

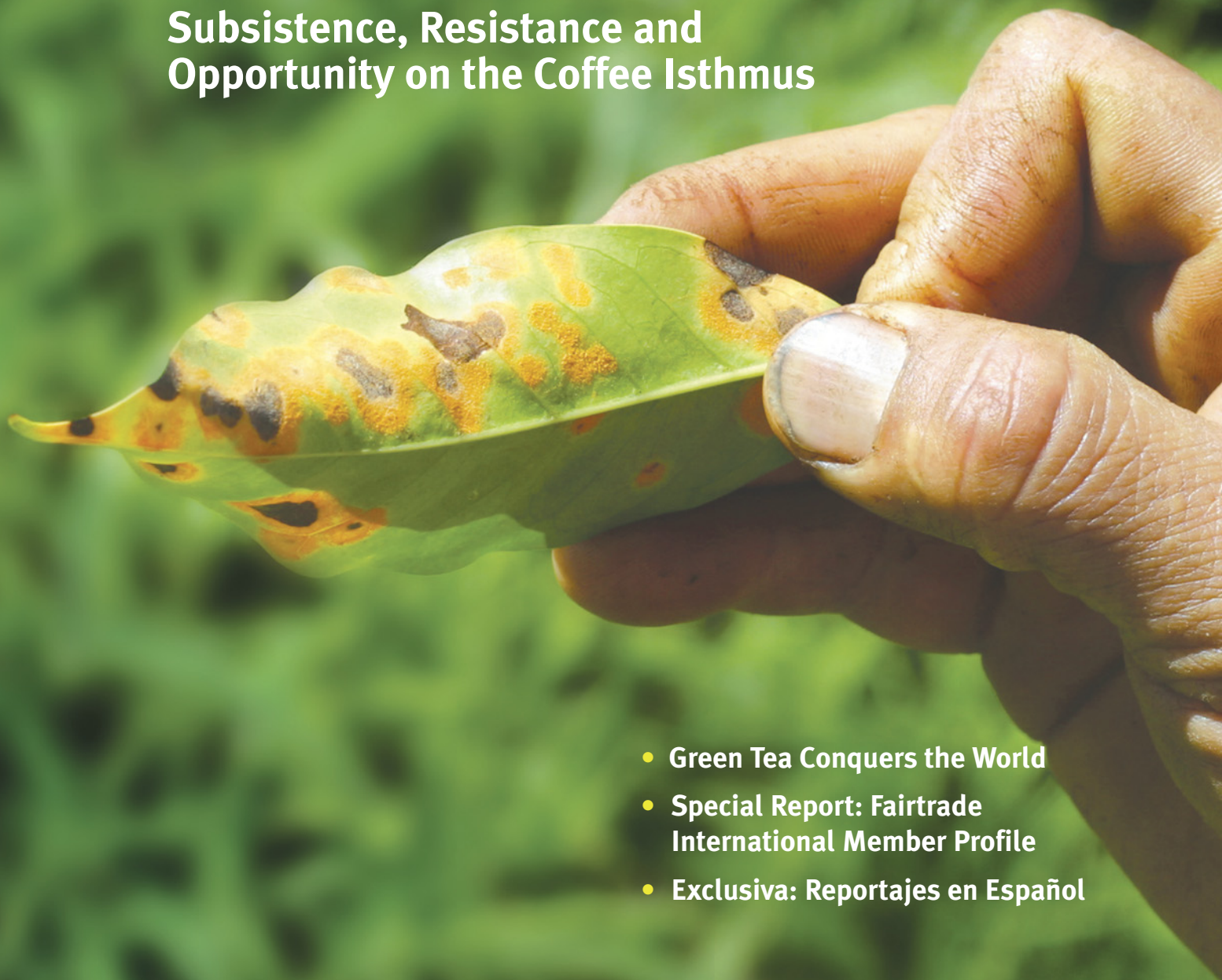
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Central America: Subsistence, Resistance and Opportunity on the Coffee Isthmus



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Central America:

Subsistence, Resistance and Opportunity on the Coffee Isthmus

In the wake of the recent rust outbreak, everyone from growers to governments is still actively fielding crisis responses and drafting long-term plans to ensure the future of coffee in Central America. **By Rachel Northrop**

The next two years will be a time of subsistence, resistance and bold opportunity in the isthmus coffee lands. International agencies, national governments, exporters, processors and individual growers will have to be creative in order to recover from the leaf rust outbreak that devastated all sectors of the coffee industry across the region.

At the first coffee-rust crisis conference held in Guatemala City in April, Promecafe, the Central American coffee promotion and development organization founded by the board of directors of Interamerican Institute for Cooperation in Agriculture (IICA), San Jose, Costa Rica, and the Central American Agricultural Council (CAC), San Jose, Costa Rica, collaboratively presented an action plan to immediately respond to the regional coffee leaf rust crisis through four main activities: integrated crop management, genetic improvement, attention to vulnerable populations and development of institutional capacities for effective responses.

With financing from the Royal Embassy of Norway, CATIE (Center for Tropical Agriculture Research and Education), Turrialba, Costa Rica, CIRAD (the agricultural research center), Paris, and Promecafe, Guatemala City, are collaboratively carrying out the fourth activity, development of institutional capacities for effective responses, through national workshops held in each of the six Central American coffee-producing countries between May and August as part of the Regional Plan for Leaf Rust Control in Mesoamerica Project.

Elias de Melo, coffee specialist with CATIE, said, "The Regional Project is first looking to ratify national plans, update statistics, and compile, generate, and share relevant information." On October 3rd, a workshop was held to share the final results of the ratified national plans, prepare trainers and bring together experts from the region.

Promecafe has already aired the radio series "Over a Cup

of Coffee," outlining the cycle of the disease, procedures for leaf sampling, fungicide application, pruning and integrated management, using an accessible dialogue format to communicate a consistent message of best practices to producers via national stations.

Subsistence

Not every farm in the region was hit, but those hit were hit hard. Many farms lost almost everything and saw the vast majority of their crop disappear. This will mean that survival, feeding the families of producers and the hundreds of thousands of individuals who depend on coffee for the majority, if not all, of their income, will in many cases come down to the ability to successfully produce subsistence crops.

Farms that practice some sort of intercropping or agroforestry have the options to consume or sell other crops or to harvest and sell hardwood, making the case that these systems are sustainable in ways far beyond just the environmental.

Resistance

Central America has seen its share of violent transitions of power and civil unrest, but today its countries are enjoying relative political stability, and now resistance means selecting strategic genetics.

In mid July, the Regional Project held a symposium at CATIE to present research on the role of climate change in the epidemic, the life cycles of the rust fungus, best practices for fungicide applications and developments in resistant genetic material.



In the past, researchers have pursued one “silver bullet” varietal to disseminate uniformly throughout the region. In light of the speed and severity with which the rust epidemic swept the isthmus, everyone from producers to politicians has been reminded of the importance of diversity as a resistance strategy. While resistant varieties that present a clean, desirable cup might be slow and difficult to develop and distribute, renovating affected farms with an array of existing varieties, resistant or not, increases the resilience of any plantation.

One of the challenges with putting resistant, high-yielding, mild-tasting varieties in the hands of producers is that varieties exhibiting these desirable qualities are often hybrids, many of which must be cloned via somatic embryogenesis, a time-consuming and expensive process. Currently, there are labs in Honduras, Nicaragua and Costa Rica propagating F1 and H1 seedlings. One effort designed to both amplify and hone the spectrum of genetic material available comes from the ECOM Sustainable Management Services (SMS) lab in Sebaco, Nicaragua, which is actively participating in World Coffee Research’s (College Station, Texas) comparative evaluation of the performance of hybrids from producing countries around the world.

What follows is an analysis of the current state of coffee production and *roya*-resistance efforts in Central America by country.

Guatemala

In revitalizing affected areas and populations, Anacafé, Guatemala City, has joined forces with IICA/Promecafe and CIRAD. USAID (United States Agency for International Development) will continue conducting research and there is potential for further collaboration with agencies like CAC’s rural sustainable development initiative, RUTA, and private entities such as Nestlé SA, Vevey, Switzerland.

Nils Loporowski, Anacafé president and Promecafe board member, cited integrated crop management as the national rust-response priority, as actions taken now in preventative rust control can have the

Coffee Production in Central America

	Hectares planted with coffee	% over 20 years old	% affected by leaf rust	Number of producers	
Guatemala	not available	25%	69%	not available	ANACAFE
Honduras	280,000	42%	54%	112,000	IHCAFE
El Salvador	152,178	51%	71%	17,000	PROCAFE
Nicaragua	126,153	7%	36%	44,267	MAGFOR
Costa Rica	93,774	42%	64%	52,787	ICAFE
Panama	19,490	42%	54%	7,700	MIDA

Source: CATIE

best long-term impact on future harvests. However, he recognized the challenges such renovations present to producers in this economic environment. “In a low coffee price scenario it is difficult to have a price estimate that the producers can make, even with their best efforts,” he said.

Guatemala is committed to looking at rust in the context of the whole coffee production picture. Anacafé is promoting a bulletin released by the International Organization for Regional Crop Health (OIRSA, San Salvador) outlining the relationship between leaf rust and *la broca*, the coffee berry borer. Under ripe cherries left on the ground as a result of tree defoliation from leaf rust create the ideal habitat for *broca* to breed. In response to the blow from rust, producers must be extra diligent to comprehensively care for their farms in order to not be further crippled.

Honduras

Just eclipsing Guatemala for title of most hectares planted with coffee, Honduras is seeing a decrease of 1.8 million 46kg sacks of green coffee for the 2012/13 harvest as a result of the leaf rust.

At the April rust summit in Guatemala City, participants in one of the working groups noted that “there is a direct relationship between the price of coffee and farm management.” Omar Acosta, general manager of the Honduran coffee export company CADEXSA (San Pedro Sula, Honduras) and president of the Association of Honduran Coffee Exporters (ADECAFEH), one of the first groups to push for the declaration of a national emergency, noted, “While the *roya* is a major issue, another concerning issue is low prices and minimal access of producers to

credits to renovate their farms. This will present a major challenge to processors and exporters as well as producers.”

IHCAFE is administering government funds to help producers renovate their land. More than half of the hectares across the country planted with coffee were affected by the rust, so the task of revitalizing production to recuperate the losses extends to the private sector, where some exporters are supplying producers with seeds of more rust-resistant varieties.

El Salvador

The Regional Project workshop held in San Salvador in June was the most highly attended of the six held throughout Central America, with more producers in attendance than in any other country. This speaks to the fact that more than 70 percent of El Salvador’s coffee hectares were affected by the leaf rust.

The large land area in production and the labor force needed to work the land and harvest the coffee creates a large vulnerable population. Of the four areas of concern enumerated at the summit in April, Adan Hernandez, phytosanitary expert with El Salvador’s coffee institute Procafe (San Salvador), considers attention to this large vulnerable population to be the country’s top priority in responding to the rust crisis. “If there isn’t work on the farms, all these people will migrate to cities. That’s the serious part,” he said.

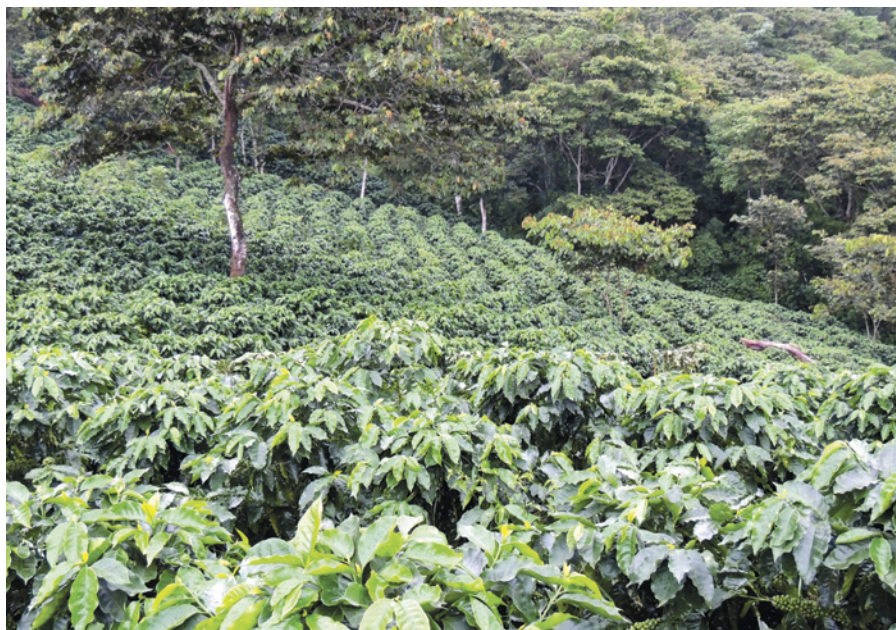
On August 26th, the Salvadorian newspaper *El Diario de Hoy* estimated that 102,000 jobs were lost because of the rust outbreak. The scope of land and individual livelihoods affected by the rust is great enough that revitalization will require the pooling of resources from

diverse organizations like the Central American Bank for Economic Integration (BCIE, Tegucigalpa, Honduras) and the International Cooperation and Development Fund of Taiwan.

El Salvador finds itself with the oldest farms in the region, with more than half over 20 years old, making renovation vital to ensuring future harvests. Landowners are eager to get started. Pruning and replanting will generate some employment, but the low price of coffee makes it difficult for producers to make investments, even with the financial support that is trickling in, since they won't see a harvest from those renovated hectares—and a return on those investments—for at least two years.

Nicaragua

As a country, Nicaragua skirted the worst of the crisis, with the second lowest incidence of rust infestation in Central America. In late August, CONACAFE (Managua) reported that



Nicaragua had the second lowest outbreak of coffee leaf rust infestation in Central America.

the province of Jinotega experienced just 5 percent rust outbreak in farms above 100 masl (meters above sea level). MAGFOR (Ministry of Agriculture, Ranching and Forestry) delegate to

Jinotega, Jose Adan Garcia, estimated, “a harvest of more than a million quintales of green coffee” from the province in the next harvest, provided producers aggressively prune, regulate shade and monitor



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their farms for the first signs of rust.

While parts of Nicaragua emerged unscathed, producers affected by the outbreak are looking for answers and assistance. On August 9th, the Nicaraguan newspapers *La Prensa* and *El Nuevo Diario* reported on the creation of the National Alliance of Nicaraguan Coffee Growers (ANCN, Managua), a grouping of 5,000 smallholders.

Provisional president Álvaro Reyes Portocarrero called for the need to integrate research with political support and lines of credit for producers. "We can take countries like Honduras as examples, where they've developed their cultivation of coffee thanks to the implementation of informed politics, which we have not seen in Nicaragua," he said.

At the Regional Project workshop held in Managua in June, Conacafé secretary Luis Osorio similarly noted, "Producing families are sleepless, and the answer will be in the unity of government institutions, the academic and private sectors, and producers." MAGFOR recently held the country's first "Field School in Coffee Production" in the province of Managua, with 25 producers in attendance.

Costa Rica

Outside of Ethiopia, Costa Rica is home to the world's largest collection of coffee varietals, housed at CATIE Turrialba. This fact is not merely symbolic; Costa Rica's ICAFE and University of Costa Rica have been working closely with CATIE to lead the efforts in a regional response to the leaf rust outbreak.

CATIE has been cloning F1 hybrids for years, but at a July Regional Project symposium, Brazilian researchers from Instituto Agronômico de Campinas, Federal University of Viçosa, and Empresa de Pesquisa Agropecuária de Minas Gerais presented CATIE with 17 varieties of Sarchimores, Cavimores and Catimores, all of which are genetically rust-resistant. The forum also presented data on the life cycle of the rust fungus and climates in coffee-growing regions in order to better understand the correlation between changes in temperature and rainfall and patterns of leaf rust outbreak.

Costa Rica has been proactive since the current rust outbreak first descended, declaring a national emergency, helping producers acquire fungicides and establishing early warning systems. Because Costa Rican producers sell their coffee in freshly picked cherries to large wet processing mills, the operators of those mills have been making farm visits to survey the effects of the rust and thus make informed decisions about the specific support their producers need.

Panama

The number of coffee producers and hectares planted with coffee in Panama is the lowest in the region, as is the percentage of hectares affected by the rust. The majority of Panama's coffee production is concentrated above 1500 masl, making it fairly "safe." Specialty coffee grower Wilford Lamastus of Boquete reported, "My farms are between 1700 and 1900 masl and absolutely nothing happened."

Many of the producers with farms at



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high elevations are also those who export differentiated coffees for significant premiums, affording them the resources to invest in timely fertilizations and fungicide applications.

Affected farms are receiving support from Panama's Ministry of Agricultural Development (MIDA) and the newly formed Committee for Control of Coffee Leaf Rust, *Ojo de Gallo* and *Broca*. MIDA Secretary General Alberto Arjona cited the effective collaboration between the members of the CAC to, "define and execute regional early alert actions that will reduce the risks of negative affects from pests and plagues."

Bold Opportunity

Often, moments of crisis are also moments poised for drastic change that would have otherwise been impossible. All farms, even those that didn't see the orange spores on the leaves of coffee trees, were affected by the ways in which the rust forced coffee producers to rethink all aspects of crop management.



Central America has solidified itself as the world's top producer of specialty coffee. Despite the mass devastation, there is opportunity as the demand for specialty coffee is growing globally.

On average, 36 percent of coffee farms in Central America are more than 20 years old. With renovation being a key tool in both recovery and future resistance, all parties in the supply chain have the rare and invaluable opportunity to collectively ask, "Renovate with what? Renovate how?"

Researchers, governments, agronomists and producers are already working around the clock to answer that question, and all parties recognize that the best answers probably won't be conventional. Instead of packing high-yielding trees close together again, producers are becoming more specialized.

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Central America has already solidified itself as the world's top producer of specialty coffee. In the wake of devastation comes a clean slate. Production levels will be lower as farms are renovated, but rather than attempt to recuperate previous production levels, this may be the perfect opportunity to accept lower volume and pursue higher quality.

The demand for specialty coffee is increasing. Central American countries have found loyal and hungry markets not just for coffee from their country, but for coffee from specific regions, farms and lots. Cup of Excellence actions draw masses and inspire whole communities to improve quality. Using this momentum, this could be the most opportune moment to plant new varietals at lower densities, and better care for every tree in order to guarantee that all the coffee is somehow differentiable for some market.

Now is the time for careful research and revision of data, but it's also the time for experiments. Planting varietals from other countries, interplanting new crops and trying new fungicides and fertilizers are considerations that might never have made it to the table had the rust outbreak not obliged everyone to rethink production as usual. Stepping back to assess the damage has created a space for reflection, and everyone in the supply chain has been reminded that growing coffee is not a sum of individual activities; rather it's a cyclical process where herbicide use affects soil quality, soil quality determines need for fertilization, and fertilization influences a tree's ability to resist disease.

Central American coffee was dealt a debilitating blow by the rust outbreak, but the region is already taking steps to come back, and everyone from phytosanitary experts to individual producers is seizing this bold opportunity to come back stronger. ☕

Rachel Northrop is a New York-based freelance writer. Her book "When Coffee Speaks: Stories from and of Latin American Coffee People" is available via whencoffeespeaks.com. She may be reached at: northrop.rachel@gmail.com.

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