, and food security. The empowerment of women was visible. These are sustainable impacts.”

Though USAID’s EIG ended in March 2013, the work will continue under two new projects that are part of the U.S. Feed the Future Initiative. The first, the Knowledge-based Integrated Sustainable Agriculture project, or KISAN (“farmer” in Nepali), is already underway, aiming to improve agriculture production, nutrition, and hygiene throughout Nepal, with an emphasis on women and children under 5 years old. And the second, an entrepreneurial literacy project, will continue and expand upon some of the training successes of EIG, targeting KISAN beneficiaries.

Outside Nepal, Winrock is applying the lessons of EIG to expand MUS around the world. “We’re consciously working on building linkages between South Asia, West Africa, and East Africa through cross-learning, joint training, and research to facilitate acceleration of MUS scale-up,” said Ms. Renwick.

Meanwhile, the thousands reached by USAID continue to benefit from the increased access to water for all of their needs and the skills that have given them new earning power. Due to these interventions, more than 54,000 people working in agriculture, 82 percent of whom are women, have increased their incomes by an average of 250 percent.

Rina is one of these women, and her ambitions continue to soar. “Today, with my EIG education, I am determined to grow my agricultural business,” she said. “My self-confidence is higher now.”

Improving Efficiency with Multiple-Use Systems in Nepal

By **Katie Unger Baillie**

(This article originally appeared in the USAID’s Global Waters online publication)



An EIG trainer demonstrates how to use drip irrigation, a water-efficient method of growing crops. Pic: George Figdor



Multiple Use Water Systems was first introduced in Nepal by a USAID project in the early 2000s. USAID’s currently ongoing agriculture and climate change activities, like the Initiative for Climate Change Adaptation is scaling-up the use of these multiple-use water systems across the country. We’re also introducing solar-powered versions, which enable farmers to use drip irrigation for high-value crops, increasing their annual income by over a third.