



## CJ1319 - Peru El Diamante David Flores Chilcon Raised Bed Yellow Caturra Crown Jewel

November 22nd, 2019 | [See This Coffee Online Here](#)



**Intro** by Mayra Orellana-Powell with Chris Kornman

Having grabbed hold of the saying, “All for one and one for all”, David Flores Chilcon is a bit of a coffee musketeer. He is all about supporting his family and they are all about supporting him.

Much of his passion started just a few years ago when he went with his father to sell coffee and saw a coffee laboratory for the first time. He was hooked on the dream of producing a coffee that would stand out on the cupping table.

Fast Forward to this micro-lot, harvested and processed on David’s farm called El Morito located near the community of San Ignacio in the Cajamarca region, and you know his dedication is paying off. David has his own micro-mill where carefully harvested cherries are depulped, fermented, washed to remove the mucilage, and then gently dried on raised beds over a period of 12-18 days.

While David has designed farm management and post-harvest solutions to fit his needs, he also has a strong alliance to bring his coffee to the international market and earn fair prices. He started working with Aroma del Valle, an organization established to assist producers access the specialty coffee market. With the help of Aroma del Valle, David built the drying space he needed to produce his first micro-lot. David’s youth and energy has been an inspiration for other young producers who also want to sell coffee in the specialty coffee market.

The coffee is super juicy, marked by vibrant citrus fruits like lime and mandarin orange with abundant stone fruits like apricots and peaches. Some subtler grape and cherry tomato accents add complexity. We’re thrilled to have this, our first new crop from the Southern Hemisphere, ready for roasting and brewing.

**Grower:** David Flores Chilcon, Parcela El Morito

**Process:** Fully washed after pulping and fermenting, then dried on raised beds for 12-18 days

**Region:** El Diamante, San Ignacio, Cajamarca, Peru

**Cultivar:** Yellow Caturra

**Altitude:** 1700 masl

**Harvest:** July - September 2019



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### Green Analysis by Chris Kornman

Our newest barista, Nate Lumpkin, and I used this coffee as a training tool for an introduction into green coffee measurements. In a lot of ways, it's an interesting specimen. The density reads well above average, while the screen size is a pretty standard 16-18 medium to large... no surprises here. Things start to get strange when we look at the moisture numbers, though. Having a high density accompany a low moisture reading is no surprise, yet the 9.3% here is below average, especially considering we rarely see Peru clock below 10%. And then there's the water activity. I was sure our machine was miscalibrated. We broke out the test tubes and calibration standards and set about confirming that we were indeed within spec. So this coffee has a very low water activity, low moisture, and pretty high density -- metrics that all speak to good shelf-life and longevity of flavor but may need some attention to detail when roasting. Keep an eye on the roast notes on this selection.

A note on the cultivar: Caturra, an American mutation of Bourbon first observed in Brazil in 1937, it is one of a number of single-gene-changes that results in dwarfism in coffee (its "cousins" include Pacas, Pache, Villalobos, and Villa Sarchi). The short stature allows for more trees per hectare, and thus higher average yields. The yellow fruit variant isn't as commonly advertised, but it was used as the parent ingredient of another popular short cultivar: Catuaí. Caturras are well regarded by quality agents and is considered a legacy variety, bearing close resemblance in flavor to its favored Bourbon lineage.

<u>Screen Size</u>	<u>Percent</u>	<u>Density</u>
>20	2.04%	708 g/L (free settled)
19	9.65%	688 g/L (Sinar)
18	27.60%	
17	29.15%	<b><u>Total Moisture Content</u></b>
16	21.14%	9.3% (Sinar)
15	7.27%	
14	3.07%	<b><u>Water Activity</u></b>
≤13	0.09%	0.397 (Rotronic)

### Ikawa Analysis by Chris Kornman

*We've updated our V2 Ikawa Pro machines with the latest Firmware version (24) and run on "closed loop" setting. Our roasters underwent full service in October of 2018 which included replacement heating elements and an updated PT 1000 temperature sensor, and were recalibrated in September 2019.*

I used this coffee in an Ikawa training session with our Barista James Scott, who took the reigns and worked on a new profile for two other coffees, using these two roasts as a jumping off point.



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Roast 1, in blue, has been a reliable go-to for me in recent weeks for sample roasting. It pairs my signature high early airflow with a high charge temperature and steep rate of rise that remains fairly constant throughout drying and color change. Looking at the temperature, it would seem the end of the roast might bake the coffee, but in fact a gradually but significantly reduced airflow towards the final seconds of the roast has the effect of increasing conduction and eliminating the risk of flinging roasted coffee into the chaff collector. This was our preferred profile, showcasing vibrant citrus notes with a sturdy chocolate backdrop.

The second roast included a demo for James on how to manipulate elements of the roast without changing the end time and temperature. We chose to reduce the charge temperature and increase the rate of rise prior to color change, effectively reaching the Maillard reaction earlier and spending an extra 20 seconds of pre-crack color development: an elongated Maillard. The coffee was solid but not quite as vibrant as the first roast, with notes of raisin and walnut accented by some nice vanilla, caramel, and floral qualities. James took what we learned from this roast and improved upon it for CJs [1320](#) and [1321](#).



You can download the profile to your Ikawa Pro app here:



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Roast 1: [Crown 6m NatEth ck1.4](#)

Roast 2: [Crown 6m NatEth ck1.5](#)

### Quest M3s Analysis by Evan Gilman

*Unless otherwise noted, I follow a set standard of operations for all my Quest roasts. Generally, I'll allow the machine to warm up for 15 minutes until my environmental temperature reading is at least 250F, weigh out 150g batch size, and begin roasting when I've reached my desired charge temperature. [Read my initial post here](#) and my [updated post here](#).*

This week, I did some comparative roasting on the Quest M3s. Our Probatino is currently undergoing maintenance, so the majority of roast comparisons came from yours truly! For three different coffees ([CJ1320](#), [CJ1321](#), and this lovely lot) I attempted similar heat application techniques. For my first roast of each coffee, I charged with a lower Environmental Temperature and a higher temperature as read at the Bean Temperature probe. For example, in my first roasts, I usually charged at around 260F ET and 400F BT.

For my second roast of each coffee, I started with a higher average ET and lower BT (about 275ET and 385BT at charge). The result, as you can see in the graphs below, is more time spent in Maillard for my first roasts, and more time spent in drying phase for my second roasts.

For the first roast of this coffee, I began airflow early and began ramping down heat application at the 5 minute mark. By 6 minutes, I cut heat application entirely, and maxed out the fan speed. There was enough momentum in this coffee to continue through the roast without further heat application. I dropped this coffee before it got too hot ( 7:45 / 401.2F ), but it would have continued to exotherm had I kept it in the roaster. Definitely keep in mind that this coffee is dense, has low water activity, and will nearly roast itself after ample heat application!

In the second roast, I did something slightly different. I kept airflow to a complete minimum by opening the back of the roaster to stop airflow - until a bit after turning point. I then closed the back of the roaster, and after a few seconds turned the fan speed up to maximum. At a little after 5 minutes, I cut heat application entirely, having learned from my first roast. I may have been a bit heavy handed here - I ended the roast at 7:44 / 394.5F as it was no longer increasing in temperature. This accounts for our tasting notes below!

The first roast of this coffee displayed more sugar browning notes like chocolate and honey, but definitely retained the bright malic acids that this coffee displays. Peach, pear, melon, and lychee all figured in our tasting notes.

The second roast, in comparison, lacked a little body. The acids were clear in this roast as well, but the experience as a whole was perhaps a little sharper - less well-rounded. Even so, sweet stonefruit and pear came through clearly in both roasts of this coffee.



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So word to the wise: while this coffee will exotherm very easily, find the balance in heat application, and the acids therein will reward you sweetly! Don't get greedy like me, and watch out for stalls after first crack!

As for applications, I'd recommend this coffee for nearly any brewing method. I'd love to see this as an espresso, but the clear shoo-in is filter drip. Look for those gentle malic acids to shine in [this spectacular Peruvian coffee](#).

### **Diedrich Analysis** by Chris Kornman

In a perfect storm of Probatino breakdowns and Candice Madison's absence, I made a last-minute drive out to Royal's warehouse on Coliseum Road in East Oakland to pay Jesse Herrera and the team a visit. Jesse is our warehouse manager, a 20+ year veteran of the Royal Coffee team, and an absolute all star. In addition to coordinating pickups and deliveries (one recent day saw them shipping out 2000+ bags, not including deliveries and pickups, with 5 of the 13-man crew out of the office and both delivery trucks down for servicing), Jesse personally oversees the Crown Jewel bags and boxes and often packs them himself. An unsung hero if there ever was one, Jesse spent a few minutes to catch up with me and tell me about the goings on, and then graciously handed off a few extra pounds of this Peru to roast for analysis.

I had about 7 lbs of green left after Evan's Quest Analysis, so I figured I'd try my hand at two small roasts in the Diedrich, rather than one big one. I pulled up our Pourover Test Profile and warmed up the roaster. The Deidrich has an idle issue (in that it's not terribly fond of staying at one temperature for very long) so getting it to align with a prescribed starting point can take a bit of finesse. I think my first attempt, PR-2154, fell victim to a declining drum temperature as I approached the charge, and never really recovered. I just assumed the small batch would pick back up some momentum as it cruised into Maillard, but it never really did, and insufficient gas throughout the roast cost me a full 11-minute profile with seven of those minutes spent before Maillard.

I charged attempt number two about 30 degrees hotter, yet it got off to a slow start as well. I pushed a little harder with the gas and kept the airflow closed longer, however, and ended up careening into first crack and killing the gas entirely after about 30 seconds. The coffee coasted to a finish in about 9:30 with a comparatively small color change and development ratio. It was then that I noticed my mistake: I'd left my gas at setting 2, idle, until well into the roast. The recipe called for a charge at 5, nearly full gas. I'd misread the number and assumed that my charge would be from an idle setting. It occurred to me much later that the coffee's very low water activity and high density might have worsened the effect, I should've known to use more heat, especially early in the roast. Guess I'm a little out of practice.

The ColorTrack reading from Roast 2 at least looked closer to my target, so I felt cautiously optimistic about its chances on the cupping table. It did score a bit higher overall, though the roasts had more in common than I expected given the sharp differences in roast style. Both showed off a balanced but



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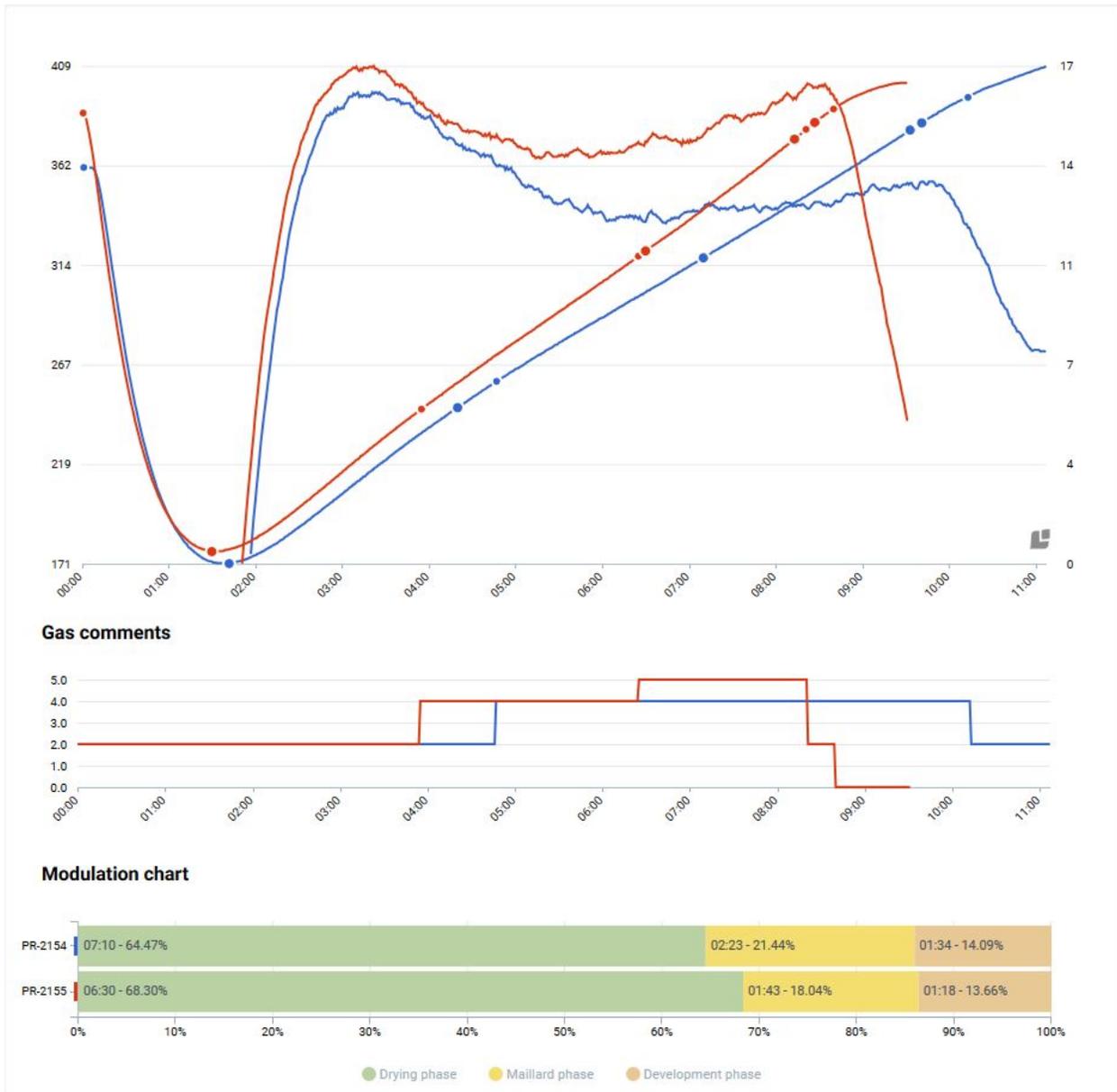
present citric and malic acidity with plenty of caramel and sugar browning sweetness. Roast 1 offered a bit of vanilla and cantaloupe, while roast two leaned more towards a tropical fruit and dried date flavor profile. Generally feeling positive, it seemed worthwhile to publish the results despite some odd roasts.

The key, I think, is balance. As Evan notes in the Quest analysis, given sufficient heat early on, the coffee should “roast itself.” I’d recommend a hot charge with plenty of heat early, and a gradual reduction as you approach first crack, for best results. If you prefer to carry your coffees through development, you may barely need any gas at all after first crack is complete.



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## Brew Analysis by Alex Taylor

It's always exciting to have fresh new coffees from Peru landing on the table! I've always found really great coffees from Peru have a way of surprising you with how good they can be. We're kicking off this year's Perus with what we really hoped would be a stunner: a beautiful new [microlot from David Flores](#). I found this coffee to be a little all over the place on the cupping table, but in a good way! I tasted a little bit of citrus, a little bit of peach, some caramel (or was that molasses?), and lots of chocolate, and oh



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wait, it's floral too. So rather than trying to tell this coffee how I want it to taste, I opted to follow a pretty straight-forward brew recipe for both of Chris's roasts and see what this coffee has to offer in brewed form. So I chose one of my go-to flat bottom brewers, Fellow's Stagg X, and followed a 1:15 brew recipe, with all other variables held the same between the two brews.

Even before tasting the coffees, liked the results! Both coffees drained relatively quickly yet still yield fairly high TDS readings and extraction yields maybe a touch higher than average. I don't know about you, but first thing in the morning, I *really* appreciate a coffee that doesn't need a 5 minute draw-down and tons of care and attention. This coffee was ready to extract!

The two cups were fairly similar, but with some important distinctions to be made. In the first (Chris's roast PR2154, or the blue curve above), we tasted dark fruits like currants, plum, and red apple, with some dried dates, raisin, and a molasses-y sweetness. This brew also had just a touch of a dry finish, but was overall quite tasty. The second cup (PR2155, or the red curve) was notably brighter. The fruit notes turned to grape, berry, and orange, while the sugar note lightened into a brown sugar, and the finish was crisp and floral. I absolutely loved this cup (and brewed another for myself immediately after we were done tasting). Upon going back to look at the roast curves, we decided that the shorter roast probably did this coffee more favors than its longer counterpart, although that's not to say the first roast wouldn't have excelled via a different brew method.

Roast	Method	Grind (EK43s)	Dose (g)	H2O (g)	Ratio	Preinfusion (g)	Preinfusion (s)	Time	TDS	Ext %
2154	Stagg	8.5	20	300	1:15	60	30	2:50	1.64	21.37
2155	Stagg	8.5	20	300	1:15	60	30	3:00	1.61	20.97