

Luis Flores and Dave Weatherspoon examine butternut squash with the students of El Verbo Orphanage in 2005. Weatherspoon, then-director of Partnerships for Food Industry Development – Fruits and Vegetables (PFID-F&V), is an associate professor in the MSU Department of Agricultural Economics; Flores, an MSU doctoral student in the Department of Community, Agriculture, Recreation, and Resource Studies, is the Nicaraguan country coordinator for PFID-F&V.



## MSU Works with Nicaraguan Orphanage to Produce Fruits and Vegetables for U.S. Markets

In the fruit and vegetable aisles of American supermarkets, shoppers typically look for quality and uniformity in the produce, not inspirational stories. But today's produce aisles can connect American shoppers to the rich, often moving stories of people around the globe who are transforming their lives and economies. For example, buying an off-season butternut squash can be a direct partnership with a Nicaraguan orphan where both win.

Increasingly, the off-season or exotic fare in American markets is grown by small farmers in Third World countries helped by a U.S. Agency for International Development (USAID)-funded project managed by MSU's Institute of International Agriculture, Partnerships for Food Industry Development – Fruits and Vegetables (PFID-F&V) project. Through PFID-F&V, farmers learn to grow the right produce at the right time and deliver the right quality to make more money more consistently. Markets get a reliable supply of fruits and vegetables. Consumers get what they increasingly demand – high-quality produce regardless of season. And in the case of that organic butternut squash, 120 children get a shot at a future.

“The PFID project with the orphanage is just one of the many programs that we have in Nicaragua,” said Russell Freed, PFID-F&V acting director and MSU professor of crop and soil sciences. “In its first year, the revenue from this project will pay for all the food costs for the orphanage for a whole year for the children and staff. It's gratifying, and it's just the beginning.”

PFID-F&V's success, Freed said, comes from identifying market demands and tailoring farming, quality control, and exporting operations to meet those demands. Organic is a strong niche market, and PFID was aware of a buyer who needed organic squash to sell in New Jersey and California.

El Verbo Misión Cristiana is a Christian mission with tidy, low buildings that shelter children who have been orphaned, abandoned, or rescued from the streets. El Verbo's mission expands beyond the spiritual and basic necessities, but also aims to arm the children with vocational and educational skills.

Tomas Membrano, PFID's in-country director, explained that PFID-F&V, under MSU's administration of a USAID grant, was looking for a small farm operation that could grow organic crops. The

fields that surrounded the El Verbo orphanage, largely barren and thus uncontaminated with pesticides or fertilizers, were a good fit. El Verbo is centrally located so other farmers could come and learn from the operation. And El Verbo was motivated – with many hungry mouths to feed, and hungry minds as well. The little farming that was done was organic, though not certified, Membrano said. “They just believed in it.”

PFID-F&V began working with El Verbo in October 2004 and introduced technical expertise from Israel to grow organically. Drip irrigation systems and plastic mulch were brought in. Training was done to teach selection of high-grade produce demanded by supermarkets. The facility has since been certified organic for export to the United States. At El Verbo, they also grow plantains, passion fruit, dragon fruit, and other vegetables for local and regional markets. “We've taught how to grade the products, and they now understand the parts of the supply chain,” Membrano said. “By the older students doing the grading and sorting, they can add value.” The teenagers have a class in organic farming, he said. Even the younger ones can go out in the 15 acres of fields for lessons. Local women come in after harvest to help with packing.

Staff is hired for the heavy work, and older students work in the fields as part of a work-study program. They have the opportunity to learn cutting-edge technology. For some, it's a springboard to a career. For others, it's a chance to be near professionals who are powerful role models.

Produce from the 10 acres of hard squash grown at El Verbo has been sold in Los Angeles and New York and earned the orphanage a net income of about \$30,746 – enough to buy food for a year. The squash project employed 21 workers.

Besides the hard numbers, El Verbo's success story provides a snapshot toward the larger effort in Nicaragua. Funded by USAID, PFID-F&V has been working in Nicaragua more widely to connect poor small-scale farmers to the global market. “Meeting grades and standards for the international market is a challenge for farmers everywhere,” Freed said. “The competition they face is global no matter how small or local they are. We're here to use technology, training, and relationships to build capacity of local organizations and producers.”

The relationship part is crucial – for in the food business, even massive supermarkets value knowing where the food comes from. Consumers, increasingly, value that too, said Luis Flores, the

Nicaraguan country coordinator for PFID-F&V. “These vegetables we're delivering come from small farmers and that's important to me,” Flores said. “I know Dole and Del Monte give me good quality, and now we know these farmers are also providing quality. It makes me feel good knowing I can buy food grown by small farmers who are going to be self-sufficient.”

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Already work has begun through PFID-F&V to build a high-tech greenhouse at El Verbo that will serve not only as a way to grow crops year-round, but also be an important teaching tool both for other farmers and for the children.

Hilda Nubia Soto Castro looks years younger than her 18 years. She's leaving soon for college after spending seven years at El Verbo. She has spent time weighing and classifying squash grown at El Verbo, making sure they meet standards for the U.S. market. She values the experience she's gained from the farming project. “It has been useful, because anything you learn can be helpful,” Castro said. “Now I can teach others.”

At El Verbo, postage-stamp-sized slips of paper are slipped into each crate, thanking buyers for supporting the orphans of El Verbo. Hilda knows the squash they grow is sold in a big American city – she feels a connection. “I want people there to know these are harvested with a lot of love and hard labor,” she said. “It's from good people with good hearts.”

For more about PFID, including related projects in several African countries, India, and elsewhere in Central America, visit the website at [www.pfid.msu.edu](http://www.pfid.msu.edu)

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