

# Making Ripples

## Coffee and Climate Change

by Amanda Bancroft

Climate change, like a boarder who didn't make a reservation ahead of time and has a tendency to dampen the mood, will now have a place at our breakfast table. It's come for our coffee, and not necessarily because we're serving the best cup. In fact, the changing climate is causing prices to rise while the quality of the bean is deteriorating in some locations.

Coffee is the world's third most popular drink, but coffee plants are quite sensitive. "Rising heat, extreme weather and pests mean the highland bean is running out of cool mountainsides on which it flourishes," writes Damian Carrington of the Guardian. We typically enjoy our coffee hot, but the coffee itself prefers the cooler mountains. Like the American Pika, which also lives at higher elevations in the Rocky Mountains and can die if temperatures reach above 80°F, the coffee plants evolved adaptations for growing in the cool mountain air of Ethiopia originally. Farmers around the world are moving their coffee plantations to higher elevations, but as Peter Baker, who studies coffee for the nonprofit CABI Bioscience, said in an NPR report, "You can move up the mountainside as it gets warmer, but you actually run out of space, because mountains have this unfortunate property of being pointed."

Climate change is also changing weather patterns, which alters growing conditions to less favorable ones. There can be too much moisture in Central America, but too little in Brazil, where much of the world's coffee is grown. There are additional complications from leaf rust fungus and the berry borer beetle, which both thrive on warming coffee plantations where these pests were once unknown.

"The fungus continues to mutate, appearing in Guatemala and Nicaragua in different strains than the one detected in Colombia. Most farmers douse plants in expensive fungicides, but there's little research on whether chemical treatments work on new strains of rust," National Geographic's Dan Stone reports.

According to NPR, "In El Salvador, nearly three quarters of all coffee trees are infected with the fungus; in Costa Rica more than 60 percent are infected. And in Guatemala, coffee rust now covers 70 percent of the crop, resulting in the loss of at least 100,000 jobs and a 15 percent drop in coffee output over the past two years."

It isn't just the breakfast table being affected negatively by this news. There are 25 million rural households worldwide that rely on coffee production to sustain their livelihoods, according to the Guardian. More widespread poverty among farmers has been linked to social problems such as the drug trade. So the next time you ride your bike or carpool to work with a thermos of coffee, know that you're helping reduce emissions not only for the planet, but also for the uplifting coffee you carry which in turn carries all the families that rely on the coffee industry.

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