



# **CARE-Cargill:** Nourishing the Future

**Final**

**Briefer**

**Evaluation**





A photograph of two women in traditional Mayan clothing working in a field. The woman on the left is smiling and looking towards the right, while the woman on the right is looking down at the plants. They are both wearing colorful, patterned blouses. The background shows a field of green plants and some trees.

# EXECUTIVE SUMMARY

## Introduction

### Program Background

This is the final report for the CARE-Cargill global program with funding support from Cargill, Inc. For more than fifty years, Cargill and CARE have shared a commitment to promote opportunity and create lasting change for families living in extreme poverty. After a successful five-year phase of programming from 2008 until 2013, Cargill provided \$7,550,000 funding seven project countries globally: Ghana, Cote d'Ivoire, Egypt, Guatemala, Honduras, Nicaragua, and India. The newest phase of this global partnership, implemented from September 1, 2013 until August 31, 2016, built on many of the achievements from the first phase of programming while establishing new initiatives to meet our program goal: *prosperous and resilient communities*. The program has four main components based on the following intermediate outcomes:

- ◇ **Increased quantity and quality of production**
- ◇ Key intervention: Building the production capacity of smallholder farmers in the supply chain
- ◇ **Increased access to equitable market**
- ◇ Key intervention: Connecting producers to equitable markets
- ◇ **Increased food security and nutrition**
- ◇ Key intervention: Promoting food and nutrition security within communities
- ◇ **Well-governed and thriving communities**
- ◇ Key intervention: Addressing issues of governance, hazardous child labor, and education

The following report will evaluate the impact of *Nourishing the Future* in Guatemala, Honduras, and Nicaragua.

## Program Summary

### Rationale and Justification

**Central America** has recently experienced economic growth but has struggled to reduce poverty rates and food insecurity. Thirteen percent of the population in Central America is malnourished and the proportion of people living below the \$1.25/day is a staggering 48%. Food insecurity and poverty in this region are rural phenomena, concentrated within two population groups: small rural producers and indigenous peoples or Afro-descendants. Nearly three of every five people in rural areas live in poverty, and three out of 10 live in extreme poverty.

Underlying causes of poverty:

- ◇ High vulnerability to climate change related stresses and shocks
- ◇ Lack of financial capital, specifically for indigenous and poor communities in rural and urban areas
- ◇ Limited awareness regarding healthy nutrition practices
- ◇ Limited economic opportunity
- ◇ Inequitable participation in decision-making processes between men and women

According to the World Bank, Nicaragua, Guatemala, and Honduras have similar poverty rates of 29.6, 59.29, and 62.8 percent respectively. Rural poverty is considerably higher, with rural poverty rates of 50.1, 76.1, and 65 percent respectively. Nearly 15 percent the population in all three countries is undernourished.

## Nourishing the Future

### Project Goals, Implementation Strategies, and Results Highlights

Nourishing the Future (NTF) is a regional project implemented in three countries across Central America. The project aimed to foster more prosperous and resilient farming communities across some of the most marginalized communities in Guatemala, Honduras, and Nicaragua. Through an integrated, community-based approach, NTF implemented a three-year project using the following strategies:

- ◇ **Improving Agricultural Production Capacities:** training in good agronomic practices (across seven value chains including yellow and white maize, red beans, sorghum, green beans, blackberries, and peas), facilitating access to inputs for farmers, strengthening farmer collective performance
- ◇ **Connecting Micro-entrepreneurs and Farmers to Markets:** linking farmers to formal private-sector business supply and distribution chains (Cargill), training in organization and business management skills for farmer and micro-entrepreneur collectives, and bridging the gap between collective groups and formal/informal markets
- ◇ **Improving Knowledge, Skills and Practices Regarding Nutrition:** social and behavior change communication in primary schools, cooking demonstrations, developing cookbooks, community and school gardening, and training in healthy nutrition practices for school children, teachers, and community leaders
- ◇ **Fostering Well-governed Communities:** training for community and municipal leaders on food and nutrition security, advocacy for incorporating NTF best practices into community and municipal agendas, and gender training within collective groups





The Nourishing the Future project was able to successfully reach the following results during the life of the project, from September 1, 2013 until August 31, 2016:

- ◇ **Increased income:** Households in Guatemala and Honduras ***more than doubled their*** income, with income increasing by 22.5% in Nicaragua.
- ◇ **Greater access to credit:** Access to credit increased across in all countries. In Honduras, specifically, access to credit increased by 37.2% among women micro entrepreneurs.
- ◇ **Improved production:** Despite poor rainfall and variable climate, all farmers increased their production. In Guatemala, there was a 13.8% increase in green bean yield, a 2.9% increase in black berry yield, and a 3.6% increase in pea yield. ***In Honduras yellow maize yield increased more than five-fold***, with white maize yield increasing by 16% and red bean yield by 23%. Sorghum production in Nicaragua increased by 32.5%.
- ◇ **Healthier diets:** Dietary diversity increased by 16.6% in Guatemala, 45% in Honduras, and 20.1% in Nicaragua. In Nicaragua, 90% of households were eating the minimum threshold of 7 food groups.
- ◇ **More food secure households:** Household ***food insecurity was halved in Guatemala***, decreasing from an average of 5 months of food insecurity to 2 months at end line. In Honduras and Nicaragua food insecurity was reduced by 19% and 13.69% respectively.

Contributing factors to these successes include:

- ◇ **Stronger linkages to markets:** Connecting sorghum and yellow maize to Cargill's supply chain resulted in the sale of 100% of Nicaragua's sorghum production and 89.3% of Honduras's yellow maize production.

In Guatemala, farmers ***sold 12 times more green beans, 4 times more blackberries, and 8 times more peas to local markets*** compared to baseline. Farmers in Honduras sold 4 times more white maize by the end of the project.

- ◇ **Created broader access to inputs:** Farmers in Guatemala, Honduras, and Nicaragua increased their access to inputs by 27.8%, 25.7%, and 34.8% respectively.
- ◇ **Better agricultural practices:** The number of farmers using agricultural techniques that will help them improve their production ***doubled*** in Honduras and Nicaragua. There was 26.1% increase in Guatemala, with 95% of the farmers applying improved practices.
- ◇ **Involving children and schools:** The project used 63 schools as a platform for nutrition promotion, training teachers and students on optimal nutrition practices and providing opportunities for broader community engagement. School communities plants 61 school vegetable gardens, a mechanism the project used to disseminate information regarding the importance of fruit and vegetable consumption.

## Conclusion

### Impact

Based on these results, NTF has successfully achieved its goal of fostering prosperous and resilient communities. Farmers and micro entrepreneurs across Central America have greater access to services including formal and informal financial services, business and financial training, and agronomic capacity building. Small-scale producers are applying what they have learned to maintain and expand their businesses, with some venturing to develop new businesses. Despite unpredictable climate patterns and an unprecedented time of drought resulting from El Niño, NTF farmers reported significant increases in agricultural production, while most farmers in the agricultural sector cited less productive seasons. NTF sorghum production in Nicaragua was 45% higher than the national average (1.82 tons/ha). A likely explanation for the observed increase in production is better agricultural practices among NTF farmers. The number of farmers using agricultural techniques that will help them improve their production doubled in Honduras and Nicaragua. There was 26.1% increase in Guatemala, with 95% of the farmers applying at least one improved practice. Farmers also had broader access to inputs as a result of the project, with access to inputs increasing by 27.8%, 25.7%, and 34.8% respectively. Moreover, by developing stronger linkages, farmers were able to sell more of their agricultural production. Connecting sorghum and yellow maize to Cargill's supply chain resulted in 100% of Nicaragua's sorghum production and 89.3% of Honduras's yellow maize production to be sold. In Guatemala, farmers sold 12 times more green beans, 4 times more blackberries, and 8 times more peas to local markets compared to baseline. Farmers in Honduras sold 4 times more white maize.

The combination of increased agricultural production, agronomic capacity building, stronger linkages to markets, financial and business management education, and livelihood diversification has facilitated a two-fold increase in per-capita income among households in Guatemala and Honduras and a 22.5% increase in Nicaragua. In addition to significant gains in income, families own more household assets as before, which can serve as a safety-net in emergency situations or other unforeseen stresses within their lives.

Another dimension of resilience worth noting is access to credit. Farmers often face financial capital constraints before harvesting their crops. They often need to take loans to support themselves until the next harvest yet lack of information, high interest rates, lack of collateral to take loans, and loan sharks are barriers to farmers' ability to access financial resources. In Guatemala and Honduras, the proportion of farmers who improved their access to credit increased by 2.3% and 14% respectively. In Honduras, access to credit increased by 37.2% among women micro entrepreneurs. The result of this increase can largely be attributed to the proportion of farmers' savings via formal banks. In all three countries savings through formal banks increased between 8.6%-17.8%, from 22.2% to 40% at end line in Guatemala, from 28.2% to 36.8% in Honduras, and from 23.5% to 38.3% in Nicaragua. Farmers and micro entrepreneurs also described revolving funds within collective groups and *Cajas Rurales* as a valuable service provided by the project along with opportunities to more broadly

access informal financial services. Moreover, saving motivation has dramatically shifted. Access to financial capital and financial management education has transformed how NTF beneficiaries are thinking about the future, with savings objectives changing dramatically from the beginning of the project. For example, the proportion of farmers saving for emergencies increased nearly two-fold in Nicaragua, from 44% to 82.7% at end line, and by 11.8% in Honduras. There was also a 5.9% increase in the percentage of farmers saving for business in Honduras and a 2% increase in Guatemala. The majority of respondents across the region reported saving for emergencies and health needs. Increased household savings for business and emergencies coupled with greater access to credit can create opportunities for historically marginalized small-holder farming families to have a cushion in the case of unexpected emergencies on their farms or within their homes.

A significant impact on behavior change in nutrition was also observed. The project's holistic approach and livelihood focus led to greater food access across the communities. Household food insecurity was halved in Guatemala, decreasing from an average of 5 months of food insecurity to 2 months at end line. In Honduras and Nicaragua food insecurity was reduced by 19% and 13.69% respectively. Households also report healthier diets, with household dietary diversity increasing by 16.6% in Guatemala, 45% in Honduras, and 20.1% in Nicaragua. At end line, project households that were samples in all three countries were eating the minimum threshold of 7 food groups per day.

The women's empowerment index shows an increase empowerment of 7% in Guatemala, 21% in Honduras, and 8% in Nicaragua. This was achieved by working with women and communities, promoting the empowerment of women as a strategy for equality, given that inequality is an underlying cause of poverty. The project also aimed to influence local institutional and organizational structures in allowing greater participation of women in positions of leadership. NTF also developed a gender and women's empowerment plan focused on educating male and female small-scale producers on self-esteem, gender equality, and the importance of women's participation in capacity building, training and leadership. Despite reported increases in women's empowerment, however, data shows women's access to productive resources remains restricted, limiting their productivity and household income generation. With larger society norms dictating women's access to income and productive resources, the need for strengthened gender programming is evident.

With these findings as supporting evidence, the project made significant progress toward the goal of prosperous and resilient communities. Despite long periods of drought, families were able to avoid farm related losses. Farmers and micro entrepreneurs also cited investing more money in their homes and their businesses. In Guatemala and Honduras almost all farmers have established a new business, 95% and 88% respectively. Families across all three countries have demonstrated their ability to manage climate-related stresses, generating both more income and higher quantities of agricultural production. They have access to more assets, capacities, financial capital, and services that will continue to provide with them with a safety net in the event of unforeseen shocks and stresses.

## Lessons Learned

### Recommendations

#### **Improve access to new technology:**

There is high demand for equipment including motorized spraying machines and weighing scales among farmers. While CARE facilitates access to some of this equipment, access to machinery remains low among men and women farmers. The project should consider additional platforms to increase access to agricultural machinery.

#### **Facilitate broader access to productive resources for women farmers:**

There are access inequities between men and women, specifically in access to tools and other miscellaneous inputs. In the future, the project should focus on addressing gender inequality within farming communities, increasing access to large

machinery and tools for women farmers so that women can have the resources they need to maximize their productivity.

**Increase access to and availability of climate information:**

Include capacity building activities on climate change mitigation measures for farmers. The erratic rainfall pattern reported by farmers requires future interventions to include training modules on climate change mitigation and seasonal climate patterns to help farmers anticipate and adapt to climate variability.

**Involve children, parents, teachers, and schools:**

The project used 63 schools as a platform for nutrition promotion, training teachers and students on optimal nutrition practices and providing opportunities for broader community engagement. Communities were given access to 61 school vegetable gardens, a mechanism the project used to disseminate information regarding the importance of fruit and vegetable consumption. Given the project's results regarding nutrition, future programming should use and improve this model and continue working through schools.

**Improve governance of cooperatives:**

While 60-77% of collective groups reported effective governance, there is still a lack of compliance with commitments, purchasing contracts, and minimal inclusion of women in leadership. The project should invest in alternative mechanisms for improving the governance structure of cooperatives and incorporate more rigorous monitoring of the groups themselves into programming.

**Increase access to financial services:**

While increased access to financial services increased, the total proportion of farmers with access is less than 40% in **Guatemala** and less than 60% in **Nicaragua**. Savings groups within cooperatives, like Honduras's *Cajas Rurales*, and revolving funds within producer groups were cited as valuable services provided by the project. More than half of farmers in **Honduras** reported using *Cajas Rurales* as a primary savings mechanism. The next phase of the partnership should incorporate the *Cajas Rurales* model into other countries to promote broader access to informal financial services as well as formal financial services.





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