



Feed the Future Country Fact Sheet

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Fighting Coffee Rust in Latin America and the Caribbean



Agrilinks

An outbreak of coffee rust in countries including Honduras and Guatemala is threatening the livelihoods of millions of smallholder coffee farmers.

Growing coffee is one of the most important sources of income for millions of smallholder farmers in Central America and the Caribbean.

As the beverage of choice among millions of consumers around the world, coffee has become the most widely traded tropical agricultural product and is one of the value chains that Feed the Future focuses on improving in the region.

Unfortunately, smallholder farmers who rely on growing coffee to sustain their livelihoods often cannot afford fungicides, leaving them vulnerable to pests and diseases that can seriously damage or even wipe out entire coffee crops.

Right now, a fungal plant pathogen called *Hemileia vasatrix*, which causes deadly coffee leaf rust, is devastating coffee crops across Central America and the Caribbean. This outbreak is the result of many factors, primarily poor agricultural management practices, stresses on plant health, and climate conditions that have been conducive to the spread of the disease.

A [May 2013 report](#) estimated that the coffee rust outbreak has resulted in approximately 374,000 job losses, including in Feed the Future focus countries like Honduras and Guatemala. Many countries in the region declared states of emergency earlier this year as millions of hectares of coffee plants were crippled by coffee rust.

Coffee rust was first discovered in East Africa in the 1860s and has since migrated to coffee growing regions around the world, including Java, Sumatra, Sri Lanka, and eventually South and Central America. Coffee rust can spread through infected coffee seedlings that are transported internationally, but rust spores can also survive long-distance airborne travel, which makes the pathogen both difficult to control and susceptible to changes in climate and related weather patterns.

While poor management practices are chiefly responsible for the current outbreak, climate change is exacerbating coffee rust in a number of ways. First, weather patterns associated with rising temperatures have increased the impact and geographic range of coffee rust in the region. For example, in high-altitude areas where the disease has been historically uncommon and farmers generally do not need to use fungicides, higher temperatures have created a more hospitable environment for coffee rust, which has posed a threat even to shade-grown coffees that are not typically at great risk of fungal disease.

In addition, higher temperatures and the more frequent “El Niño” weather events of recent years have shortened the latent period of the coffee rust pathogen (i.e. the time between spores landing on a plant and the leaves showing symptoms), meaning that the disease is killing plants at a faster rate than in past years. Variable rainfall patterns associated with dry periods also give coffee rust a better chance to germinate and remain on leaves longer, leading to increased movement of rust spores between coffee plantations as farmers harvest and transport their crops.

Over the long term, without improved management practices, the continued threat of coffee rust could drive smallholder farmers out of coffee growing and into other value chains that require clearing land for agriculture (by comparison, coffee is typically shade-grown). The resulting deforestation would radically transform the landscape of Central America in particular, and have serious consequences local wildlife and water resources.

Feed the Future is playing a major role in the U.S. Government's response to this major threat to small-scale agriculture in Central America and the Caribbean. The U.S. Department of State chairs an interagency task force on the coffee rust response that also includes the U.S. Department of Agriculture and the U.S. Agency for International Development (USAID). By engaging with governments across the region, other international organizations, private coffee companies, universities, and coffee research institutes, Feed the Future is supporting comprehensive plans driven by Central American regional institutions to mitigate the impacts of coffee rust.

In the short term, these plans include facilitating financing to farmers for large-scale replanting of coffee plantations with healthy seedlings and providing technical assistance to farmers for best agricultural management practices, such as increased use of safe and effective fungicides. Feed the Future is also supporting the development of an early warning system for coffee rust based on weather patterns, and monitoring the particular strains of coffee rust in this particular outbreak.

USAID and industry partners will fund long-term breeding programs and capacity building partnerships with universities and coffee research institutes to expand genetic resources and develop coffee rust-resistant varieties. Jean Ristaino, a plant pathologist at North Carolina State University and a [Jefferson Fellow](#) in USAID's Bureau for Food Security, says it is crucial to support these research programs.

“The lack of sustained investments in building research infrastructure and training of plant pathologists and breeders has exacerbated coffee rust problems in the region,” says Ristaino. “That’s why Feed the Future is helping train the next generation to tackle these problems.”

[Learn more](#) about coffee rust and plant disease.