



COLOMBIA SENSORY TRIAL
A Coffeelands Conversation with CIAT's Mark Lundy

COFFEELANDS: How would you frame the central research question of the Colombia Sensory Trial?

MARK: I like the way Tim Schilling of World Coffee Research put it: “What variety will give farmers the best bang for their buck?” The best research questions are often the simplest.

COFFEELANDS: How would you describe the research methodology, including reference to both its strengths and weaknesses?

MARK: The strength of what we did in Nariño was that we had a very narrow research question and we were very clear about the limitations inherent in the design. The Colombia Sensory Trial was an almost perfect “natural experiment.”

COFFEELANDS: Can you unpack that term a bit?

MARK: A natural experiment happens when you identify interesting things that happen in real life—variation you couldn't randomize or examine as a controlled trial, but chance allows you to find naturally occurring and to analyze it.

In the case of our work in Nariño and the 25 farms that are part of the Colombia Sensory Trial, nature has allowed us to identify farmers growing different kinds of coffee under identical conditions. The only thing different between the two samples in each sample pair is that one is Castillo and one is Caturra. It is almost an ideal situation. If we tried to send it up as a randomized control trial, which is all the rage these days in experimental economics, it would have been next to impossible. This is the next best thing.

The limitation of our design is the number of farms involved. The sample size just wasn't big enough to generate statistically significant outcomes.

COFFEELANDS: And then there is the fact that cupping as an approach to sensory evaluation is pretty flawed. You have called it “completely subjective.” Do you stand by that characterization?

MARK: Well, let's just say it is much more art than science and very, very subjective.



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COFFEELANDS: Is it fair to say also that the research design had the virtue of having its vices? You may recall that early on in the process there were people weighing in on design who wanted to see us carefully control every variable around management, which we did not do. This was more of a field experiment than a scientific affair.

MARK: It's true that these aren't coffees grown on research plots. This is coffee as it is being grown and sold into the market. That is probably a fairer comparison than if this were done on experimental lots by the Federation, and certainly one that is more relevant to buyers of Colombian coffee.

COFFEELANDS: So, what did we learn from the cupping data?

MARK: The first takeaway for me was that both varieties can score well, but they are not the same. The Trial shows market acceptance of both varieties as potentially high-scoring and therefore high-value cultivars. But it also shows that the best and worst expressions of both varieties have different flavor notes and attributes.

Second, the data showed a much stronger relationship between elevation and management on the one hand and quality on the other than between genetics and quality. Both these coffee varieties can produce high quality coffees if they are planted in adequate agroecological niches and well-managed. In the end, if the choice is between Castillo and Caturra, which variety a farmer plants may not be as important as where the farm is located and how the coffee is managed.

While a farmer can't change the growing environment easily, management is under a farmer's direct control. If your management practices are not adequate or if you are not investing in your farm, the probability of achieving high quality is much lower. The question is, how do you know if you are in an agroecological zone that is amenable to high-quality coffees?

COFFEELANDS: Is there a policy recommendation in there?

MARK: Yes! I think the implication is that we need to increase the "intelligence" of extension services and national coffee institutes to understand the relationship between environment and quality in a more nuanced fashion. That is a role for either public policy or a coffee institute or private policy at a farmer organization or firm level. But in reality, the research costs associated with something like this are so high it is probably more reasonable to think of this information as a public good financed by public funds.



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In the case of Colombia in particular, it is an area where the Federation can be playing a more active role given that it has already done so much of the work in connection with its Denomination of Origin program. The FNC has a lot of information about what areas of the country have potential for higher quality, but that information isn't necessarily making its way to farmers in a way that informs decision-making.

What farmers need to receive from the policy environment that they are not necessarily getting now is this kind of feedback: your best bet is quality-differentiated coffee or your best bet is productivity and maximizing yields.

Of course, productivity is applicable both in high-quality production areas and higher-volume production areas, but this information would inform the decision on investments at the farm level in terms of the reasonable probability of getting a return on investment in improved quality.

Once an area's potential is established and growers make choices about what kinds of strategies they want to pursue, then there is a need for differentiated extension packages, including seed for varieties that are consistent with those strategies, agronomic assistance with improved production technology, credit, etc. The point is that the extension services should be tailored to different production niches.

COFFEELANDS: Which brings us to Colombia's policy on coffee varieties, which is to offer seed, credit and subsidies only to growers renovating with Castillo—a one-size-fits-all approach that decidedly is not tailored to different production niches. How do we square the current approach with what you seem to be recommending?

MARK: Policy needs to reflect best-bet approaches for the largest number of growers. I think the Federation, by focusing on rust and a variety that was resistant to rust and doing it in a way that doesn't compromise quality, did a fairly good job of balancing concerns about yields and quality.

I also think the fact that Cenicafé developed a series of regional Castillos optimized for local conditions reflects the application of a more site-specific approach.



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COFFEELANDS: But offering different “flavors” of Castillo is not the same as offering a full package of support for multiple varieties based on specific growing environments. I understand that public support for varieties susceptible to rust may not be politically viable, and that Colombia’s Castillo-only policy may do the most good for the greatest number of growers. But do you think the use of public funds for more robust investment in the “site-specific” approaches you mention is appropriate?

MARK: It is probably more reasonable for the state to provide a generic enabling environment and space for private-sector firms to operate. It may be a good thing that the Federation doesn’t support traditional varieties in the way it does Castillo. That way the market is providing the signals based on real opportunities in the market and farm-level decisions are not distorted by policy interventions not tied to specific demand.

COFFEELANDS: Those are very clear implications for policymakers. How about coffee buyers? What do they stand to learn from the results to date of the Colombia Sensory Trial?

MARK: If you are a buyer, you really need to know the costs of production of the growers in your supply chains and understand what you are asking farmers to do in terms of assuming additional cost and risk when you ask them to plant Caturra or Marago or Gesha. This probably means more investment than most companies are making right now. If you want reliable access to high-quality coffee, you need to make sustained investments to increase the probability that growers will produce high-quality coffee year-on-year. The alternative is coffee hunting, and coffee hunting is not a viable business model.

The other implication is around price. A model built around the commodity price as a benchmark is wrong for this kind of business. We need to evolve the pricing mechanism for quality-differentiated coffees to build higher and more stable prices into the system so growers can get more clarity on the likely returns on their investments in quality.