SeedChange



2018

PROGRAM HIGHLIGHT

1

Agroforestry: Diversifying farms for increased resilience in Central America

Photo: Kath Clark/SeedChange

Agroforestry[1] is being used by farmer communities in Central America to enhance biodiversity while producing products with high economic and nutritional value for families. Integrating woody perennial plants on farms, including fruit and nut trees, has been found to reduce soil erosion and improve the quality and quantity of water available, while also providing long-term food and income sources and improving climate resilience. By integrating traditional and new practices, farmers are demonstrating how innovation can meet the needs of rural communities.

WHY IS AGROFORESTRY IMPORTANT?

Climate change is impacting small-scale farmers around the world. The increased likelihood of chaotic weather heightens economic and food insecurity. In many parts of Central America, a rise in weather extremes such as drought or intense rains is making it increasingly difficult to grow traditional crops. For example, in some communities in the Dry Corridor of Central America, maize can no longer be grown reliably. Solutions to promote greater resilience to climate change include incorporating more drought-resistant annual crops and introducing a diversity of varieties with different growing cycles. However, annual crops are not sufficient to conserve soil and water at high altitudes or in regions that experience frequent droughts. Agroforestry - the integration of beneficial trees and other woody perennial species on farms - has been recognized as a key strategy for diversifying farms for increased resilience to climate change while also generating income and food for women, men and young farmers. This practice is being widely adopted by rural communities in Central America.

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AGROFORESTRY IN ACTION

Agroforestry is an important agroecological practice of many of SeedChange's partners in South and Central America including in Honduras, Nicaragua, Guatemala and Bolivia.

Avocado nurseries in Honduras

In Honduras, our partner FIPAH, works with farmer research committees in 168 communities. Farm diversification is key to the program, such as the creation of agroforestry systems with women (447 in 2018) with more than 17 species, including avocado varieties. Two farmer-run nursery businesses in the municipalities of Vallecillo and Victoria have championed the local production of high quality avocado varieties because of their economic value and nutritional quality. Agroforestry practices have spurred innovations as these nurseries include various agroecological methods such as the development of organic products for pest management, the use of native avocado diversity as rootstocks for seedling production, and improvement of plant selection for the harvest of buds to be grafted. Vallecillo farmers identified a local avocado variety with good characteristics to receive grafting. Traditional methods are being valued as part of this process. Farmer-led research has demonstrated how best to intercrop avocado and shade-grown coffee, which sustainably intensifies farm production and improves income-generation. Farmers are now developing nurseries as a strategy to provide access to avocado diversity at the local level. These innovations, which include a mix of local practices with new varieties and techniques, are a win on all fronts, and offer great potential to be scaled-out. They are allowing farmers to produce higher quality products, preserve local diversity, maintain traditional knowledge, and also generate more income.

Fruit trees in the Dry Corridor of Nicaragua

FECODESA, partnering with SeedChange in Nicaragua, works with cooperatives which are promoting the planting of diverse fruit trees like avocado, banana and orange trees in the Dry Corridor as an essential strategy to reduce risks to household food security from recurring drought conditions. Farmers are demonstrating that agroforestry helps improve farm microclimates, by retaining soils and increasing the water available for plants. Women, as primary managers of household



"And every time you eat the fruit of a tree, you think of the person who gave you the seedling." – Josefina Zambrana, Pueblo Nuevo, Estelí

Photo: Blanca Castro

WHO WE ARE

SeedChange, formerly USC Canada, is a nonprofit founded in 1945 by Dr. Lotta Hitschmanova, rooted in the notions of human dignity and equality. Today, we are part of a global movement fighting for justice, health and sustainability by shifting the way our food is grown. We work with farmers around the world, including in Canada, to strengthen their ability to grow food sustainably, using locally adapted seeds. By harnessing the power of good seeds, farmers' leadership and global solidarity, we help communities thrive.

The work in Honduras is directed by the Foundation for Participatory Research with Honduran Farmers (Fundación para la Investigación Participativa con Agricultores de Honduras, FIPAH). Using a highly grassroots and participatory approach, women, men, and youth in CIALs (Comités de Investigación Agrícola Local) carry out research and training to address agricultural challenges by working collaboratively with dedicated field technicians and facilitators.



Farmer Reina Flores grafting avocados in a nursery in Honduras.

Photo: Carlos Avila/FIPAH

food security, are providing important knowledge and leadership in this activity. Having fruit trees means that the women no longer need to buy fruit as they have enough for to meet their families' needs and can even sell the surplus in local markets. Over time, trees not only generate diverse products for food and sale, they also help increase water supply in local creeks and wells by providing shade and reducing erosion. Combined with composting and other practices to improve soils, many cooperative members have been able to reclaim previously unusable land for growing crops. For the coming years, the cooperatives are seeking to facilitate access for more families to have training on grafting, agroecological management, and the production of other fruit products such as mangoes, guava, banana and others.

NEXT STEPS

Agroforestry has been practiced around the world for centuries, and yields many benefits, but had been gradually marginalized due to the emphasis on annual cash monocultures. Agroforestry is regaining the attention it deserves in Honduras, Nicaragua and beyond, where farmers are looking to reduce climate vulnerability by increasing the use of tree crops. The valuable skill sets of tree-seed harvesting, sappling propagation, nursery management in adverse conditions and grafting, are key to ensuring agroforestry gains increase in coming years. In addition, the integration of agroforestry practices within all food security work, helps to push the agenda for adequate land holding security as tree crops establish and mature. More and more market opportunities are linking to agroforestry as well. Close to 700 women and youth are linked to markets due to the agroforestry activities as mentioned here. Diets are also improving due to diversified tree-based food sources being more available. SeedChange and our Central American partners will be keeping the focus on agroforestry as a key feature of all agroecology work. However, more support is needed to help farmers establish agroforestry projects and scale-up the solutions it offers.

Learn More: **fao.org/forestry/agroforestry/80338/en**

1 Agroforesty is defined as the use of woody perennials in agricultural systems (http://www.fao.org/forestry/agroforestry/80338/en/)

SeedChange partners

ASOCUCH

Federación de cooperativas para el desarrollo
FECODESA. R.L

FIPAH

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Canada

Sustainable Development Goals

SeedChange's work in ecological agriculture helps meet 14 of the 17 SDGs. For instance, here's how agroforestry contributes to the following SDGs:





By supporting agroforestry, SeedChange is building the resilience of marginalized communities and reducing their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.



Agroforestry is part of sustainable food production systems that increase productivity and production, maintain ecosystems, strengthen the capacity for adaptation to climate change and other disasters, and improve land and soil quality.



By emphasizing working with women, SeedChange and our partners FIPAH, ASOCUCH, FECODESA and PRODII, are empowering and promoting the social, economic and political inclusion of women.



Agroforestry has been shown to help restore degraded land and soil.