

BENEFICIARY PROJECTS 2011/2014

Technology Linkages
for Sustainable Agriculture

TechnoLinks
Competitive Agriculture Technology Program

Background

Throughout the developing world, small farmers face numerous challenges in accessing affordable and appropriate agriculture technology needed to improve their farm productivity and increase their incomes – seeds, fertilizers, irrigation systems, and improved production practices, to name a few. At the same time, the majority of agriculture technology providers caters to the medium and large farmer market segment, believing that small farmers cannot afford to buy such products. It is this gap in demand and supply of agriculture technology that Techno-Links aims to overcome.

What is Techno-Links?

Techno-Links is an innovative project launched in Nicaragua and Peru in August 2011 by MEDA (Mennonite Economic Development Associates), with the support of the IADB (Inter-American Development Bank) and CIDA (Canadian International Development Agency). Valued at approximately US\$2 million, Techno-Links responds to the challenges agriculture technology suppliers face in serving the small farmer market. Over the three years of the project, Techno-Links is building the capacity of twenty agriculture technology suppliers in Peru and Nicaragua so they are better able to provide much needed technologies to small farmers that are both commercially viable and environmentally sustainable.

How is Techno-Links achieving its Goal of Improving Access to Agriculture Technologies?

MEDA is using smart incentives to accelerate the technology supply chain for small holder farmers. The Techno-Links *Agriculture Technology Matching Grant Fund* requires investment from technology suppliers – one dollar for every dollar invested up to a maximum of US\$60,000, with the best business proposals supported through a competitive and transparent process.



The selection process for choosing twenty technology suppliers consisted in two calls for business proposals. The successful applicants received support from expert Techno-Links business consultants in both the review of project ideas and development business plans as well as throughout project implementation. Following rigorous evaluation of plans by an expert Selection Committee, the matching grants were awarded.

Techno-Links Matching Grant Recipients

During the first call in August 2011, 45 business plans were submitted (26 in Peru and 19 in Nicaragua). From this process six technology suppliers were selected for funding:

	Supplier	Technology Description
Nicaragua	Burke Agro	Provision of technical assistance to small fruit farmers for processing and sale to export markets
	Tecnosol	Marketing and installation of small scale domestic bio-digesters in rural households to provide farmers with renewable energy
	EIAG	In vitro micropropagation for improving the productivity of banana crops
Peru	Grupo Hualtaco	Introduction of "Novo Suelo", a comprehensive strategy for sustainable revitalization of soils which aims to increase productivity and quality of crop areas dedicated to organic bananas
	CAC Divisoria	Production of bio-fertilizers made with efficient micro-organisms to improve the quality of coffee and cocoa crops
	Pronatur	Promotion of low- pressure solar-powered irrigation systems

In the second call in June 2012, 115 business plans were submitted (68 in Peru and 47 in Nicaragua). From this process, fourteen technology suppliers were selected for funding:

	Supplier	Technology Description
Nicaragua	Chiles	Promotion of drip irrigation technology for small tabasco chili producers
	Cisa Exportadora	Technology package and financing facilities to improve the productivity of small coffee farmers
	Davila	Increased productivity of certified organic coffee plantations through the provision of certified organic inputs
	Dulce Miel	Agro-industrial equipment and training to help farmers produce propolis and pollen compliant to both international and national standards
	iDEAL	Low pressure micro-irrigation systems for small horticulture
	Ingemann	Increased beekeeping productivity through the replacement of queen bees
	CAC Trading	Integration of small chia producers into export markets through the provision of technical knowledge and agricultural inputs
Peru	Aproeco	"Kuntu" technology for the threshing, sorting, selection, toasting and packaging of coffee
	Biocafe	Three-phase power generator for two wet-mill coffee plants in order to increase the quality of small farmers' coffee yields
	CAC Perene	Production of husk briquettes as alternative renewable energy in households for food processing and/or heating
	Cedepas	Collection centers for technological improvement and introduction of new varieties of amaranth, a traditional Andean grain
	CIED	Quality improvement of quinoa as a result of the establishment of business technology centers
	La Florida	Increased productivity of specialty certified coffee by applying high systematic pruning technology
	Milenium	Technology services for small producers to improve the production and packaging of olives

Results to Date

Now in Year 3, Techno-Links has achieved the following notable results in Peru and Nicaragua:

- 5,733 small farmers (of which 28% are women producers) in Peru and Nicaragua will benefit from access to more appropriate and affordable agriculture technology (versus a project goal of 5,000)
- US\$6.7 million invested by matching grant recipients, leveraging US\$1.1 million donor contribution
- Matching grant recipients have developed improved and diversified business models as a result of support provided by Techno-Links business consultants. This includes sales and marketing strategies that specifically target small farmers as the intended customer.
- **Small farmers working with matching grant recipients are enjoying high demand for agriculture products and improved linkages to markets**

Techno-Links in Numbers

A total of 160 business ideas were initially submitted. This number was divided as follows:

- 59% were from Peru and 41% from Nicaragua
- 52% were presented by producer's associations, 22% by Non-Governmental organizations, 19% by suppliers or buyers and 7% by various actors.
- 62% of proposals aimed at production issues and 38% aimed at post-harvest issues and added value.
- 41 business plans were developed and 20 were implemented thus benefiting nearly 5,000 small producers.

- **Strong partnerships developed between matching grant recipients and sector specific organizations (MFIs, farmer cooperatives, government institutions etc.) reflect the sustainability of the initiatives**

Solar Powered Irrigation in Peru

One of the winners in Peru is PRONATUR. Located in the city of Chiclayo, PRONATUR is among the 10 leading coffee exporters in Peru and among the first 20 biggest fruit exporters. Its social mission is to promote the sustainable development of small producers' organizations so that they can meet their basic needs and improve their quality of life. They work with and buy from 2,100 small producers from the northern departments of San Martin, Amazonas, Lambayeque and Cajamarca.

The project is improving small producers' harvests and socio-economic conditions by facilitating access to low pressure solar powered irrigation systems that are appropriate for the dry climatic conditions in the region. The use of solar panels is generating energy that farmers can use, saving them income that would otherwise be used to purchase alternative energy sources.

Through a partnership with a farmers' association, Pronatur is reaching farmers more effectively and ensure it understands their needs and can provide guidance on good agricultural practices.

- Environmentally sustainable technologies have been prioritized by Techno-Links, and are reflected in the projects by matching grant recipients. As a result of this focus, Techno-Links was awarded a \$10,000 prize by GAIN (Global Adaptation Institute) in 2012.

- **Gender assessments and strategies developed for matching grant recipients enabled them to understand how gender equality issues are relevant to their businesses.**

Renewable Energy Company Discovers Women as a Market Segment

Techno-Links partner Tecnosol in Nicaragua sells small scale biodigestors to small farmers. The project gender assessment revealed that women are a large potential market, because the biodigestor's green energy reduces the impact of smoke related respiratory diseases, which largely affect women. The company's marketing campaign did not initially focus on these health and gender related benefits, but they now plan to reorient marketing strategies to more effectively target women and increase sales

- **Establishment of an online platform called Intercambio ('Exchange') to allow agriculture technology suppliers in Peru and Nicaragua to share information about innovative approaches to reach small farmers.**

Technology Uptake in Nicaragua

In April 2013, a sample of 26 rural, small-scale Nicaraguan farmers who accessed technology from two Techno-Links partners, were interviewed. These findings confirmed the success of Techno-Links to date:

SATISFACTION

65% of farmers were satisfied with the technology

AWARNESS OF TECHNOLOGY

92% aware of technology and benefits

BENEFITS

- 58% increased income
- 54% improved health
- 54% better market access & negotiation
- 50% increased yields and product quality
- 50% time savings

About MEDA

Mennonite Economic Development Associates (MEDA) has a sixty-year history of designing and implementing innovative and successful market-driven economic development programs that reach marginalized communities around the world. We base our achievements on facilitating sustainable private sector development that integrates disadvantaged populations into viable industries and markets.

Founded by a small group of service-oriented business people, MEDA believes our work is not done until it is proven to be sustainable, replicable, scalable and measurable. MEDA has established itself as a leader in the areas of financial services, market linkages, and impact investing, while specializing in several areas of focus within these broad economic areas, such as women's economic development, rural finance, agriculture linkages, youth, and post-conflict populations.

An international not-for-profit organization headquartered in Waterloo, Canada, in 2012 MEDA worked through 227 partners in 56 countries, including regions affected by conflict, to implement sustainable, market-driven solutions to poverty. This work has in turn helped over 18 million families realize healthier, more economically sustainable lives. MEDA remains at the forefront of innovative partnership models and new approaches for local capacity building.



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