

## *Central American Farmers Head to the U.S., Fleeing Climate Change*

By Kirk Semple

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CORQUÍN, Honduras — The farmer stood in his patch of forlorn coffee plants, their leaves sick and wilted, the next harvest in doubt.

Last year, two of his brothers and a sister, desperate to find a better way to survive, abandoned their small coffee farms in this mountainous part of Honduras and migrated north, eventually sneaking into the United States.

Then in February, the farmer's 16-year-old son also headed north, ignoring the family's pleas to stay.

The challenges of agricultural life in Honduras have always been mighty, from poverty and a neglectful government to the swings of international commodity prices.

But farmers, agricultural scientists and industry officials say a new threat has been ruining harvests, upending lives and adding to the surge of families migrating to the United States: climate change.

And their worries are increasingly shared by climate scientists as well.

Gradually rising temperatures, more extreme weather events and increasingly unpredictable patterns — like rain not falling when it should, or pouring when it shouldn't — have disrupted growing cycles and promoted the relentless spread of pests.



Guatemalans harvesting coffee in Honduras, where there is a shortage of workers. César Rodríguez for The New York Times

The obstacles have cut crop production or wiped out entire harvests, leaving already poor families destitute.

Central America is among the regions most vulnerable to climate change, scientists say. And because agriculture employs much of the labor force — about 28 percent in Honduras alone, according to the World Bank — the livelihoods of millions of people are at stake.

Last year, the bank reported that climate change could lead at least 1.4 million people to flee their homes in Mexico and Central America and migrate during the next three decades.

The United States has allocated tens of millions of dollars in aid in recent years for farmers across Central America, including efforts to help them adapt to the changing climate.

But President Trump has vowed to cut off all foreign aid to Honduras, Guatemala and El Salvador because of what he calls their failure to curb the flow of migrants north.

Critics contend the punishment is misguided, though, because it could undermine efforts to address the very problems that are driving people to abandon their farms and head to the United States.

“If Donald Trump withdraws all the funds for Honduras, it’s going to generate more unemployment, and that’s going to generate more migration,” said María Esperanza López, the general manager of Copranil, a coffee-growers cooperative here in western Honduras. “And that’s going to result in more abandoned farms.”



“Climate change is destroying some farms,” said a coffee farmer, Fredi Onan Vicen Peña, right, shown with his father, Juan José Vicen. César Rodríguez for The New York Times

Coffee cultivators in the region are at particular risk of disruption because the crop is highly sensitive to weather variations.

Fredi Onan Vicen Peña, the coffee farmer whose brothers, sister and teenage son have already given up and joined the exodus north, reached over and tore a leaf off one of his plants.

It was a mottled yellow and brown: signs of coffee rust, a disease whose spread has been influenced by climate variability. As much as 70 percent of his crop, planted across five acres in a pine forest, had been affected, he estimated, and there was little chance he could salvage it.

“Climate change is destroying some farms,” said Mr. Vicen, 41.

Beyond that, some of his healthier plants had begun to blossom nearly two months ahead of schedule because of a heavy unseasonable downpour, throwing the entire growing cycle into doubt.

“This is not something we predicted,” Mr. Vicen said.



Average temperatures have risen by about two degrees Fahrenheit in Central America over the past several decades, making the cultivation of coffee difficult, if not untenable, at lower altitudes that were once suitable.

That has forced some farmers to search for land at higher altitudes, switch to other crops, change professions — or migrate.

“Some very fine families that have been producing quality coffee for a long time are now facing the decision of whether to stay in coffee,” said Catherine M. Tucker, a professor of anthropology at the University of Florida who has done research in Honduras for more than two decades.



Signs of coffee rust, a disease that devastated Honduran crops in 2012-13 and whose recent outbreaks may have been influenced by climate change. César Rodríguez for The New York Times

Some climate scientists say that in the absence of long-term meteorological data, it is hard for them to say with certainty whether the increasing variability is caused by long-term changes in the region's climate. But, they say, they are leaning in that direction.

“It's becoming so unusual, it's almost certainly climate change,” said Dr. Edwin J. Castellanos, dean of the Research Institute at the Universidad del Valle de Guatemala, a university in Guatemala City, and one of Central America's leading scientists in the field of climate change.

Climate change is rarely the sole factor in the decision to migrate. Violence and poverty are prime drivers, but climate change can be a tipping point, farmers and experts say.

“Small farmers are already living in poverty; they're already at the threshold of not being able to survive,” Mr. Castellanos said. “So any changes in the situation may push them to have enough incentives to leave.”

The outlook for the region seems bleak. Reduced yields of coffee and subsistence crops like corn and beans could significantly increase food insecurity and malnutrition. By some predictions, the amount of land suitable for growing coffee in Central America could drop by more than 40 percent by 2050.

The number of coffee producers in the area where Mr. Vicen lives has dropped by a quarter in the past decade — to about 9,000 from about 12,000 — partly because of pressure from climate change, said Marlon Danilo Mejía, the regional coordinator for the Honduran Coffee Institute, an industry trade group.

A vast majority are small producers, managing less than about nine acres each, he said.

José Edgardo Vicen, 37, one of Mr. Vicens' brothers, had weighed migrating for years. He had worked in the coffee fields since he was a boy, continuing the family tradition. In this part of Honduras, coffee is a major crop, with an increasing amount bound for North America, Europe and Asia.



Analyzing coffee samples at a cooperative in Las Capucas, Honduras. Cooperatives provide support to farmers and can negotiate better international contracts. César Rodríguez for The New York Times

But after a rust outbreak and other pressures in recent years, including plunging commodity prices, the younger Mr. Vicens said he could no longer earn enough from his harvest to cover production costs.

He headed north with his 14-year-old son last August, crossed the border illegally and settled in Texas. A brother and a sister, driven by similar circumstances, left Honduras soon afterward and also sneaked into the United States.

“For the small producer, I promise you, there’s no way to get ahead,” said Mr. Vicens, who now works in construction and sends remittances home to support his wife and daughter.

When he was younger, harvest time “was like a party,” he recalled. Now, “there are only losses, no profits.”

Fifteen producers from the Vicens’ coffee cooperative — more than 10 percent of its members — have migrated to the United States in the past year, said Ms. Esperanza López, the general manager of the cooperative. They have joined thousands of others from villages in Honduras’s western highlands.

Stephanie Leutert, director of the Mexico Security Initiative at the University of Texas at Austin, said that government statistics on apprehension of migrants at the southwest border of the United States in recent years reflect a sharp increase in people from western Honduras.

After large caravans of migrants arrived last fall in Tijuana, Mexico, a United Nations survey found that 72 percent of those surveyed were from Honduras — and 28 percent of the respondents had worked in the agricultural sector.





Carlos Peña Orellana growing greenhouse tomatoes, which he produces to supplement his income from coffee crops. César Rodríguez for The New York Times

The exodus of farm workers has worsened already serious labor shortages in western Honduras. Some industry leaders in the region joke that if the caravans in recent months were “the laborer caravans,” the next wave will be “the grower caravans.”

Coffee farmers have been scrambling to adjust to the changes, learning which species are more resistant to plague and drought, and branching out into other crops — like cacao, avocados or trees that produce construction-grade wood.

Nongovernmental and public-private initiatives have also taken root in coffee-growing regions of Central America and around the world to help guide farmers. Some have received the backing of the world’s biggest coffee sellers — like Starbucks, Tim Horton’s and Lavazza — trying to ensure their future supply.

Yet even the application of best practices is no guarantee that everything will be fine.

“The weather is crazy,” said Carlos Peña Orellana, 58, a farmer and member of a local coffee cooperative. “Everything’s out of control.”

He owns 12 acres of land but can afford to farm only about five. He gets by with income from a tomato greenhouse he built with the cooperative’s help, and with remittances from two sons who migrated to the United States after struggling through the rust crisis of 2012-13.

“They’re helping to revive the farm,” he said at his ramshackle ranch one recent afternoon. “It’s really difficult now.”

He turned to his youngest son, Carlos, 12, and saw a future migrant. Pointing a leathery finger, he said: “You’re next, right?” Mr. Peña chuckled. The boy squirmed, saying nothing.