

Infected leaves, El Mirador/Costa Rica



Jorge Cuevas, director of trade at Sustainable Harvest

# Coping with Rust



Anne Costello, director of coffee at Peace Coffee in Minneapolis, Minn.

La Roya unnerves specialty buyers who must now account for unreliable volume and what many buyers hope is a temporary decline in quality as they negotiate to purchase Central American coffees.

raders became alarmed when word spread that coffee leaf rust, or CLR, had reached crisis levels in Central America. Many feared severe shortfalls in the 2013/14 harvest season.

Jorge Cuevas, director of trade at Sustainable Harvest in Portland, Ore., reported, "Many buyers started to book coffee ahead of time. They didn't want to be cut out. Even before summertime, people booked as far as 12 months out."

Volumes are no longer expected to fall as low as earlier projections suggested. Still, "la roya" or "rust" in Spanish was the major focus of concern at coffee conferences and tradeshows this fall. Experts presented findings about the extent and intensity of infection, gave updates on emergency aid, and proposed long-term projects to prevent another such crisis even as recovery from this one gets underway.

The degree to which roya impacts flavor varies from one locality to another, often taking buyers by surprise. Even with CLR held at acceptable levels in many areas, cup quality is suffering. Many farmers cannot afford to buy the fertilizer and fungicide needed to get their crop to ripen properly.

Rust was not the only much-discussed subject, however. Presenters and attendees alike talked about the continuing decline of commodity prices for coffee. Many worried how this would influence buyers' strategies this harvest season in Central America. Coffee prices fell 29% in 2013 and are down 49% compared to 2011. With the ICO composite indicator price near all-time low levels in November, roya-affected farmers are in the undesirable position of selling below the cost of production.

Then in December, when a record crop in Brazil appeared to almost single handedly guarantee an excess, torrential rains — the worst deluge in 90 years — led commodity brokers to estimate production will decline to 51 million bags this year from 57.2 million last year. Projections that ranged as high as 60 million bags were quickly revised. The good news is that Arabica prices surged on the news.

All these factors — uncertainty about volumes and quality, and that the composite dipped below \$1 per pound — have shifted the present course of negotiations. And, as several buyers acknowledged, strategies and supplier relationships will change if the rust crisis continues.

#### Fearing price spikes

Last spring projections about how hard the crisis would hit supply levels and workers were stark for the 2012/13 harvest. In El Salvador, for example, the number of workers expected to be out of seasonal jobs was more than 325,000. The actual numbers, with about 60,000 more working than expected, is hardly a cause for optimism.

Molly Laverty, sustainable green coffee supply and procurement manager at Farmer Brothers observed that, "Starting last year when roya was really coming to the attention of coffee buyers, a lot of us were hearing the same kind of stories from producers. It seemed a little bit apocalyptic at first — the devastation that this would have on coffee volumes coming out of Central America."

Guatemala is an interesting case in understanding how to interpret projections. Reports on what buyers could expect in terms of decreased production at a country level varied depending on source, with some suggesting a 70% decline in volumes and others only 59%. Either case presented challenges to buyers who rely on the unique characteristics of coffees from Atitlan or Huehuetenango to please their customers' palates.

For this harvest season, "there appears to be a lot of speculation in Guatemala. It's not clear whether producers are holding off and waiting for a better price. Price discussions are taking longer than normal to complete: a week instead of a couple of days," said Cuevas.



Close up of infected coffee leaf at El Mirador in Costa Rica. A single CLR lesion produces up to six crops of spores during its three to five month reproductive cycle, releasing 400,000 spores that drift on the breeze to infect nearby leaves.

## **The Quality Problem**

The timing of defoliation due to coffee leaf rust has varying effects on cup quality.

The 19th century botanist Harry Marshall Ward studied coffee leaf rust in Ceylon and is credited for discovering when roya was most vulnerable to intervention. He was unable to stop the outbreak that led to the eventual demise of coffee cultivation there, though he did make a number of important observations that led to the ability to control rust today.

Ward proposed that fungicides be applied before spores can move from the germination to the colonization stage. To this day, studies show the importance of proper timing when applying such controls.

Emergency access to funds and fungicides has had an impact in many Central American countries but such measures prove little more than a stopgap for some.

Molly Laverty, sustainable green coffee supply and procurement manager at Farmer Brothers, relayed a common problem: "We have one farm in El Salvador whose neighbors aren't protecting their farm very well, whose farms are totally destroyed by roya. And they found it extra difficult to control for roya because every time they sprayed fungicides, a couple weeks later they'd have to do

Once roya takes hold, however, little can be done to slow its progression. Rust robs the developing coffee cherries of nutrients after it penetrates the leaf. Many trees still produce, though the now-starved fruit yields a very different cup quality than one would expect. Buyers began noticing this tendency with the 2012/13 harvest.

Jose Cuevas, director of trade at Sustainable Harvest, explains: "The biggest problem has turned out to be quality because Roya has an effect on maturation of the cherry resulting in underdeveloped, cereal-like, and vegetal flavors. This is because the loss of leaf prevented sugars from fully developing. That flavor problem caught a lot of people off-guard."

The Oregon-based importer Cuevas works for hosted its annual supply chain conference, Let's Talk Coffee, in El Salvador in 2013. The team also organized a companion event to follow open to all in the trade called Let's Talk Roya.

At Let's Talk Coffee, attendees were encouraged to blindly taste two coffees between sessions. Volunteers recorded answers to a brief survey about each taster's cupping experience. Few were surprised when results revealed that even inexperienced cuppers could distinguish which sample came from a roya-affected farm.

Sustainable Harvest staff planned the analytical cupping session that took place at Let's Talk Roya months in advance, inviting producers and roasters to participate. To avoid differences being introduced by processing, all underwent the same washed process and were roasted to the same profile.

The nine coffees sampled included two controls: a Castillo, a hybrid of Arabica and Robusta bred to be resistant to rust; and a Caturra from a farm affected by broca, a coffee berry borer, but not by roya.

The remaining seven samples were all Caturra and came from producers who experienced varying damage from rust.

Cuppers preferred those coffees that experienced less leaf loss overall. The timing of defoliation in the overall production cycle seemed to be a confounding factor. Samples from farms that lost a higher percentage of leaves earlier in the growing season tended to receive the lowest scores.



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David Griswold, president of Sustainable Harvest with Ed Canty, fair trade and organic coffee buyer for Green Mountain Coffee Roasters at Let's Talk Roya.

But is a price crisis on its way? At a macro level, supply is readily available.

"There are 3 million bags at risk—that's what we've heard about with roya. There are 120 million bags being produced: Brazil's got 60 million (since revised down to 51 million) and Vietnam's got a record crop of 30 million. So, even if it's worst case, is the 3 million going to cause a blip in the supply chain? I don't think so," reasoned David Griswold, founder and president of Sustainable Harvest.

Consumers are not likely to feel the effects of shortfalls in the near term. Retail operators manage price risk at the top of the value chain by using fixed price contracts, some extending for as many as five years. However, if in fact hard-hit growers can no longer earn a living by growing headline-grabbing high elevation coffees, limited supply will trigger isolated price spikes.

Phil Beattie, director of coffee for Dillano's Coffee Roasters, validated this assessment: "I anticipate that in some way roya is going to show its impact in the price for single origin coffees. At that time, people are going to be much more concerned."

#### **Enough for now**

Traders who sign contracts for a wide range of green bean volumes year after year all reported playing a wait-and-see game for coffee sourced from Central and South America. Many adopted a more flexible approach to working with suppliers, and chose to stay in closer contact with favored farms or cooperatives during the course of the 2013 growing season.

Beattie explained what is happening now, "We're projecting what the volume and quality will be and where it needs to be priced so that I can get the quality that I'm looking for at a price point that the farmer is going to be able to make a living wage. It's not an issue of if I'm going to find the quality that I want, it's a question of what is that quality going to cost."

Green Mountain Coffee Roasters purchased 216 million pounds of coffee in fiscal 2013, of which about 68% is from farm-identified sources meaning that it can be traced back to the farm, estate, or cooperative. Having such traceability is very important when disease rates rise or natural disasters impact available supplies.

Ed Canty, fair trade and organic coffee buyer for GMCR, said "Our buying behavior doesn't follow country report analysis it follows producer group analysis."

Smaller companies applied the same approach to assessing whether their suppliers can deliver.

Torrey Lee, president of Café Moto, affirmed, "So far we are able to receive the needed volumes from our regular sources for next harvest. Going forward we'll see." This San Diego roaster buys about 10% of the volume of GMCR with approximately half sourced from Central and South American origins.

Peace Coffee, a roaster in Minneapolis, Minn., purchases about 35% of its green coffee from Mexico, Guatemala, Honduras, Nicaragua and the Dominican Republic. The company's director of coffee, Anne Costello, explained how she hopes that maintaining long-term relationships will help secure the volumes she wants: "We'd like to think we'll be first in line if our suppliers are going to have a higher harvest than they're projecting. We think we're good traders, we hope that's the case. A lot of our work in risk management is being a good partner."

#### **Future adjustments**

The coffee industry in Central America faces challenges that will take years to resolve. Even without the rust crisis, convincing those in the next generation of coffee farmers to stay in the business is difficult.

Griswold predicted what will happen if conventional prices stay low: "There will be limited supplies as people convert their farms to other uses. And that's already happening. People are planting avocados, in Brazil they're putting in eucalyptus, or they sell it to become condos or golf courses. The remaining farms will become highly subscribed."

At least one large-volume buyer is concerned about what happens if specialty volumes decline.

"Diversifying market access is important for everybody. It's sustainable for Green Mountain but mostly for producers to have several customers. There is room in this conversation for buyers of all sizes and our solutions will be more successful with their involvement," said Canty.

"We really don't want to buy any more than 60% from one co-op," said Canty.

The reality is that not every producer will recover. As Cuevas put it, "Coffee is going to go to the edges. The guys in the middle are going to get squeezed. If you produce 82-84 cupping coffees, you are in a bind. Buyers will gravitate to other countries and varieties."

Beattie was pragmatic, "Absolutely I'm looking at other alternatives if this is a permanent issue for Central America that doesn't get resolved within the next year or two. If I have to start looking at other origins like Peru or Colombia or Bolivia or Ecuador because those countries have the potential to produce coffees with the same profiles as those in Central America, then I will."

Other small roasters and retailers agreed that more significant product line changes could become necessary.

"We're going to need to be flexible. That means more blends and differentiating our lineup a bit more. It's a scary thing to look at when you know one of your best sellers is the coffee you're going to have to change up," said Costello.



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