

Linking gender equity and low-emission agriculture

An agricultural innovation program helps Honduran women gain access to land, trees, coffee and cookstoves.

Coffee farmers in Honduras are still reeling from the 2012 outbreak of coffee leaf rust. The fungal disease swept through Central America and the Caribbean, destroying crops worth USD 500 million and costing 374,000 jobs across the region, according to the International Coffee Organization. Prolinnova, the University of Virginia, the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), and the Foundation for Participatory Research with Honduran Farmers (FIPAH) teamed up to help smallholders to fight the blight. But the partnership's objectives go beyond addressing leaf rust and other immediate challenges. The project, "Women-Led Agroforestry and Clean Cookstoves," aims to give women a greater role in driving innovation, improving livelihoods and reducing greenhouse gas emissions from agriculture.

The initiative's three goals—farmer-led innovation, gender equity and lower emissions—form an important intersection for agriculture in the face of climate change. CCAFS research around the world reveals that women often play key roles in adapting to climate impacts. And innovations that help with adaptation may also boost farmers' income and create farms that store more carbon in trees and soil. The partnership in Honduras is one of three Prolinnova-CCAFS projects worldwide that explores these synergies.

Fast facts

- ▶ A pilot project in Honduras thwarts the recent epidemic of coffee leaf rust while also empowering women and supporting low-emission agriculture.
- ▶ Women farmers get access to small plots of land to plant with disease-resistant coffee and tree crops. The land and seedlings are paired with fuel-efficient cookstoves, ensuring that the women gain both long- and short-term benefits.
- ▶ The pilot's straightforward approach, centred around women's needs and agency, will be scaled up across Honduras and into Nicaragua and Guatemala.

The power of land

The Honduras project asks male farmers to commit to giving their wives access to land for agroforestry development. The 49 women participating in the pilot are all experienced farmer-researchers from local associations called CIALs. They have already garnered respect, but because land in Honduras is mainly owned by men, the women's agricultural decisions are highly constrained. In this project, however, they designed their own plots and chose their crops at agroforestry workshops organized by FIPAH. All participants opted to include a rust-resistant strain of coffee provided by the programme, which is highly valued locally. Many families in the area earn up to 80% of their income from coffee, and leaf rust can reduce their yields by 40-80%. The farmers integrate coffee plants with various tree crops, including fruit trees like peach or lemon, spice trees like cinnamon, timber species such as mahogany, and firewood or shade trees.

The diverse cropping systems will not only produce income and fuelwood, but also help prevent floods, retain water in the soil and fix nitrogen. All community members will reap these benefits. At the same time, the new agroforestry plots serve the global community by sequestering carbon. As part of the initiative, FIPAH developed methods for estimating carbon sequestration and trained local farmer-facilitators in the techniques, with a view to spreading the training in future.

"The women have a unique learning experience as they plan, design and measure the impacts of their decisions on carbon capture," says project lead Sally Humphries. "Those opportunities empower women by raising their status both within their families and in the wider community." For example, income from the crops may give women more say in household spending and decisions. Women farmers report that planning their plots has already improved their understanding of household budgets, the costs of production, and the potential for income generation.

The farmers can start harvesting their coffee in 3 to 5 years and the tree crops in 5 to 10 years. Meanwhile, the project offers women a more immediate benefit: participants receive new cookstoves that reduce smoke, cook faster and consume 50% less wood. Women using the stoves have already added improvements, such as a compact, fuel-efficient oven. In a few cases, women are earning income from building and marketing stoves.

Simple and scalable

Cookstoves, agroforestry and land tenure might seem loosely connected, but the combination arises from a farmer-centred programme design. FIPAH had noted women's concerns over cooking smoke and growing difficulty gathering fuelwood. And women generally felt limits to their social and economic participation in the community, and even in household decision-making. The project uses straightforward strategies to address these needs, together with pressing agricultural challenges like soil erosion and coffee leaf rust. "It wasn't a top-down approach promoted by researchers," says Ryan Hottle, an Ohio State University environmental scientist who helped report on the project's results. "The Honduran team designed the project with the farmers and around their needs, and gave them direct control and leadership. That's made all the difference."

The approach allows room for women farmers to adapt and innovate, and is easy to spread. In 2015 USC Canada, an NGO supported by the Canadian government, funded FIPAH to



Photo: Ryan Hottle (CCAFS)

Gathering feedback

The women involved in the agroforestry and cookstove project come from a remarkable network of local farmer groups that the founders of FIPAH helped to organize in 1993. Local Agricultural Research Committees (CIALs) are groups of about 10 farmers, including both men and women. Among other activities, they carry out a participatory breeding program for red bean and corn varieties and share their findings at biannual conferences. CIALs attract the innovators from local communities, so they are an ideal platform for this study of innovation led by women farmers.

scale out its farmer research programme across Honduras and into Nicaragua and Guatemala. The women who shaped the agroforestry-cookstove pilot project will now serve as inspiration for others across the region to increase their earning power while tackling environmental threats. As one female farmer said, "I want to show people that women can do this, and we can do it sustainably."

To find out more about CCAFS Low Emissions Agriculture, please visit: <http://ccaafs.cgiar.org/themes/low-emissions-agriculture>



Photo: Ryan Hottle (CCAFS)

About CCAFS

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together the world's best researchers in agricultural science, development research, climate science and earth system science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security. www.ccaafs.cgiar.org

CCAFS is supported by CGIAR Fund Donors, Danish International Development Agency (DANIDA), Australian Government Overseas Aid Program (AusAid), Irish Aid, Environment Canada, Ministry of Foreign Affairs for the Netherlands, Swiss Agency for Development and Cooperation (SDC), Instituto de Investigación Científica Tropical (IICT), UK Aid, Government of Russia, The European Union, New Zealand Ministry of Foreign Affairs and Trade, with technical support from the International Fund for Agricultural Development (IFAD).