

# Innovations in Agroenterprise

## How the CRS-led ACORDAR project in Nicaragua is helping small-scale farmers become major players

### The problem

Worldwide, smallholder farmers often grow only rain fed crops and use low quality seed. They also produce supply-driven raw materials that they sell to intermediaries at the farm gate. As a result, they don't benefit from the profits made in the resale of their goods in larger markets and remain trapped in a cycle of poverty.

### CRS globally

For the past ten years, CRS has been assisting such farmers to produce demand-driven goods and sell them directly to profitable markets. The agency has also helped them organize themselves in enterprises that maintain multiple off-farm relationships with financial service providers, buyers, local governments, and added-value certification bodies.

### The ACORDAR approach

Launched in November 2007 in Nicaragua, the CRS-led Alliance to Create Rural Development Opportunities through Agroenterprise Relationships (ACORDAR) is an example of this work at scale. The \$53 million, public-private sector, five-year initiative directly benefits 7,000 producers organized in 107 cooperatives in 50 municipalities around the country. USAID views ACORDAR as its flagship agroenterprise project in the country and frequently hails it as an example of success in USAID Washington's Global Development Alliance program.

### Results

#### Market-based production

CRS found that, with perennial crops such as coffee and cocoa, farmers needed to increase their plant populations per hectare to improve production volume. In the first 30 months of the project, ACORDAR supported farmers to repopulate 608 hectares with 1.8 million coffee and cocoa plants. Access to new production technologies such as micro-tunnels and plastic row covers to ward off pests, reduce weeds, and enhance soil moisture were important contributions by the project.

#### Certified seed

ACORDAR also promotes high quality and certified seed to increase yields and introduce new crop varieties based on market demand. As a result, bean farmers using certified seed have seen



CRS agronomist Mariela Zamora, left, examines the health of coffee trees with coffee farmer Rosa Amelia Centano in rural northern Nicaragua. Rick d'Elia for CRS

increases from 590 kilos per hectare to almost 1,800 kilos per hectare. Papaya farmers who formerly used a bland, large papaya seed yielding 15-30 fruits per tree are now planting with the red lady papaya variety and producing 80-100 tasty, smaller fruits per tree for local supermarkets.

Because seed is expensive for farmers and germination is critical for the investment, ACORDAR has supported the installation of over 43 greenhouses that are owned by cooperatives and used by thousands of their members.

#### Organic farming

CRS has taken advantage of years of experience in sustainable agriculture by promoting organic fertilizer production both on the farm and at the cooperative level. As a result, hundreds of farmers in ACORDAR are either organically certified or using organic methods as a cost-saving measure for fertilization. Over 196 vermiculture storage bins have been built on individual farms, and five organic fertilizer production businesses initiated amongst cooperatives.

#### Water access and storage

Another essential asset to year-round production is having proper water access, storage and irrigation systems because they enable farmers to grow irrigated crops in addition to rain fed, thereby decreasing their vulnerability to erratic weather patterns. To date, ACORDAR has co-invested with farmers to build 328 water storage tanks, 95 wells and 542 drip irrigation systems on over 250 hectares. The results have been nothing short of phenomenal in water conservation and increased production. By switching to drip systems, farmers have reduced their water use by 50 percent. The equivalent savings of water per cycle on 250 hectares of land provides water for 60,750 people for one year.

### **Adding value in post-harvest management**

A staple of the CRS approach in ACORDAR is to train farmers in washing, fermenting, selecting, drying, storing and in some cases transforming agriculture products.

In producing coffee, investments in wet mills are important to ensure product quality and retain more income at the farm level. ACORDAR has built or rehabilitated 355 ecological wet mills that reduce water consumption and manage waste water to prevent contamination. Similarly, the project has invested in 325 fermentation systems and seven storage centers for cocoa. The project also works with approximately 3,500 bean farmers. To increase red and black bean processing capacity for export, the project invested in a large scale, farmer-owned bean processing plant with the capacity to process 1.2 million pounds of beans per year and store 3 million pounds at any given time. A roots and tubers packing and processing plant was also built to help farmers add value and meet export requirements of high value taro, yucca and other roots and tubers.

### **NEW JOBS!**

As a result of interventions in production and post-harvest management, the number of people employed in these activities rose by 5,473, from 21,882 at the start of the project to 27,355 at the end of the project. This 25% increase in the number of jobs represents a 101% fulfillment of the target for the number of new jobs to be generated by the project.

### **Access to markets, financial and non-financial services**

CRS has served as a relationship builder between farmers and supply chain actors. Farmers now act as business people and entrepreneurs in relationship with financial service providers, buyers, local governments, agriculture input providers, and added-value certification bodies.

### **SALES INCREASE!**

After 60 months of project implementation, farmers have sold a total of \$128M in agriculture products, or \$56M over the base line. These sales have led to an average increase in net income of ninety-seven



CRS agricultural technician Reynaldo Centeno checks the water level of a storage tank in the Sébaco area of Matagalpa Department. The tank uses a gravity-fed system to water seedlings in the ACORDAR greenhouse as well as the farmer's crops beyond. *Rick d'Elia for CRS*

percent, or from \$2,606 to \$5,145 in average annual income per producer. Participating businesses have benefited by reducing supply chain risk by ensuring reliable, consistent and higher quality produce.

### **Strengthening farmer enterprises and ensuring sustainability**

CRS and local partners have been critical to the formation, strengthening and growth of small farmer enterprises in Nicaragua. Traditional local partners such as Caritas have accompanied farmer organizations through their legal founding and assisted in the establishment of governance structures, strategic and business planning, and member expansion. After a number of years of capacity strengthening, select farmer enterprises have become direct recipients of grants from CRS in major agroenterprise projects.

### **Value chain governance**

ACORDAR has also facilitated value chain governance amongst chain actors in beans, coffee, and taro root, with the objective of implementing chain competitiveness plans. CRS and local partners convene chain actors on a national level on a regular basis, and are learning how to make the chain more competitive for all actors.

## **Looking Ahead**

ACORDAR is working in alliance with 25 of the 50 municipal governments in northern Nicaragua to improve conditions for agricultural competitiveness through direct investments in productive infrastructure and training. These investments have aided project objectives through the construction of roads, bridges, and irrigation systems; land donations for packing and storage facilities; in-kind donations of municipal government personnel for training and technical assistance to farmers; renovation of the municipal market; building of community centers to hold town hall meetings; and water and sanitation projects. Collaborative relationships among cooperative enterprises, private sector actors and the municipal government, along with the integration of cooperative enterprise investment needs into municipal development plans, will ensure sustainability of the initiative into the future.