



CJ1224 - Uganda Kapkwai Sipi Falls Raised Bed Natural Crown Jewel

August 29th, 2018 | [See This Coffee Online Here](#)



Intro by Chris Kornman

This blueberry bomb [dry-processed Uganda](#) comes to us by way of smallholder producers growing coffee on the northern slopes of Mount Elgon, a massive peak split nearly in two by the border of Uganda and Kenya. The microregion is rife with coffee and is well-served by the Sipi Falls mill, a centralized washing station with the capacity for processing cherry and drying coffee to improve the value to local farmers.

Uganda's reputation for high quality Arabica is still in its infancy, in many ways. Much of the coffee grown in the country is Robusta - close to 85% - and Arabica's value continues to be undermined by historical low margins on the futures trading market. However, 2018 has seen the introduction of a coffee auction in Uganda in an effort to promote high quality and better prices. Uganda is currently Africa's leading exporter of coffee by volume (Ethiopia produces more, but exports less), and is among the only African nations with consistent annual production volume increases.

Near the Sipi Falls Mill, producers for years had been accustomed to rudimentary home processing techniques. Kawacom, the export company that owns the washing station, has gone to great lengths to prove the added value (and subsequent profit) by contributing their unprocessed cherry to a central mill where washing, fermenting, and drying can be performed consistently with professional oversight. They have also started an example nursery with high quality varieties and provide agronomic support to the local smallholders, many of whom are families led by women.

[This particular micro-lot](#) is one of just a small handful of natural coffees produced by the station. Coffees like this, where the fruit is untouched and allowed to sun-dry (called "drugar" in Uganda) retain high amounts of fruit flavor from the increased contact time with the cherry. This lot was floated in water to sort for density and damaged beans prior to drying. The raised beds provide even airflow and the employees of the mill turn the coffee frequently to ensure uniform drying for optimal quality and shelf life.

Grower:	Smallholder farmers organized around the Sipi Falls washing station	Process:	"Natural" dried in the fruit on raised beds in the sun.
Region:	Kapkwai, Kapchorwa District, Eastern Region, Uganda	Cultivar:	Blue Mountain, SL14, SL28
Altitude:	1300 - 2000 masl	Harvest:	September 2017 - February 2018



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Green Analysis by Chris Kornman

A very solid looking green coffee here, with especially high density. I was a little surprised, and took a few extra measurements to be confident - but sure enough, this crazy Uganda drugar is very, very dense. Otherwise, the green is dry with modest water activity and a nice screen size distribution, majority 16 with about 85% falling between 15 - 17. Just keep an eye on your heat energy through first crack - enough momentum early on will likely carry you through without a problem.

The varieties grown around Mount Elgon and the Sipi Falls Mill include Blue Mountain - genetically indistinct from heirloom Typica - and SL14 and SL18, both from Kenya's now extinct Scott Laboratories. SL14 is coffee berry disease (CBD) and drought resistant; SL28 was developed from a drought resistant strain found in Tanganyika (now Tanzania) and is considered to have the highest cup quality of the SLs, but is a little low in productivity. Both SL14 & 28 are selections related to heirloom Bourbon.

<u>Screen Size</u>	<u>Percent</u>	<u>Density (freely settled)</u>
>19	0.39%	0.719 g/mL
18	5.82%	
17	23.68%	<u>Total Moisture Content</u>
16	42.11%	10.2% (Sinar)
15	20.46%	9.5% (Kett)
14	7.25%	<u>Water Activity</u>
≤13	0.28%	0.58 @ 24.0C

Ikawa Analysis by Jen Apodaca

Due to the size and high density of this coffee, I decided to use a longer roast profile that would allow for ample time during the post crack development stage. I started with a smooth and steadily increasing heat percentage through the rest and then started to decrease just before first crack began. The airflow profile is set to allow for a drop in fan speed around yellowing and then increase until the final stages of the roast when the coffee expands, becoming brittle and producing smoke.

On the cupping table this coffee was very sweet and tasted very similar to the concord grape flavors we find in the best natural Ethiopian coffees.

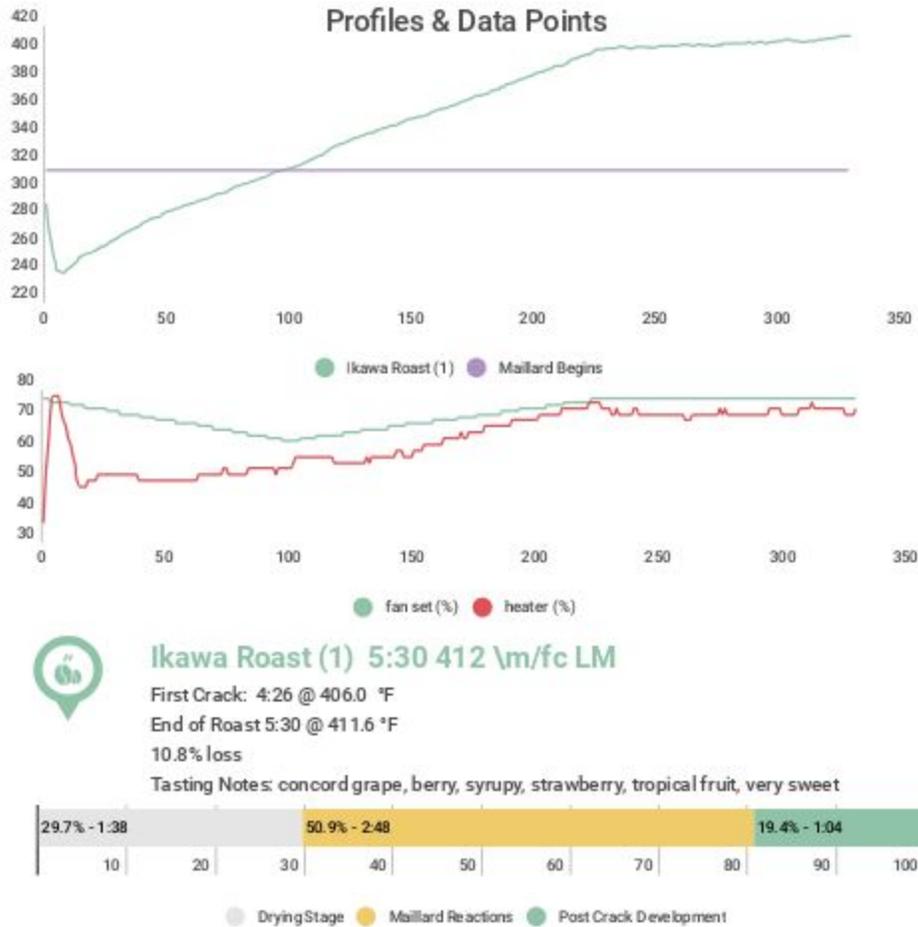


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IKAWA

Profiles & Data Points



Probatino Analysis by Jen Apodaca

With a high charge temperature of 383°F, I had enough momentum in the roast to delay a heat adjustment until just before yellowing. At 2:20, I increased the heat to 3¼ gas which is slightly higher than a normal roast. I wanted to make sure that I had significant heat through the Maillard stage to create aromatics in the coffee, specifically fruit acidity. After just 27 seconds, visual yellowing occurred and I reduced heat to 2¼ gas.

Naturally processed coffees often have lower moisture and higher water activity which means they wick moisture faster and will have a higher rate of rise towards the end of the roast. Often times, the “dip” in the drum probe reading will barely register because of the lack of moisture being released at first crack compared to a washed coffee. On the other hand, I often experience a build up and release of moisture



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in coffees with high density readings which can result in an aggressive “dip” in temperature on the drum probe. This coffee being both dry and very dense, I wasn’t too sure what to expect. Using my rate of change as an indicator, my gut told me that I would need to drastically reduce heat if I wanted to extend my post crack development time more than 60 seconds.

With two reductions in heat, one before first crack and the other after first crack, my rate of change was still significantly high at 8.3F/30 seconds. My final heat adjustment was set to 2 gas which is the lowest setting on the Probatino without completely shutting off the flame. There was enough momentum to carry the coffee for just over a minute and I ended the roast at 8:03 with an end temperature of 412.7°F.

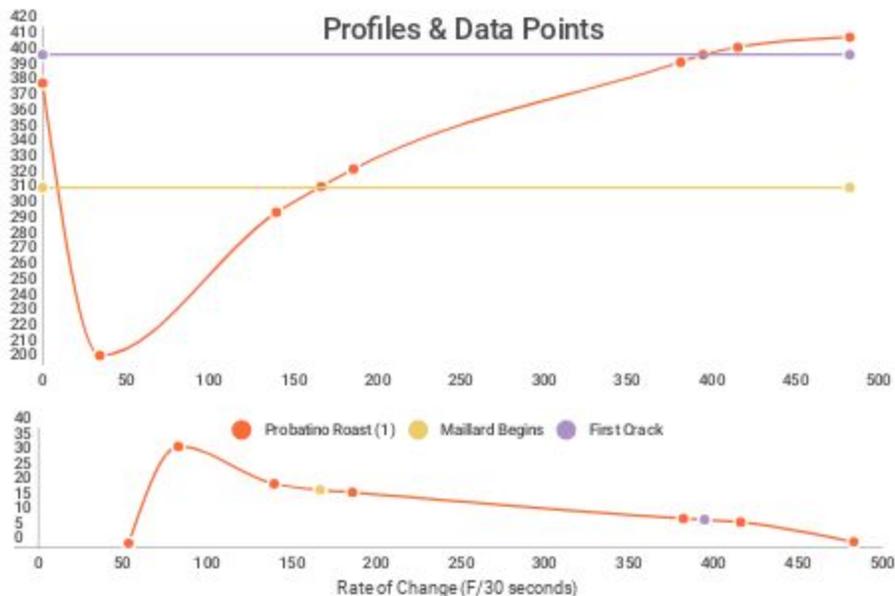
On the cupping table the sweetness of this coffee was a real standout. Chambord and concord grape acidity in abundance with a smooth mouthfeel. A delightful cup for any natural coffee lover.



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PROBATINO



Probatino Roast (1)

First Crack 6:35 @ 401.0°F

End of Roast 8:03 @ 412.7°F

13.5% loss Colortrack: 61.51 whole bean sample/ 56.52 ground sample

tasting notes: chambord, amaretto, concord grape, cocoa, smooth



Quest M3s Analysis by Evan Gilman

This week I worked with a new thermocouple, extending the probe down through the green coffee chute as an alternative to the suggested MET (Maximum Environmental Temperature) location while I wait for my proper probe to arrive. This is a bare 'beaded wire' thermocouple that came with the [Mastech MS8217 multimeter](#) I purchased some time ago for personal use. Looking at my results, this gave me a better idea of when to expect crack to begin. My measurements for MET topped out at 180C (356F) for every roast this week, but I believe this number would have been significantly higher with better probe placement. Next week, I'll be taking a look at BT (Bean Temperature) placement.



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Taking a look [specifically at this coffee](#), it has a fairly tight screen size distribution, very high density, and decently high water activity. All of these factors contributed to the speed of my roast, and from my details below you'll be able to see that this was indeed a quick roast.

I started this roast with 9.5A power, the back of the roaster open, and a 450F charge temperature as read on the Quest's default ET thermocouple placement. My 'MET' probe read 138C at the outset. I reached turning point at 400F/2:25 and closed the back of the roaster. It was at this point that I saw that the coffee was really starting to take off, especially since my 'MET' probe started to climb dramatically from 155C to 180C in less than a minute.

Due to this, I increased fan speed to 6 at 3:10. At 7:15 I dropped amperage to 7.5A, and first crack started almost immediately afterwards at 7:30. I increased fan speed to max at this point, and dropped the coffee at 9:00. One thing you'll notice when roasting this coffee is that there is a good amount of chaff. Definitely clean out your roaster thoroughly after roasting a batch of this coffee!

I achieved good internal and external development on this coffee, and there were positive notes at the cupping table. Deep berry, fudgy chocolate, and a winery tartness came through in this roast quite clearly.

Personally, I was a little disappointed to taste some roast characteristics coming through due to the speed of post-crack development, and felt that I should have done a few things differently. When dealing with coffees with this set of characteristics in the future, I would use a lower charge temperature and less post-crack development time.

By more closely monitoring temperature with a roast logging platform (we'll get to this - baby steps!), I will be able to control roast more effectively in the moment, but looking at green specs is hands down the best way to presage the direction of a roast.

Brew Analysis by Sandra Loofbourow

The heavy, jammy notes this coffee presented on the cupping table begged for a full-immersion brew, so I pulled out the single-cup Clever Dripper to see if i could to [this coffee from the Sipi Falls mill](#) justice. Starting with the EK 43 at setting 8 and an 18g dose, I added all the brew water within the first 10 seconds - 280g of water total, making for an almost 1:16 brew ratio. I was confident that I had saturated the grounds thoroughly with my aggressive first pour, so I waited until 1:00 had passed before stirring the sludge for 10 seconds. I repeated the stir at 1:30, and at 1:40 I set the Clever on top of a decanter to drain. As per usual, the draining process went on for over a minute; at 3:00 minutes I halted brewing even though there was still a small amount of water floating on top of the brew bed.

This first brew was really lovely, with notes of raspberry, watermelon, black cherry and plum, dark chocolate and red wine. But with a TDS of only 1.28, I wondered what it would taste like with extraction pushed a little further. Using the same brew recipe as before, I tightened the



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grind to 7.5 on the EK 43 and tried again. The finer grind created more heavy sweetness, with notes of vanilla, raisin, and fudge to meet the raspberry jam and tamarind acidity. I really enjoyed the heavy sugars of this clean natural and am sure it would have been stellar as a pour over and really interesting as a fudgy, juicy shot of espresso.

Roast	Method	Grind (EK43)	Dose (g)	H2O (g)	Ratio	Stir 1	Stir 2	Time	TDS	Ext %
Probat	Clever	8	18	280	1:16	1:00	1:30	3:00	1.28	21.06
Probat	Clever	7.5	18	280	1:16	1:00	1:30	3:00	1.33	21.88