



ResCA
RESILIENT CENTRAL AMERICA



TECHNOSERVE
BUSINESS SOLUTIONS TO POVERTY



Resilient Central America (ResCA)

Nicaragua

Cattle ranching is an important sector of Nicaragua's economy. In 2012, over one fourth of the country's exports (excluding free zone exports) were livestock products, including dairy foods, bovine meat and live cattle, among others. In addition to being an important source of income to the local farmers and their families, the meat and dairy products of Nicaragua contribute to the food security of neighboring countries. However, productivity is low and production is highly dependent on the changing weather conditions.

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THE PROBLEM

In Nicaragua, there are nearly 140,000 dual-purpose cattle ranchers (meat and dairy products). However, many of them struggle with low productivity due to degraded grasslands, low soil fertility, poor genetic variability, high temperatures, excess water during the winter and scarce water availability during the summer, and the lack of food supplements. In fact, the majority of farmers only produce one gallon of milk per cow and have reproductive rates of 55% or less.

Moreover, each year there are "milk peak periods" between May and July, when production increases by over 30% with regards to the dry season (January-April). During this time, prices fall dramatically and the industry is forced to limit the supply. Meanwhile, during the dry season, this productivity decreases significantly.

Milk peak periods are largely driven by seasonality. During the rainy season (May through December in parts of Matagalpa, Jinotega, RACCS and RACCN and June through November in drier areas, such as Boaco), grasslands recover which results in seasonal parturition, which is defined as an increase in the number of cows becoming pregnant at the start of the winter (May through July) and therefore giving birth nine months later, (March through May). If nutrition were consistent throughout the year, milk peak periods would significantly decrease, therefore increasing the profitability for farmers.

Another great challenge to address is the lack of technical assistance that is available to farmers: less than 5% have access to ongoing training programs.

THE URGENCY

Livestock health and productivity is highly dependent on water availability. Due to climate change, in the coming decades, droughts are expected to become more intense, prolonged, and frequent. Impacts, however, are already taking place. In 2014, for instance, prolonged drought caused the death of over 5,000 cows. ¹



THE SOLUTION

The Nature Conservancy, in coordination with TechnoServe, Lala, and the Centro de Investigación en Sistemas Sostenibles de Protección Agropecuaria (CIPAV), will support the adoption of silvopastoral systems – which are productive systems that integrate cattle ranching and tree planting. In addition to contributing to the conservation of soils, these systems represent an additional source of shade and food for cattle, increasing its productivity, and strengthening its resilience to climate change. This project will engage stakeholders from across the value chain, including farmer cooperatives, dairy transformers, suppliers, financial entities, donors and farmer associations. At least five cooperatives from Boaco and Matagalpa will participate in the project, and at least 700 small and medium farmers will be direct beneficiaries. The project goals will be achieved through:

1 Technology transfer and best practices:

The project will select 35 farms to implement intensive and sustainable silvopastoral practices. These farms will then be used as demonstration sites and models to identify best practices to train additional farmers. In addition to silvopastoral practices, farmers will be trained in credit management, accounting, and watershed and forest management to increase productivity and resilience. 700 farmers will be trained, and milk productivity is expected to increase by 15%.

2 Partnership building:

The project will facilitate partnerships among stakeholders in an effort to strengthen their ability to implement silvopastoral systems. Cooperatives will be connected to investors, suppliers, and financial entities through a coordinated joint effort with partners.



3 Support for stakeholders to establish sustainable practices:

The project will engage public and private stakeholders that can promote the uptake of silvopastoral systems. For this purpose, we will strengthen and promote the creation of public and private policies, establish round tables to establish environmental and economic standards for silvopastoral systems, and create forums to share lessons learned and thus, scale up the potential impact of the project.

¹FAGANIC

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