



CJ1397 – Brazil Carmo de Minas Álvaro Antônio Pereira Coli Yellow Bourbon Natural Crown Jewel

January 8, 2021 | [See This Coffee Online Here](#)

Intro by Chris Kornman

Álvaro Antônio Pereira Coli, the great-grandson of the Italian immigrant who founded the family farm called Sítio da Torre, has produced (in this author's opinion) the definitive Sul de Minas Natural Yellow Bourbon. Impeccably clean, impossibly decadent, and indescribably lush with notes of concord grape, ripe blackberry, and red velvet cake, this coffee represents traditional cultivars and practices which exceed quality expectations at every turn.

It's not hard to see why, as Pereira explains, "we continue to produce natural coffee (dry method), always focusing on the quality of our coffees, as we are certain that when coffee is well cared for from the fields to post-harvest, it will always be 'special.'" He goes on to mention that "We produce quality coffee, however never forgetting to preserve the environment, as we are certain that the man-environment integration provides us with sustainable coffee production."

Pereira's 65-hectare Sítio da Torre is located in the municipality of Carmo de Minas in the Serra da Mantiqueira mountain range. The peaks span from São Paulo to Rio de Janeiro, and the slopes that fall within the borders of the vast bread-basket state of Minas Gerais are known under an "[Indication of Origin](#)" as the "Mantiqueira de Minas." The region is the epicenter of some of Brazil's most exceptional coffees and award-winning coffee farms.

The word Mantiqueira is derived from a Tupi phrase meaning "crying mountains." The range is rife with natural springs, including Carmo's neighboring city of São Lourenço, where the water bursts forth from the earth, mineral-rich and effervescent. The abundance of fresh water in the region is uncommon in many Brazilian production zones, and combined with distinctive elevations, terrain unsuitable for mechanical harvesting, and smaller-than-average estates, the perfect ingredients exist in Mantiqueira de Minas for exceptional coffees.

Surviving on little more than *pão de queijo* and Guaraná Antarctica, I made one of my very first visits to purchase coffee in Carmo de Minas nearly a decade ago. It's an ideal location to shed the preconceptions often repeated about Brazilian coffees – that they lack quality and consistency, that they're mass-produced, that they're not specialty. The farmers here will quickly convince you otherwise over a cup brewed by hand, paired with guava jelly and farm cheese, or – if you're lucky – piping hot fried cornbread *broas* still dripping with butter.



Of course, the farmer's work is not the only contributing factor to quality. Brazilian dry mills' reputation for precision is well-earned by the country's impressive mechanization techniques and industry-leading equipment manufacturers. The efficiency of production in these facilities is a marvel to behold – from microlot to macrolot outturns, hulling, sorting, defect removal, and screen size separation are a matter of strict science. Sítio da Torre's coffees are processed at Cocarive (Cooperativa Regional dos Cafeicultores do Vale do Rio Verde – that's right, a Brazilian cooperative) conveniently located in town in Carmo. The advantage of nearby milling is a critical contributing factor to quality preservation, and Cocarive's 6-decade history of sustainable farmer support provides unmatched stability for its contributing associates, which number close to 1,000.

Natural coffees – those which are picked and dried unprocessed in the whole fruit before milling – have long been the preferred method in Brazil, but only recently have they caught the attention of quality-conscious roasters. Yellow Bourbon is among the nations' most important coffee quality hallmarks. The trees have been featured in academic publications offering evidence that they produce higher sensory quality (particularly at the higher elevations of the Mantiqueira mountain range) compared to corollary red fruit trees. Unlikely to be strictly speaking a direct descendent of Reunion Island's unique arabica variety, the cultivar we call Yellow Bourbon is most likely a hybrid of a spontaneous yellow mutation of Typica called Botucatu crossed with a standard red fruit Bourbon. Regardless, it is an important and coveted Brazilian contribution, and one that makes this specific lot even more iconic as a benchmark against which I'm sure we'll be measuring many coffees for seasons to come.

Grower:	Álvaro Antônio Pereira Coli Fazenda Sítio da Torre	Process:	"Natural" dried in the fruit on a patio
Region:	Carmo de Minas, Mantiqueira Region, Minas Gerais, Brazil	Cultivar(s):	Yellow Bourbon
Altitude:	1100 - 1300 masl	Harvest:	May - September 2020

Green Analysis by Nate Lumpkin

This natural-processed coffee from Brazil comes to us with below average density, somewhat below average moisture content, and below average water activity. Its screen size is tightly sorted, with the vast majority falling into sized 16 through 18, a common Brazilian screen category. Lower density coffee such as this one may lend itself to scorching in the roast, so consider a gentler approach. Its low water activity should cause it to retain its quality for longer periods of time under good storage conditions.

Yellow Bourbon is simply a variety of Bourbon with yellow fruit which was first reported in 1930, though many speculate that it is a cross with Brazilian Yellow Typica, also called Amarelo do Botucatu. Bourbon itself is a widely cultivated variety that has its origins in Yemen. It was brought to the island of Reunion off the coast of Madagascar, at the time called Bourbon. This variety was brought to Brazil in 1859, where it quickly became popular, as it was more productive than the Typica commonly grown there at the time. It spread from Brazil throughout Latin America, though in many places it has been replaced with its descendants, including Caturra, Catuai, and Mundo Novo.

Screen Size	Percent		Density
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>20	1.85%		670 g/mL (free settled)
19	9.95%		688 g/mL (Sinar)
18	31.33%		
17	31.93%		Total Moisture Content
16	23.49%		10.1% (Sinar)
15	0.95%		
14	0.50%		Water Activity
≤13	0.00%		0.502 @ 19.45C (Rotronic)

Ikawa Pro V3 Analysis by Nate Lumpkin

As of September 2020 we are running all Crown Jewel Analysis roasts on an Ikawa Pro V3, using the most recent app and firmware version on “closed loop” setting.

It’s been quite a long time since I’ve tasted a natural processed coffee from Brazil, and we have been serving a Pink Bourbon from Colombia at the Crown for several weeks now, so I was very curious to try this and compare. I roasted this coffee in our Ikawa V3 the week before Christmas, which meant it rested a little bit longer than I’m used to before cupping it, though the coffees still had a brightly recognizable flavor profile.

Our standard hot and fast profile cracked a little bit late in the roast, at 5:28, producing only 31 seconds of post-crack development. In the cup, I tasted a distinct note of peanut, and a caramel aroma, with additional notes of lemon, cucumber, blueberry, cranberry, raspberry, and dark chocolate. I really enjoyed the complex fruit notes but found the peanut flavor a little out of balance with the rest of the cup. I would expect this coffee’s lower density to maybe lead it to cracking early on a hot roast like this, but sometimes coffees defy expectations!

Our profile with a longer Maillard phase produced a more proportional development time. It cracked at 5:31 and had 58 seconds of development. It had a sweet honey aroma, and notes in the cup of kiwi, cranberry, raspberry, applesauce, cinnamon, and honey, with an interesting floral note, like chamomile and violet. It also had a bright acidity, similar to the flavor of a kiwi. I found this cup quite delicious. It had a unique mix of tropical and dense fruit flavors, along with some lovely florality.

Our final low airflow and longer duration profile cracked a little late as well. It had a honeycomb aroma, and notes of orange, tangerine, apple, and a hard to place bright and sweet note like cranberry or artificial cherry. Unfortunately, this cup also had a marked astringency, and its body had a slippery quality that I did not enjoy. I can’t really recommend a profile like this one! It seems that this coffee really benefits from more time in the roaster, and a longer time in post-crack development, to let its complex fruit and florals develop to their full extent.

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

Roast 1: [Crown Standard SR 1.0](#)

Roast 2: [Crown Maillard +30 SR 1.0](#)

Roast 3: [Crown 7m SR LowAF 2](#)



Diedrich Roast Analysis by Candice Madison

Naturally processed coffees from Brazil hold a very special place in my heart for a couple of reasons; the taste profile of natural coffees is one I learned to recognize when drinking single origin Brazilian coffees in London. The sheer volume of coffee processed and sold from Brazil, and the fact that until relatively recently it was easier to buy a cup of Brazilian specialty grade dry-processed coffee than a cup of any other specialty-processed coffees from the country, meant it became easy to become familiar with both the taste profiles of the origin, as well as the process. Brazil, and in particular Minas Gerais was the site of my first origin trip. The first time I smelled the fragrance of coffee blossom, it was mixed in with petrichor specific to the red clay in Minas Gerais, the first origin trip dinner I ate was accompanied by guitar strumming and cachaca and my ride to the airport was punctuated by capybara trills.

Sometimes it can feel as though you are transported to another world when you taste a new coffee. In this case I was drinking Minas Gerais in - in all regards - and my memories lasted longer than the coffee in my cup! Cupping the arrival of this coffee was a joy. It was clean, crisp, and juicy with well-articulated flavors and a stunning sweetness. I wanted to see what I could get from it, but as wonderful as Brazil is, and as tasty as this coffee can be, I'm always a little wary when roasting due to the somewhat dichotomous nature of the green metrics. Lower density, lower moisture and fairly tight screen size distribution give me an indication that this coffee should roast evenly and will rise rapidly in temperature as the roast proceeds, even more so after first crack. However, the low water activity reading meant that I had to pay attention when applying heat and trying to achieve the desired flavor profile through the Maillard and caramelization processes during the roast. To learn more about the relationship between these reactions and water activity, I would encourage you to read [this piece](#) by Chris that details the experimentation and analysis undertaken by him and my predecessor a few years ago.

As you can see from the infographic, I started this coffee at a higher charge – 20 degrees F higher - than I usually do on the Diedrich. This was because I wanted to start hot and rapidly reduce the heat in stage one to enable to coffee to coast through stage two, in order to take advantage of the sugars I had tasted in the sample roast. I let the machine warm up for about 10 minutes longer than I usually do, and because of missing that timing, I got cold feet. This meant I left the gas low until the turning point. Not a good idea. The batch fell in the drum and although I turn up from 2 (our minimum) to 5 (90%) on our dial, the turn was slow and laboring, meaning the shape of my curve was bloated at the bottom. As a visual person, I know that this means that I'm already going too slowly into stage one and taking less advantage of allowing the heat to agitate and express more of the enzymatic reactions at this stage. I worried less about that and more about the heat that was being built up going into stage 2. Without creating a space in your roast for the pace to allow you to manipulate each stage, you will end up running one into the other, as I did here.

There are two ways I consider mitigating this in future roasts; I will trust my roast plan and start at 90% gas application upon starting the roasts, and I will ensure that the drum is hot enough to encourage a quicker pace from turning point into stage one... which is all well and good, but how was this roast? It didn't go the way I wanted, exactly, but I wasn't confused as to why not – all very good things, to be sure. So, the analysis behind me, time to jump into the cups.



I don't really use this as a tasting note, but it was so distinct as to be first on the list; basmati rice. It takes a little imagination, if you are not used to tasting this as an isolated flavor, to understand how to separate the sweetness from the starchiness in your brain, but it's there and it is yum! In addition, I perceived an added layer of caramel, as well as a malty note, with harmonics of baked banana, so pretty much a moist, sweet banana bread. Fruit notes of cherry, raisin, cascara added to the flavor profile, accentuating and adding complexity to the sweetness. Notes of cassis and hints of dried blueberry transformed a simpler fruit sweetness into a winey, fruit cocktail. The clean effervesced with lemon and lime acidity and coddled by the taste and body of Chantilly cream. Just a beauty of a coffee. It's sweet, but refreshing, comforting but still surprising. I would drink this as a morning pour over, a way to shake off the early morning frost and try and restart this new year!

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](#).

Brazilian coffees are clearly quite popular. I have been working in outbound shipping while performing some of the duties I had while stationed at The Crown, and just as soon as the Brazil arrivals start coming in, they're already leaving. This lot of Brazil is a fine example of why they fly off the shelf. It certainly disappeared out of my cup pretty quickly.

In all honesty, I'm not sure I've ever tasted a cleaner Brazil. The following roast left my palate with the faintest hint of delicious walnut, but everything else came up plum, lemon, and cream. With plenty of sugar, I might add.

Knowing that Brazilian coffees tend to be a little less dense, I started this coffee off with lower heat application, 7.5A, and full fan. At turning point, I cut the fan and turned up the heat a little to 10A to get through drying phase a bit more quickly. This coffee has a very low water activity number, which means it will be quite shelf stable, but at the cost of less potential for Maillard and sugar browning reactions. As you'll see, this wasn't a problem at all.

I decided to reduce heat application again at 2:25 / 250F as the coffee was taking on heat quite easily (despite a fairly wide spread of screen sizes from 16-18. At 3:50 / 300F I reintroduced airflow by increasing fan speed to 3. As I've mentioned before, the fan on the Quest is deceptively small and very effective at its job as long as you keep the machine clean. Introducing air at this point really allowed me to draw the coffee slowly through Maillard to get all those sweet sugars cooking.

At 5:38 / 350F, I turned heat application down to 5A and kept it there for the remainder of the roast. Creeping towards first crack, I maxed out fan speed at 6:25 / 365 to really draw away moisture and smoke from this coffee as it finished. This is one of my longer roasts at 9:09, but also one of the lowest drop temperatures at 394F. This fits with Nate's suggestions of a longer roast time, and more post-crack development on the Ikawa.

Folks, the gambit paid off. This coffee came through super clean and sweet; it nearly dissipated off my palate. Especially as a filter drip, this coffee was truly confectionary. I would definitely recommend this coffee as an



espresso as well, but it honestly has huge potential for single origin drip. In fact, any method at all is bound to reward you with an excellent cup. To be honest, Brazilian coffee isn't usually my go-to, but this one had me ready to change my tune.

Brew Analysis by Elise Becker

After hearing rave reviews of this coffee from colleagues, I was very excited to brew and taste this delightful Yellow Bourbon myself. I took two of my favorite brewers – the C70 from Saint Anthony Industries and the Stagg [X] from Fellow – and tested out this Crown Jewel from Brazil in each one. I was blown away by how sweet and clean both brews turned out!

The C70 brew had a brown sugar and dried fruit sweetness, notably dried cherry and raisin. It also had a pleasant chocolatey element, complemented well by a lingering note of almond and a delectable creaminess.

Although I kept all brew variables the same, The Stagg brewed more quickly and yielded a cup with a higher extraction and a little more acidity. Dried fruit became a more juicy cherry and tamarind, brown sugar and almond lightened to a honey graham cereal, and dark chocolate transitioned to a smooth milk chocolate. Still, a very clean, sweet, and creamy cup with plenty of bright fruit to lift it up.

Roast	Method	Grind (EK43S)	Dose (g)	H2O (g)	Ratio	Bloom (g)	Bloom (s)	Total Brew Time	TDS	Ext%
Diedrich	C70	8	18.5	300	1:16	50	30	3:31	1.35	19.19
Diedrich	Stagg	8	18.5	300	1:16	50	30	2:36	1.5	21.35