



# CJ1413 – Crown Jewel Yemen Şa‘dah Khulani Traditional Natural

Date | [See This Coffee Online Here](#)

## Overview

This is a traditional natural coffee from Şa‘dah Governorate, Yemen, produced by 109 farmers organized around the Khulani Coffee Society for Agricultural Development and exported by Fatoum Muslot’s company Pearl of Tehama.

It’s a very sweet coffee with notes of raspberry, chocolate, and mild rose with a comforting, creamy texture.

Our roasters found the coffee to pop at a predictable temperature but to take on heat somewhat quickly after first crack.

Our baristas worked to dial this coffee into a pour-over spec that minimized the mild astringency as much as possible and found that raising the brew water temperature and keeping the brew time under 3 minutes worked very well. We’d also recommend this coffee for full immersion brewing.

## Taste Analysis by Sandra Loofbourow

This Yemen is sweet, comforting, and surprisingly delicate. While the body is thick and creamy, and the headliners are chocolatey and vanilla notes, there are a host of subtle flavors this coffee has to offer. On the floral side, it tends towards rose and orange; when the extraction is just right it can hint at raspberry and blueberry juiciness. Throughout, it remains chocolatey, malty, pleasantly astringent, and distinctly tasty.



## Source Analysis by Charlie Habegger

This coffee is produced by small legacy farmers in the high mountains of Yemen's northwestern Şa'dah Governorate, who together comprise a grower coalition called the Khulani Coffee Society for Agricultural Development (KCSAD). KCSAD brings together farmers from across the Şa'dah districts of Saqayn, Haydan, Ghamr, Razih, Monabbih, and Majz. The core aim of KCSAD is to inspire more ambitious farm investments and quality standards in harvest and post-harvest alike. Coffee sales and exports so far have started to increase since the group's founding and farmers are still meeting regularly, where they devise outreach campaigns to teach cultivation techniques and emphasize the economic potential of a well-run farm. Centralized aid has also been made available for select families in need.

Coffee-growing families in this part of Yemen, like many others across the country, tend parcels of terraced land passed through many generations. Coffee is the one crop that continues to survive all others, both for the livelihood it provides as well as a being a deep social tradition that keeps communities together. "Khulani" is a term of terroir distinction similar to "Kona," that refers to high-quality "heirloom" coffee varieties produced in the unique climate and soil of Yemen's northern ranges. Khulani coffee is widely regarded in Yemen as one of its best and most historic. All Khulani coffee is processed as a natural: hand-picked, sorted for consistency, and dried in a single layer in full sun on raised beds or rooftops.

Yemen is the oldest territory on Earth to cultivate coffee commercially. Its seed stock, originally transported as wild arabica landraces in Ethiopia, was used to create the world's first ever coffee farms where coffee would be grown commercially for trade across the Arabian peninsula and eventually mainland Europe. The word *Arabica* itself referred to the Arabian coffee supply that was the West's first in history.

Maintaining coffee trees in a climate as dry, high, and uniquely challenging as Yemen's western and northern ranges requires the kind of proven techniques that only generations of farming can bestow. Coffee farms are iconically terraced on incredibly steep and arid slopes. Bore holes are dug manually into the rock to provide individual water reserves for each tree wherever rain is scarce. Coffee trees are spaced generously, about 1000 per hectare (compared to 4000-6000 common in Latin America), both by necessity on the narrow terraces, as well as for better groundwater access and erosion control. Raising young coffee trees is a matter of hardening them for a lifetime of vicious elements and water scarcity. Older coffee trees become very tall, and often end up hanging their branches over the terrace edge and are known locally as "hanging gardens." Canopy trees are carefully selected and positioned for how well



they block water evaporation. As can be imagined, productivity is very low in such conditions. And still, over one million people work in Yemen's coffee trade, from farm to export.

Pearl of Tehama, the miller and exporter of KCSAD's coffee, is a family business founded in 1970. For many years, all coffee was exported under the name of the family patriarch and founder, Ali Hiba Muslot. After his death in 1980 his three sons continued using the family name until 2012, when the family business, including other trades and retail, was split up. The coffee export business was reborn as Pearl of Tehama for Import, Export, and C.A.S, and is still owned by Ms. Fatoum Muslot, the late Muslot's daughter. Fatoum's eldest son, Yasser Al-Khaderi, is the company's general manager.

Royal has been working with the extended Muslot family since the 1980s: see [HERE](#) for Bob's personal memoir of the ongoing relationship, and [HERE](#) for Mayra's interview with Fatoum Muslot herself to learn more about their mission in her own words.

Yemen continues to suffer from protracted conflict that has cost many lives and displaced over 3 million people. Two-thirds of the country needs food or medical aid. So, when new crop arrives, we pause to remember and honor the coffee and those who are responsible for its survival. What makes the quality so special is that it hinges on a relationship of trust which has been constant for decades between Royal and the Muslot family, despite many odds.

Fatoum Muslot and her company are headquartered in Al Hudaydah, a busy port city that has been near the front lines of the country's civil war. Her perspective on their ongoing business, despite adversity, is refreshing: "With regard to the coffee trade, we cannot stop our activity for many reasons, the most important of which is that we are dealing with a large number of families working with us in the field of coffee cultivation and trading especially coffee farmers in the production areas who do not have any kind of agricultural activities other than coffee. Therefore, we have a great and humanitarian responsibility towards these producing and working groups in the field of coffee."

Yemen's ongoing civil war has not stopped the Muslot family and Pearl of Tehama from dutifully managing and exporting the coffee harvests of the farms and families they represent; something they can be very proud of given the conflict's overwhelmingly ruinous effect on much of Yemen's international trade. Not only this, but Pearl of Tehama has established a consultancy for other service providers in coffee, particularly exporters, to help expand Yemen's coffee sector safety net and even increase the coffee's availability and competitiveness abroad. Consulting covers the management of traceable harvest information, preparing technical reports from the field, correspondence with farmers and customer relationship management, harvest and processing calibration, and more. The guiding mission is to increase potential at both ends of the value chain: more available quality coffee from throughout Yemen's historic producing territories; and greater buyer appetite all over the world thanks to expertly managed, traceable coffees being marketed.



<b>Grower:</b>	109 producers in Şa'dah Governorate, organized around Pearl of Tehama	<b>Process:</b>	"Natural" dried in the fruit on rooftops and raised beds
<b>Region:</b>	Şa'dah Governorate, Yemen	<b>Cultivar(s):</b>	Audaini, Dawaery, Tuffahi
<b>Altitude:</b>	1400 – 2500 masl	<b>Harvest:</b>	October 2020 - February 2021

## Green Analysis by Chris Kornman

Yemeni coffee's physical specs are as unique as the location where it is grown. Typically small in size and low in density, this specific Crown Jewel conforms in both regards. What's less common is the slightly high moisture content and water activity we find here; the arid climate frequently results in overdried green and that is not the case with this Khulani lot. The water activity here specifically indicates that you should try and roast this quickly after opening the package (or store it in a sealed environment and low, stable humidity and temperature), but it also hints at the complexity of the coffee's flavor and that there is plenty of flexibility in the roaster's choice of development profiles to draw out its rich sweetness.

Pearl of Tehama have informed us of the cultivars grown: known locally as Audaini, Dawaery, and Tuffahi, names I'll confess I know relatively little about. You'll likely find cognates of these varieties spelled differently depending on who might be translating. Many Yemeni cultivars are derived from regional location names and are very much analogous to landraces grown in gardens and forests across Ethiopia.

What's especially interesting since we last released a Crown Jewel from Yemen is that Qima Coffee with the assistance of Dr. Christophe Montagnon (a leading expert on coffee plant genetics) have identified a new arabica "mother" population specific to Yemen – a cluster of genetically similar cultivars grown nowhere else on earth, which most surely evolved independently after the plant was first domesticated from its origins in Ethiopia. They have dubbed the population as "[Yemenia](#)" and this marks what is surely the tip of an iceberg in the process of untangling the rich history of the crop in the Arabian Peninsula.

Screen Size	Percent	Density
>20		(free settled)
19		(Sinar)
18		
17		<b>Total Moisture Content</b>
16		(Sinar)
15		
14		<b>Water Activity</b>
≤13		(Rotronic)



## Diedrich IR-5 Analysis by Candice Madison

I do love a first, and this coffee heralds the first I've ever roasted from Yemen. One roast down, many, many more to go, I hope! I remember tasting my first Yemeni coffee as if it were yesterday, mostly because it almost was. For someone who has been in the industry for well over a decade, I had my first Yemeni coffee about six years ago, which feels somewhat shameful, seeing as this country can boast being the birthplace of our favorite brew. I was struck by the unique flavor profile of the exclusively naturally produced coffees.

Much like its near neighbor from across the sea, Ethiopia, Yemeni green coffee beans tend to fall on the small side. Armed with this information, and the knowledge that it had higher than typical moisture levels and a lower density reading, I decided to risk a touch of aggression at the front of the roast, instead of possibly overheating the coffee for a longer duration at a lower temperature, building up an unmanageable amount of stored heat, and losing the roast right at the end.

Wanting to drive off some of that extra moisture as quickly as I could, I started the roast with 90% gas and 100% air, charging the drum at 380F. Not wanting to try my luck, however, I immediately reduced the airflow to 50% at the turning point and the gas to 70%. And that's where the controls sat until first crack, other than two airflow changes: one erroneous and one corrected. I had anticipated a far harder roast than this, and became suspicious of what awaited me, at first crack! I'm afraid to say that I made the rookie mistake of reacting instead of acting.

The coffee cracked at 380F, and I immediately turned the gas to the minimum – 20%, having already opened the airflow to 100% just before this. There was nothing to do as I watched the coffee rise over 20F in about a minute - not what I was aiming for and was only spared a far higher temperature reading by my cutting the gas completely at 392F. I don't love that solution to the end of the roast, or roasting in general – to me, having to turn the pilot off is a sign of a mismanaged roast, and I was kicking myself for not reading the RoR curve more closely as it began to level out at around 7 minutes into the proceedings. Trying to keep an eye on extending that period of the roast as much as possible, made me myopic and forgetful to recognize that I should be roasting to the coffee and not trying to shoehorn it into a profile. Hubris made me foolish, as it does when you forget that the coffee is in charge!

Roasting this again, I would have backed off the gas earlier during stage 2 – by allowing that much heat to build up, after erroneously opening the airflow up to the maximum, meant that I put a lot of energy into the coffee just before first crack – exactly the scenario I had been trying to avoid. The coffee needs careful management through first crack; it definitely needs energy to sustain the initial roll, but it will also rise quickly after it begins rolling and you'll have to decide how to manage that, regarding the roast degree you desire.



In my case, I'm not sure exactly why I made the gas change, but I did, and here we are. Although the post-crack development time and percentage were respectable, I had wanted a little more of each to round out the sugars I had spent time developing in stage 2. I was at a loss as to what I would get in the cup, the roast seemed such a mixed bag, but I was intrigued, nonetheless.

I was pleasantly surprised! As much as I expected some underdevelopment, I believe that only a slight astringency was detected by the team. I found lots of rich, drinking chocolate, lighter than cacao, but not by much. Notes of caramel and vanilla were offset by light florals of pink grapefruit, orange and rosewater. A hint of raspberry was complimented by the taste and mouthfeel of cream – round, smooth and coating. This is a comforting brew. Its delicate complexity is approachable and inviting. An all-day pot of coffee if ever there were one.

## 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.*

I haven't had the chance to taste a coffee from Yemen in a long time, and I was delighted to find this natural processed coffee a pleasure to roast and cup. Though it expressed itself quite differently on the Ikawa's different roast profiles, all three profiles tasted great: delicate, sweet, and complex, with a light florality and berry fruitiness. All three also cracked right on target, which is a very good sign as well for this coffee's versatility.

The hot and fast profile brought out some complex florals. I tasted jasmine, chamomile, and rooibos tea, as well as lemon acidity, dark chocolate, caramel, and a hint of berry, like blueberry or blackberry. This was nice and understated, though the fruits were a little more muted than I might prefer.

The Maillard +30 profile offered a little more fullness, with notes of fig, blackberry, mandarin, a lemon-lime acidity, dark chocolate, and a smooth and syrupy caramel finish. This cup's heavier body and more prominent fruits made this cup an easy drinker.

The long, low airflow profile performed as expected and showed a lighter, tea-like body, with notes of kiwi, blackberry seltzer, dark chocolate, and honey, and a simple white sugar sweetness. This was very nice and crisp, though I felt that the heavy fruits of the Maillard profile were a better showcase for this coffee's qualities. All in all, these cups were all delicious, and I think you'd have trouble going wrong.

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](#)



## Brew Analysis by Nate Lumpkin

This coffee posed an interesting challenge in brew analysis, as we grappled a little bit with what this coffee wanted to do versus what we wanted the coffee to do. When I think of coffees from Yemen, I think of delicate florals and berries, like an Ethiopian Natural, but this coffee had plenty of sweet caramels and sugar browning notes as well, along with a lingering toffee finish. Ultimately, our favorite brew methods were the ones that provided balance while eliminating some of the astringency that occasionally showed up, and we found a dial that we plan to serve at the Crown!

For all these brews we used 18g of coffee, a grind setting of 8 on the EK43, 300g of water, and a water temperature of 205 degrees. Our first brew method, on Kalita, brewed through in 2:47 with a TDS of 1.32 and an extraction of 19.35%. It had tart acids but a dry quality, similar to Campari, with bright notes of candied lemon and dried raspberry, with a dark baker's chocolate finish. This was quite delicious though a touch too dry, and for our other brews we tried to eliminate the astringency.

Our second brew, on v60, brewed through in 2:47 as well, though it had a slightly higher TDS of 1.36 and an extraction of 19.96%. We tasted blackberry and raspberry, with a floral quality like rose and lemongrass, and a bright lemon acidity, like pink lemonade. Its body was silky and it still had a toffee-like sweetness and a quick finish.

Our final method we tried was the Fellow Stagg. This coffee behaved unexpectedly on the Stagg, taking a full 4:26 to brew through. Its extraction was not much higher than the other brews, however, with a TDS of 1.49 and an extraction of 21.88%: still within an appropriate range. It had notes of dark chocolate and toffee on the front, bright acids like orange, raspberry, and grapefruit, as well as a note of vanilla that did not show up in the other brews. This coffee's astringency was present in this brew as well.

For service on the pour-over this bar, we ended up choosing the v60, though we increased the temperature to 210 degrees. This made the cup just a touch crisper and cleaner and improved its balance. I'd recommend trying a conical dripper like the v60 for a cup like that one, though a flat-bottomed dripper like the Kalita produced a very interesting cup as well.

Roast	Method	Grind (EK43)	Dose (g)	H2O (g)	Ratio	Bloom (g)	Bloom (s)	Total Brew Time	TDS	Ext%
Diedrich	Kalita	8	18	300	1:16.6	40	30	2:47	1.32	19.35%
Diedrich	v60	8	18	300	1:16.6	40	30	2:47	1.36	19.96%
Diedrich	Stagg	8	18	300	1:16.6	40	30	4:26	1.49	21.88%