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MCA Nicaragua Strengthens Value Chains to Promote Sustainable Economic Growth

Through a diverse portfolio of investments, the Millennium Challenge Corporation (MCC) provides significant support to countries worldwide in all aspects of food production and distribution, as well as in other aspects of rural economic growth. This includes transferring agricultural technology, securing land rights, providing access to rural finance, increasing access to sufficient and safe water, and building rural roads and other farm-to-market infrastructure, such as dry and cold storage facilities.



Prior to the Compact, there was only one Milk Collection Center in the region. Now, there are 12 new Milk Collection Centers which are equipped with cooling tanks and labs to test the milk quality

These investments help farmers and rural businesses access productive inputs such as seeds, water and fertilizers; overcome bottlenecks that hinder the ability to transport produce from farm to market; and engage in higher-value production to ultimately increase rural incomes.

In 2006, MCC started implementing a five-year, \$113.5 million Compact with the Government of Nicaragua¹. This included an investment of \$32.9 million in the Rural Business Development Project (RBD), which was executed by MCA Nicaragua (MCA-N), the local entity implementing Nicaragua's MCC Compact. The RBD Project worked with over 8,500 producers and targeted key productive sectors in western Nicaragua such as livestock (dairy), agricultural production (vegetables, grains and roots), and forestry.

¹ On July 3, 2009, MCC terminated \$61.5 million in funding under the Compact in response to a pattern of actions by the Government of Nicaragua that were inconsistent with the criteria used by MCC to determine eligibility for assistance. Funding was terminated for all activities in the Property Regularization Project and for activities in the Transportation Project, which were not already under contract. Due to that partial termination, MCC reduced the amount of compact funding available to Nicaragua from \$175.0 million to \$113.5 million.

In designing the project, MCA-N carried out a value chain analysis of these key sectors to identify the main constraints to increased productivity. Based on the analysis, MCA-N developed promotion strategies for the different sectors that included a variety of small-scale infrastructure, technology transfer (drip irrigation, good agricultural practices, utilization of improved product varieties, improved livestock management), capacity building for producers' cooperatives, and marketing support. Each of these interventions was demand-driven and based on business plans presented by each of the beneficiaries.

Transformation of the dairy sector in western Nicaragua

Before the compact, the dairy sector in western Nicaragua was characterized by low productivity, low reproduction, and low quality of milk. Improper handling and malnutrition of animals during the dry summers created much of this shortfall. The incomes of small farmers fluctuated throughout the year due to low supply of milk in the summer and excess supply in the winter.

MCA-N supported 1,635 milk producers, of whom 33 were women, with on-farm training and capacity building services to improve the management of livestock. Producers learned better feeding approaches such as how to improve pastures, production of legumes for feed, and usage of supplemental mineral salts. This enabled producers to provide adequate feed for their cattle during the dry summer. Producers also learned how to use artificial insemination and other reproductive services to improve milk production during the summer. The project funded metal containers for most producers so they can keep the milk fresh until delivery. These producers also built basic milking stations on their farms.

The Compact co-invested with farmers in 12 new Milk Collection Centers, which are equipped with cooling tanks and labs to test the milk quality; prior to the Compact, there was only one Milk Collection Center in the region. Through marketing support, these Milk Collection Centers are now connected to industrial processing plants that produce Ultra High Temperature milk, extending the shelf-life of the product, for the national and regional markets; Parmalat, Centrolac and Eskimo have established purchasing contracts with producer associations.

All of these investments in small infrastructure and technology capacity building have resulted in milk of superior quality that sells for a higher price, and greater milk production, especially during the crucial summer season. **Based on preliminary data provided by the implementer, the project resulted in productivity gains as milk production increased on average from 2.14 liters/cow/day to 2.86 liters/cow/day, representing a 33 percent increase.** Farmers connected to the collection centers and milk processing plants now receive improved and more stable prices.

Lastly, MCA-N supported 42 Dairy Artisanal Plants that process and sell dairy products such as cheese and yogurt. These plants received technical assistance in order to diversify their production and meet good manufacturing practices. In addition to technical assistance, MCA-N co-invested with producers of 28 of these plants in stainless steel equipment and utensils, allowing them to produce higher quality products that sell for a higher price.

Plantains prove to be a profitable business

Plantain farms in León and Chinandega are located in a zone that offers excellent agro-ecological conditions ideal for plantain production. In spite of this advantage, low productivity dominated the production of plantains by small farmers in the region because of the use of inadequate varieties, non-irrigated cultivation and weak market linkages. MCA-N carried out an assessment of the plantain sector that showed great expansion potential because of projected growth in the demand for plantains at the national and regional level among traditional users and agro-industries. The Rural Business Development Project focused on improving farm production and productivity, promoting the development of nurseries, expanding the use of high quality seedlings from improved commercial varieties, improving processing, and developing better market linkages.

As with all the value chains within the project, plantain production was demand-driven and based on business plans presented by farmers and their cooperatives. The project provided training and extension services and co-invested with farmers in the appropriate irrigation systems and farm equipment. **Based on preliminary data provided by the implementor, the productivity on farms improved on average from 21,694 units per hectare to 48,042 units per hectare, representing an increase of 121 percent.**

To ensure sustainability of the intervention, the project focused on developing the leadership and capacity of producers' cooperatives. Through technical assistance, plantain cooperatives developed sound administrative, financial, and logistics systems key to successfully integrate into the export market.

To further promote the plantain value chain, MCA-N co-financed the rehabilitation of a plantain collection and processing center in Tonalá and the construction of a new collection center in Posoltega. These investments supported the processing and marketing of large volumes of plantains directed at the national and regional markets. The technical assistance within the processing facilities included the development of peeling and packaging processes in compliance with the sanitary and phytosanitary conditions demanded by the export market.

As a result of the work with individual farmers, cooperatives, collection centers, and processing centers, project beneficiaries now sell their plantains to major regional international buyers including DINANT Honduras, INALMA Honduras and Hortifruti/Wal-Mart. **Based on preliminary data provided by the implementor, the 416 farmers that participated in the RBD Project through their cooperatives now generate over \$2.5 million in new international sales a year. Almost half of the beneficiaries are women.**

The RBD Project has had an important positive impact on the dairy sector and in the lives of many farmers, particularly those growing plantains. As the Compact with Nicaragua completes, MCC has commissioned impact evaluations to independently measure the impact of the RBD project on incomes and asset value.