

Improving Dairy Farmers' Lives in El Salvador

Winrock International

Improving Lives and Livelihoods Worldwide



A northern zone cattleman learns about hydroponic forage in San Isidro, Cabanas.

Volunteer Phil Pohl trained farmers in El Salvador on hydroponic forage to improve milk production, reducing costs and water use. Since the first pilot demonstration farm, 15 farmers around the country have built hydroponic corn seed forage units. More than 200 farmers have learned about benefits to using hydroponic forage as a feed alternative.

USAID's Farmer-to-Farmer volunteers have worked with dairy farmers and processors to increase productivity, competitiveness, and food safety. From 2004-2008, 17 volunteers strengthened 13 dairy business and associations in El Salvador, benefiting more than 2,100 farmers directly. As a result of these efforts and the key role played by local partners, gross sales increased by US\$9.3 million.

El Salvador's dairy industry is an important economic sector. In 2008, dairy represented 18% of agricultural GDP. Dairy generates an estimated 160,000 permanent jobs and 802,000 temporary jobs, representing 26% of El Salvador's agricultural employment.

Because of strong local demand, farmers face serious challenges from rising production costs and seasonal price fluctuations,

and the industry must find innovative ways to become more efficient and competitive.

During El Salvador's dry season, fodder for dairy cattle is scarce. Between November and April, Salvadoran farmers do not have enough rain to grow grass in their fields, and many lack irrigation. For this reason, FTF volunteer Phil Pohl introduced hydroponic forage as alternative for farmers to keep milk production steady throughout the year.

By putting the plants under cover, in trays, the hydroponic system focuses all available moisture on the growing plants, and minimizes the loss through run-off and evaporation. Growing hydroponic fodder uses over 90% less water than growing fodder in a field, according to researchers at Sandia National Labs, where this technology was perfected. Once the low-cost structure is in place, the hydroponic fodder is cheap, costing only US\$0.065/pound (buying corn seed from local markets) to US\$0.043/pound (farmers producing their own corn seed) to produce, compared with US\$0.30/pound for commercial fodder.

In addition to using less water and lowering production prices, the hydroponic system results in more productive cows. For example, one farmer notes that his first pilot plot cows now average 15.4 bottles of milk each per day, 10% more than before. At \$.30 cents per bottle, he now earns an extra \$200 each week.

Winrock International is a nonprofit organization that works with people in the United States and around the world to empower the disadvantaged, increase economic opportunity, and sustain natural resources.