

Innovations in Agriculture

CRS helps farmers understand impact of climate change on coffee growing in Central America

Background

There is little doubt that the climate is changing and will continue to change. The global circulation models that scientists use to predict the nature and rate of climate change all point in the direction of higher average temperatures and radical shifts in rainfall patterns. Coffee-growing communities in Mesoamerica are threatened by this trend.

The CRS approach

Thanks to a collaborative study carried out with the International Center for Tropical Agriculture (CIAT), CRS has been able to estimate how climate changes may affect coffee growing in Central America:

Predictions

- Low-altitude coffee will disappear
- Medium altitudes will require improved agronomic practices
- Coffee will grow at high altitudes where it is not viable at present
- Vulnerability is highly localized
- Adaptation strategies must be site-specific



Coffee plants grown as part of a CRS project in Colomba, Guatemala. Robyn Fieser/CRS



Coffee pickers in Ixcayan, Guatemala. David Snyder/CRS

According to the study's findings, climate change will shift the viable altitude for coffee in Central America from 1200 meters to 1400 meters by 2020, and to 1600 meters by 2050. Since coffee is one of the best income producers for small landowners struggling to overcome poverty, such a dramatic altitude change will affect these farm families the most because they will not have the option of buying land farther up the mountain.

To inform farmers about climate change, CRS is carrying out a project called "Coffee Under Pressure (CUP)", which will help people and communities to adapt to climate change



CRS staff Luis Rohr (left) and Rigoberto Agustín Ramírez (right) coffee farmer, roaster and member of the Asociación Maya de Pequeños Agricultores in Santa Anita de la Unión, Quetzaltenango, Guatemala, pose for a photo in the community's roastery. Michael Sheridan/CRS

in order to ensure sustainable development. The project is generating information and discussion among various actors along the entire supply

chain, assessing the impact of climate shifts on their activities, and linking potential adaptation strategies from farm to roaster.

Looking Ahead

According to the CRS/CIAT study, changes in climate will affect the entire coffee supply chain, making it essential for more information-sharing on this topic. At the farm level, an awareness of the predictions for a particular region will help vulnerable families to develop strategies to adapt.

At the next level, buyers and sellers need to know where high quality coffee will grow in the future and how quickly the new areas will become suitable for coffee growing. This will enable them to develop appropriate site-specific mitigation and adaptation strategies for the short and long-term, which will guarantee coffee supply and help people in rural areas to earn a living.

Lastly, government and non-governmental organizations that work with farmers need to know how land use patterns will change over time in order to plan and invest appropriately, to ensure that the rural poor find sustainable and competitive options for the future. For these reasons, CRS plans to continue to disseminate information about climate change and foster discussions on the issue amongst a wide variety of people involved in growing and selling coffee.