



For the Msolas, nutrition is a family business. Sebastian Msola (left), together with his wife, Victoria, and their son Carles, run a growing food company that produces nutrient-fortified products and generates jobs in the rural community of Kibaigwa, Tanzania.

Fortifying a Sustainable Future

When Carles Msola finished medical school last year, he saw a unique opportunity to improve the health of his community. Rather than joining the staff of a hospital, the 25-year-old became the product manager at his family's food processing business, Kibaigwa Flour Supplies (KFS) — a leading producer of fortified maize in Kibaigwa, Tanzania. Food fortification, says Carles, is critical to addressing the region's extremely high malnutrition.

Carles's father, Sebastian Msola, founded the business in 2005 as a small maize mill that employed five people. During the mill's early years, Sebastian and his wife, Victoria, worked the mill during

the day and did the recordkeeping by hand in the evening, struggling to set aside enough money for school fees for their five children.

"Our growth was very minimal," said Sebastian. "We had so many challenges: food processing, marketing, financial. We could not even think of growing."

In 2012, KFS started working with TechnoServe to address some of these challenges. TechnoServe advised the business to expand into flour fortification and helped the company revamp its production line, purchase better processing equipment, transition to computerized bookkeeping and access financing critical to expanding its

operations. Today, Kibaigwa Flour Supplies is a thriving company with two processing facilities, 57 full-time employees and more than 5,000 smallholder farmers in its supply chain.

BOOSTING FOOD SECURITY

Around the world, 795 million people do not have enough food to lead a healthy life, and 98 percent of them live in developing countries. In sub-Saharan Africa, one person in four is undernourished.

TechnoServe believes that food security and nutrition are essential to building strong communities and breaking the cycle of hunger

CONTINUED ON PAGE 3



KENYA: POULTRY

MOZAMBIQUE: SOY

INDIA: KITCHEN GARDENS

NIGERIA: CASHEWS

HONDURAS: BEANS/COFFEE

Updates: Our Impact Around the World

KENYA **POULTRY PRIDE**
Jane Omondi raised chickens for 15 years, but struggled to turn poultry-raising into a viable business. She would often lose her unvaccinated chickens to disease, making it difficult to grow her flock. Three years ago, Jane joined TechnoServe's SPADE (Smallholder Poultry and Agribusiness Development) program, with 30 chickens. She attended trainings, which were targeted to meet the needs and scheduling demands of women, and adopted new techniques, like investing in improved breeds, vaccinating her birds, and producing her own nutritious feed. Her flock has now grown to 1,000, and her income has allowed her to provide more nutritious food for her family and pay school fees so that her son can earn his diploma in community health and development. Close to 6,000 farmers are now practicing modern

poultry-raising techniques as a result of the program, which is funded by the U.S. Department of Agriculture (USDA). In 2015, farmers have sold chickens and eggs valued at \$517,000.

MOZAMBIQUE **SEEDS OF SUCCESS**
Obtaining quality soy seeds was a problem for smallholders in Mozambique.

Often they had to travel long distances to purchase seeds from commercial farms or processors, who usually offered little advisory support. In 2012, TechnoServe, in partnership with the Netherlands, began a project to fill this gap by providing technical assistance and access to financing to create a network of small commercial farmers who could sell improved seeds. This would help increase smallholders' yields. The three-year project has allowed more than 2,000 smallholders to produce nearly 4,450 tons of

soybeans with an estimated market value of \$2 million.

INDIA **BACKYARD BOUNTY**
In July 2015, TechnoServe, with support from Cairn India Limited, began a

project to establish kitchen gardens for domestic use in the desert district of Barmer, Rajasthan. Working with women from five locations, 137 kitchen gardens have been set up, growing vegetables such as eggplant, cabbage and cauliflower. Additionally, 37 nurseries have been established to grow vegetables during the winter season. The women are happy to have fresh vegetables available from their backyards, and have begun their own group to scale up their operations in order to potentially sell at local markets, thus increasing their income. The kitchen garden activity is part of a multifaceted five-year program called Barmer

Unnati, designed to raise the incomes of 10,000 farming households in the region.

NIGERIA **WOMEN'S WISDOM**
The success of TechnoServe and the Walmart Foundation's program to improve the livelihoods of 6,000 cashew farmers in Nigeria owes much of its success to the unprecedented level of women's participation. Temilade Dario, who has a bachelor's degree in agricultural economics, overcame her husband's objections about her participation in the project to become a passionate local community trainer. She has trained over 300 people on good farming

practices, acting as a mentor for many of her female counterparts. Not only does she now earn additional income to support her family, but she has also returned to school for her master's degree in agricultural economics.

HONDURAS **ACROSS THE VALUE CHAIN**
TechnoServe's Sustainable Agricultural Improvement project, in partnership with the USDA, is working to strengthen the value chains for beans and coffee from the ground up in Honduras. Beginning with seeds, the project has created a network of 133 community seed banks, allowing access to improved seeds for

more than 6,000 smallholder bean farmers. Included are new seed varieties, which are fortified or climate resilient for farmers in the Dry Corridor or high altitudes. Soil conservation techniques and organic fertilizers are further helping bean farmers adapt to a changing climate and address food insecurity. The project has also provided agronomy training for 17,300 small coffee farmers, improving yields for farmers. At the end of the value chain, the program is working to establish direct links between coffee farmers and coffee exporters, increasing farmers' coffee revenues by 60 percent.

Fortifying a Sustainable Future

CONTINUED FROM PAGE 1



TANZANIA: FOOD PROCESSING

and poverty. Yet rural families have few options for meeting their nutritional needs. Imported products are too expensive, and local food processors often lack the technical capabilities and business knowledge to provide high-quality foods that meet safety standards.

But as KFS has proven, small and growing food processors have great potential to produce safe, affordable products while driving growth in local economies. By building the capacity of local food companies, TechnoServe and its partners are supporting

a sustainable food supply chain that benefits farmers, workers and consumers.

HEALTH AND PROSPERITY
In addition to creating local jobs, KFS provides a stable market for more than 5,000 local smallholder farmers of maize, sorghum, sunflower and safflower. The company delivers training to the farmers on good agricultural practices to improve yields and quality. As part of its outreach activities, KFS also provides educational workshops on health and nutrition.

"I talk to farmers about fortification and its importance, about how to fight anemia and other immune deficiencies," said Carles. Kibaigwa Flour Supplies' annual revenue has increased by 90 percent since working with TechnoServe, growing from \$92,000 in 2012 to \$175,000 in 2014. To meet the demands that come with fast growth, KFS has

entered the next phase of advisory and technical support through the Solutions for African Food Enterprises (SAFE) program under TechnoServe's alliance with Partners in Food Solutions. Supported by the U.S. Agency for International Development, SAFE is helping Kibaigwa Flour Supplies access financing to build a new storage warehouse and develop a new product line of sunflower oil. TechnoServe is also assisting the company with marketing its fortified products to ensure they reach poor and vulnerable households.

"We expect to be the leading business in manufacturing fortified maize flour in the country," said Sebastian.

His vision holds the promise of better health and livelihoods for thousands of families in his community.

Greener Pastures for Dairy Farmers in Nicaragua

Efraín Nieve knew that educating his two daughters, Ada and Esther, was important in providing them with a future with more employment opportunities. That would be difficult as a livestock farmer in Nicaragua. Despite owning a 42-hectare dairy farm in San Rafael de Paiwas, Efraín struggled to make any significant income gains using his traditional farming methods.

In January of 2014, he began participating in the Ganadería Empresarial (GANE) program offered by TechnoServe with support from the U. S. Department of Agriculture's Food for Progress program. By training farmers in



NICARAGUA: LIVESTOCK

rural Nicaragua on improved livestock management techniques, as well as connecting them to higher value markets, GANE has helped to increase productivity for 4,251 farmers and grow their incomes by 20 percent.

Efraín learned how to better manage his pastures through fencing and how to improve his animals' health through a more balanced diet and a watering system to keep them hydrated. As a result of adopting these techniques, his herd's milk productivity has increased from 1.8 liters per day for each cow to 4.5 liters per day, which has helped him earn an additional \$2,217 in revenue per year. This new income has allowed Efraín's daughters to attend university where they study accounting and business administration.

INVESTING IN STRONGER FOOD SYSTEMS



In the wake of the food price crisis in 2008, a group of financial institutions formed the African Agriculture Fund (AAF), a private equity fund, to invest in Africa's food production and agricultural industries.



In order for small and growing businesses in AAF's portfolio to better reach their potential, a Technical Assistance Facility (TAF) was established alongside the Fund. TechnoServe manages the Facility, providing technical assistance and linking smallholder farmers and entrepreneurs to the finance, materials and markets they need to build strong businesses. In turn, these businesses can generate more income and improve the availability of food in their local communities.

To date TAF has designed over 40 projects and implemented 20. Through TAF, TechnoServe is helping to link over 7,000 producers to markets in Sierra Leone, Ethiopia and Zambia. We're helping agricultural dealers in Malawi and Madagascar improve the services they provide to farmers, and we're supporting women in Zambia to distribute eggs to low income households. In total, TAF aims to work with 20,000 farmers across 12 AAF portfolio companies.

With TAF support, these smallholder farmers and entrepreneurs will produce and distribute more food, generate more income, create more jobs and paint a new picture for the future of food production and agriculture in Africa.