



Onward to

Universely

Kivers Janssen

An old coffee-growing nation trying to earn a new reputation in the U.S.









n the south Indian city of Chikmagalur, the signs we were traveling in a coffee-growing country were obvious.

There were signs advertising the best in coffee grading equipment, signs promoting the newest fertilizers for coffee plants, signs plugging export companies, curing works, and transportation networks. Frappuccino ads were nowhere to be found, but if you needed the

latest on coffee seeding advice, you didn't have to look far.

There were other signs we were in a coffee-growing area, of course. For one, everywhere we drove coffee trees peppered the hillsides, while pepper vines entwined the shade trees on coffee plantations. Another indication was the type of coffee expertise among the populace. It's somewhat humbling when your level of coffee knowledge is more or less confined to knowing that two tablespoons of coffee per six ounces of water is the correct brewing ratio, then to visit a coffee research facility that has captured, observed, analyzed, reviewed, studied, dissected, and obsessed over virtually every known threat to the coffee plant. (Of course, ask an Indian grower how to pull a shot of espresso, and he'll smile and shake his head.)

We traveled to the coffee-growing regions of India to fulfill a goal that needed to be fulfilled at some point. Both Connie Blumhardt and myself had worked at the magazine for more than three years, and neither of us had visited a coffee-growing country during our tenure. I had been to Central America shortly before starting with the magazine, but that trip was about testing my durability in \$4-per-night hotel rooms and mangling Spanish in the back of an assortment of chicken buses, not about coffee. Both of us had been to Thailand, but Buddhas and beach-front bungalows had outbid our desire to visit the country's robusta regions.









India, however, presented an interesting picture. Here is a country that produces some very good coffee (and that is making concerted efforts to improve its processing), but that the United States coffee industry, not to mention the general public, largely overlooks. India grows much more than Darjeeling and Assam tea, the two beverage products for which it is best known. It is, in fact, the sixth largest coffee-producing nation in the world, growing more than 265,000 tons in 1998-99. More than 70 percent of that production is earmarked for export, a good percentage of it to Italy and Germany.

India grows and processes coffee in some unique conditions. Most coffee plantations also grow pepper, cardamom and areca nut—a post-meal digestive aid common in many households—amid the coffee plants. If farming on a large property, the grower sometimes produces rice at the lower elevations (which, by the way, is processed most creatively by small family farmers, who

A Little Coffee With Your Sweetener?

In India, coffee is drunk with milk and sugar. This is not truck-stop coffee overloaded with sweetener to mask the brew, however. The coffee is made via a "decoction" process, then added to milk that has been aerated. The person preparing the coffee aerates the milk in the same manner as a bartender performing for money—by pouring the heated milk from one container to another several times while gradually increasing the pouring distance. Sugar is then added and allowed to dissolve in the brew. The coffee is served with milk and sugar already added, although you can add more sugar if you like. The end result is a very rich, pleasing coffee that tastes something like a less-chocolaty mocha (well made, of course).

leave rice shoots in the middle of the highway so cars will knock the individual grains out of the shoots with their tires). This product polyculture allows the growers to make a living from a wide spectrum of crops, while also diversifying the nutrients added to and taken from the soil. Some coffee lovers also assert that you can taste a slight hint of pepper and cardamom among India's best coffees, because the products are grown side by side.

India also features a largely misunderstood but very unique processing method not practiced anywhere else in the world: "monsooning." Monsooned coffees, contrary to some beliefs, are not left on coffee trees during the monsoons, but are left in cherry form in covered, open-air warehouses for 12 to 16 weeks. The end result is larger, discolored beans with low acidity, purchased mostly by the Scandinavian market and some espresso roasters.

In addition, Indian growers represent the next wave of coffee growers entering the picture. While perhaps missing the initial boom of the specialty industry some 15 years ago, they are trying to catch the wave of the new U.S. coffee business—that line between commercial canned and specialty ("calamity" perhaps?) that is starting to define much of the American market. The Indian government has relinquished much of its control over the local industry, and now individual Indian growers are collaborating to make their products visible and viable to American roasters (and, eventually they hope, to consumers as well).

We were there, however, to learn less about the lofty ambitions of certain growers than to learn about coffee growing itself. If we write about it, drink it, critique it, sell ads for it, and claim to know how to make a living from it, we'd best learn how it's made in the first place. As A.B. Ramprasad, senior liaison officer of the Indian Coffee Board and one of our hosts during our stay, said many times, "Seeing is believing."

First Impressions

We were told two things during our drive to the coffee-growing districts of Hassan and Chikmagalur, neither of which had to do with coffee: In India, the car horn is as important as the ignition key, and the driver is only responsible for the front of his car; every other side is someone else's problem.

There's a fine line between taking a choreographed drive through the country and staring at your companions with an undisguised look of terror, and understanding the basics of driving in India helps clarify that line. Horns serve as signals and "heads ups" for other vehicles (expect to hear several dozen honks per minute). And if you can squeeze the front end of your car into the narrowest of gaps, good for you.

Understanding the driving etiquette was especially important, because we were in a car most of the time. Coffee estates aren't that far apart, but when most roads are filled with potholes so ragged that they could cut bone and you spend much of your time slowing down to literally avoid sacred cows, 40 kilometers can easily take two hours. We were in a car when we were first told what we would see on a coffee estate, and it was in the car where we learned much of the ancient and more recent history of the Indian coffee industry.

Legend says it started in India with Baba Budan, described in various books and articles as a pilgrim, saint and mystic. The Muslim prophet visited Mecca around 1600 A.D., and at some point during his stay, he sampled some brewed coffee. This was back when Yemen controlled the commercial cultivation of coffee, and, in fact, had made it illegal to export fertile coffee seeds. Perhaps others would be so swayed, but Baba Budan, having enjoyed his libation, attached seven seeds to his stomach and smuggled them back to India. He ended up planting the seeds in the Chandragiri Hills of Karnataka (now also known as the Baba Budan hills), which proved to have an ideal climate and altitude for coffee. The story dictates that from these original seven seeds grew not just the Indian coffee industry—centered in Karnataka and also found in Kerala and Tamilnadu—but also much of the

coffee cultivation in Indonesia, as the Dutch took offsprings from the same plants down south.

Baba Budan's tomb is now located in those same hills, and Muslims and Hindus travel long distances to visit the shrine of the famed coffee smuggler. (Most pay tribute to his religious influence, not his sleight of hand; we were exceptions to the rule.) The tomb looks like many holy sites in the world—not extravagant, as one might think, but unassuming. Three adjacent doorways lead to an underground cave where seekers come to pray. On their way out, many people take a small chunk of rock or dust with them, making the cave slightly bigger with each passing year.

If the Yemen coffee industry seemed somewhat over-cautious in Baba Budan's time, many growers in India probably felt over-protected for much of the 20th century. The Coffee Act VII of 1942 established the Indian Coffee Board, later shortened to the Coffee Board, which was run by the Ministry of Commerce. For years, the government pooled the coffees of its growers, then took control of exports itself. This rather restrictive system ensured that the government could market Indian coffees as a lump unit, but also that coffees of distinctive qualities, like all pooled coffees, would be lost amongst lesser beans. Producers without an incentive to grow good coffee typically don't, and Indian coffee quality was seen as somewhat stagnant.



Coffee pickers sorting through freshly harvested cherries on the Heggadde Estate

In 1992-93, the government loosened its restrictions, allowing an "Internal Sale Quota" of 30 percent to growers. This started a gradual opening of the industry over the next few years, and by 1996, all restrictions had been removed on both the internal and export markets.

This "Process of Liberalization" has had several consequences. The major one is that growers now have both an incentive and the need to introduce their individual coffees to the marketplace. This has resulted in a more comprehensive view of coffee quality, as growers are realizing that the best way to differentiate their coffees is by processing them better so they attract discriminating buyers, not by simply stamping them as "Made in India." This is one of the immediate goals for many growers and the Coffee Board—improve quality.

To that end, the Coffee Board has released a number of publications detailing ways for farmers to improve their processing. The advice includes complex step-by-step instructions for each processing stage and also a rather elemental "Do's and Don'ts Checklist," including such advice as "Clean water should be used for washing coffee." The manuals make the main objective clear, however: "If the quality standards of the coffee exported get diluted at this juncture, it will have far-reaching repercussions in the quality front later. ... Maintaining quality standards of Indian coffee is all the more important to make it a worthy competitor in the global market, especially when coffee is a surplus product in the world."

When our car reached coffee country, one thing we had been told by the Coffee Board shortly after our arrival became apparent. After spending much of the time driving in savanna-like terrain, we were suddenly in the woods. The Coffee Board said that Indian coffee must be grown under shade, and it is grown that way. (The assertion has probably been made with greater energy over the last couple of years, as India has paid attention to the U.S. coffee market's increasing interest in environmental initiatives. The government has also been discussing organic coffee as an option for farmers, small holders in particular.)

From an agricultural perspective, shade is clearly preferred among Indian producers, who receive almost all their rain during the monsoons and then face a long dry period when they need to protect their coffee from overexposure to the sun. For the country's arabica production, the Coffee Board recommends a two-tier shade canopy, with a lower tier of temporary (more prunable) trees and an upper tier of permanent trees. From a purely aesthetic point of view, the trees and the coffee together create a beautiful wooded landscape.

An Evolving Process

In our moments away from the car, the Coffee Board presented an alphabet soup of hosts for our visit. In addition to Mr. Ramprasad, we met or traveled with E.P. Ramanarayana, Dr. R. Naidu, Ms. Sharada Subramaniam, D.K. Nagendra, B.P. Balakrishna, and many other Coffee Board representatives. We also had the plea-



sure of meeting both the retiring chairman, Mr. S.V. Ranganath, and his replacement, Ms. Lakshmi Venkatachalam, during our stay.

Our visits to the estates weren't much easier to pronounce, as we traveled to Heggadde Estates (owned by Marvin Rodrigues), Makonahally Estate (D.M. Putte Gowda), Hoowinhuckloo and Kerehuckloo Estates (H.B. Rajagapol), and M.S. Estate (Ashok Kuriyan), then to the Chikmagalur Coffee Curing Works (I.S.

Large and Small

One of the ironies of visiting a producing country such as India is that the vast majority of growers are small holders (137,000 of 140,000 holdings in India are between 0 and 10 hectares in size), yet the properties one visits on coffee tours are invariably estates of 200 acres or more. There's nothing intrinsically wrong with this, as the estates we visited ran responsible operations that took pride in their agricultural and labor practices. But seeing only a small segment of the industry always makes you wonder whether your experience is the exception rather than the rule. One estate has much to show, but does that mean the one next door has much to hide? And there's no doubt that both the challenges and accomplishments of growers on mid-sized estates will be different than growers farming coffee on three acres of land.

There are no simple answers, of course, and I couldn't begin to make informed statements on growing coffee in India based on one week of travel. This story is a direct reflection of my experiences.

It makes sense, of course, to visit the best estates. For one, specialty coffee represents the ideal of coffee production from a quality perspective, so why not find out how it should be done? The Coffee Board representatives who traveled with us for most of the trip were completely forthright in their admiration of the properties we visited, often telling us that the board hopes to encourage other growers to follow similar patterns to the ones we saw. In addition, they told us when neighboring estates were obviously neglecting their properties.

Established estates in India are also the best equipped to produce high-quality coffee, and are often of most interest to specialty coffee importers and roasters. Efficient wet coffee processing requires money, time and labor. It's also to a grower's interest to have his own curing facilities so he can guarantee his coffee is not mixed with another. The more control a grower has over his final product (including during transportation to shipping ports, when hijacking of trucks carrying green coffee is not uncommon), the more he can ensure it is untainted by the time it reaches an importer.

As in most producing countries, the small grower's best chance to market his coffee is to organize into cooperatives with other producers to match the level of quality control exercised by the estates. Whether this is common in India was not revealed on our trip.

Umesh Chandra) shortly afterward. Connie also visited the estate of D.M. Shankar while I took a sick day.

The visit to the Heggadde Estates revealed several firsts for Connie and myself. Number one, when you visit a coffee-growing family in India, the whole family comes to visit. At every stop along our tour, we encountered groups of 10 or 15 people wanting to show off their estates, including family members, estate supervisors, Coffee Board district managers, and others. This puts a writer such as myself, who prefers to observe rather than perform, in somewhat of an uncomfortable position—center stage. It's belittling enough when you come up with a dud of a question for one person; try asking it to 15. (I got over it.)

Number two, no matter how often you're told how coffee is grown and processed, it isn't quite real until you see it up close. This is not a simple crop that requires periodic upkeep. From the plant husbandry to the most minute processing details, coffee requires a ton of agricultural know-how (which is not the same thing as saying coffee requires a ton of chemical inputs; bio-friendly farming is quite agriculturally complex). On all the estates we visited, we learned the basics of running a coffee farm, and as soon as we left each one, our brains swelled a little and our egos shrank. People complain about spending \$10 per pound of coffee? If they only knew.

That point is compounded exponentially the first time you look at a wet-processing operation and drying patio. (Much of the coffee in India is wet processed. Dry-processed coffee, often called "cherry" coffee, is reserved mostly for the wet-process rejects.) It didn't take long before an essential goal of wet processing became clear: the elimination of defects. We watched workers who had recently come down from the hills with freshly picked coffee separate out over- and under-ripe coffee cherries one by one. The ripe cherries were then dumped into large concrete vats for depulping. We saw the "lights" and "floats"—meaning cherries that are underweight—separated out and rejected to the side throughout the depulping and washing process. A depulping machine essentially squeezes the pulp off the cherry and spits out two coffee beans (if a cherry only produces one bean, it's called a peaberry).

We saw the coffee go through fermentation, when the mucilage left on the bean goes through an enzymatic process that generally results in a fruity acidity (or a defect, if fermented for too long). We were told that during the drying process, coffees without parchment cover, with pulper cuts, or that are black or green in color are removed. (Parchment is the filmy cover left on the bean after fermentation; it's not separated from the coffee until grading, or "curing" as it's called in India). When coffee is cured, the beans are separated mechanically by weight, density and size. In some cases, workers once again sift through the coffee looking for broken or otherwise defective beans.

This understanding led to a few other understandings. Even on the best coffee plantation at the perfect altitude, only a limited amount of the coffee is of specialty grade. It's much the same for any agricultural product—not every apple on a tree is going to



be the ideal combination of flavor and texture. On a single coffee plant, there are several hundred cherries of all shapes and sizes, and some will have grown well while others will be malformed. Once the coffees are graded from a good estate, maybe 20 percent of the estate's crop will be of the ideal weight, density and size to be considered a specialty grade, and the rest will be sold to other markets.

Of course, the coffee still has to prove itself at the cupping table. A specialty-grade coffee isn't really a specialty coffee unless a buyer is willing to pay a premium because it offers unique and valuable taste characteristics. In India, as in other producing countries, estate growers are beginning to cup their coffees much more frequently. For these producers, the specialty market—even for only 20 percent of their crop—presents the best chance to achieve better premiums for their coffee.

The Heggadde Estates had recently upgraded their wet-processing operation by buying drying tables, on which they initially put the coffee after washing to remove the bulk of the moisture. Drying is an important step in processing, because you need to get the moisture level of the coffees down to approximately 10 percent to make them suitable for roasting. Dry the coffees too fast, however, and the parchment may crack, resulting in discolored beans.

On Ashok Kuriyan's M.S. Estate, management has recently started separating out coffees from different cultivars and plots during processing in an attempt to better discriminate between coffees of varying qualities. Kuriyan has also preserved a plot of Kent coffee trees on his property, believing they will draw a higher premium than his other coffee types. Kents have a lower yield than other varieties but are known for tasting better in the cup.

Even the smallest of details can make a difference in processing. Kuriyan had just purchased a new type of rake for the patio (parchment coffee must be turned over every hour to ensure even drying). A well-made rake with a soft touch is important because estates don't want to damage the beans. On most patios, workers turn the coffee over with their feet, walking slowly through the beans with the appearance of a boy grudgingly trudging to school on a snow day.

Kuriyan's dedication to quality is a point of admiration for the Coffee Board, for he had also successfully instituted a training program for his entire estate. From top to bottom, everyone who works on the property knows that quality is the ultimate objective. This spilled over to his managers, who beamed when showing off the property.

When we first arrived in the city of Bangalore at the Coffee Board offices, Kuriyan was the one standing at the cupping table hoping to get some feedback on his coffee.

The Making of a Coffee Guru

It's nearly impossible to discuss India's potential as a specialty coffee supplier without also mentioning the efforts of our traveling partner, Dr. Joseph John. John owns Josuma Coffee Co.

in Menlo Park, Calif., which imports and roasts Indian coffees exclusively. Born in the Indian state of Kerala, he has grown into an unofficial advisor to many growers in India, who take his measured advice very seriously.

John might seem an unusual choice for a coffee guru. A trained nuclear physicist and eventually a business consultant by trade, he fell into the coffee industry somewhat unexpectedly over a decade ago while evaluating the U.S. specialty coffee industry for a client. During his consultancy, a family friend who grew coffee asked Dr. John and his wife if they could interest any U.S. roasters in his coffee. Thus began another coffee career.

Not one to do things half-heartedly—if the twin traits of discipline and pragmatism were considered a science, Dr. John would be its leading practitioner—he has spent a great deal of time traveling to India, talking with specialty coffee experts, and making his own calculated observations on the path to quality. In his initial foray into the industry, Dr. John may have worked harder to understand coffee than colleagues who have been in the business for decades. As a result, he comes across as someone who has dissected the repercussions of every possible action at least a dozen times. John doesn't import coffee from any other origin for one simple reason—he believes he has a responsibility to become an expert on a country's coffee if he's going to import it, and he only has time for India.

After advising the Coffee Board and individual growers for the last 10 years, John says this is the first year growers are producing more top-quality coffee than he can buy. He notes this with a touch of pride in his voice, as on his annual visits to the estates, he comes loaded with advice on how to improve processing. He also comes with incentive: As a specialty buyer, he pays top dollar for high-quality coffee, turning a blind eye to variations in the "C" market.

Another reason Dr. John's visits are so anticipated is because he brings an equal-opportunity partnership to growers. He understands the U.S. market and can teach it to them; they understand coffee growing and can teach it to him. The partnership is paying dividends on both ends.

His next big push is to get growers to cup their own coffees, so they can taste for themselves the quality of the coffee they produce. He also hopes growers and the Coffee Board will put more emphasis on cup quality when deciding which types of coffee trees to plant, in addition to yield and disease resistance.

Dr. John's contributions to our India trip were frequent and priceless. He good-naturedly chastised a postcard seller for not offering bulk discounts: "You are not a good businessman; I don't want to do business with you." He described a previous visit to the tomb of Baba Budan with a delegation from the Specialty Coffee Association of America, when he tried to convince the group that a large shade tree near the cave was actually a descendant of Baba Budan's original coffee plants (he says he had almost half the group fooled).

Perhaps Dr. John's finest moments, however, occur when he converses with H.B. Rajagopal, Raj for short. Raj owns the



Hoowinhuckloo and Kerehuckloo Estates, and he is the energy core of growers in his district. This is a man who loves visiting the U.S. so he can travel the country by Greyhound bus. He's as happy talking about tigers, elephants and bison as he is about the details of coffee cultivation, and is one of the few people who could make a monsoon sound romantic.

Dr. John tells a story of Raj's visit to the Sequoia National Forest in California. The coffee grower, an unabashed nature lover, was so impressed with the trees upon seeing them live that, once his friends returned to the car, he couldn't resist giving one a hug. Put Raj and Dr. John together and you have an interesting mix of intellectual pragmatism and emotional tranquillity—on both sides.

That Raj is also such a respected grower tells you volumes about the potential of coffee here. His vision of his estate's success is inclusive, both as a member of the industry and as a contributor to the environment around him. Raj has started harvesting monsoon water to use for his processing so he doesn't have to use so much local water. He collects the rainfall in 17 large pools that his estate has molded from a clay-like material. He has been building a new pool every year.

Too Much Information

From the beginning, touring a coffee region is exhausting. If you want to learn something about how to grow and process coffee and what these decisions mean to individual markets, prepare for an inundation. The more you learn, the more your eyes will glaze over, and the more you'll need rest to let the information soak in.

Or you could always go to the Central Coffee Research Institute (CCRI) in Chikmagalur, which served as the official site of my brain implosion. Dr. R. Naidu leads a team of researchers that are studying coffee pests, including the white stem borer, coffee berry borer, shot-hole borer, mealybug, green scale, and root lesion nematode. They're also studying the diseases that prey upon coffee plants, the primary one being leaf rust.

The CCRI has 104 people working on scientific studies surrounding coffee, with hundreds more working on extension projects and ministerial duties. The building in which these studies are housed is a temple of scientific information. Researchers at the CCRI make it clear that Indian growers—and growers in most producing countries—are not growing coffee in a vacuum. They have advice for optimum wastewater treatment systems (wet coffee processing produces acidic, contaminated wastewater. India requires growers to treat their wastewater in holding tanks—many of which are cement—rather than dump it immediately into the local ecosystem). They are developing a variety of natural methods for pest control that involve introducing biological enemies to coffee pests. They can tell you the optimum spacing for planting different types of coffee and the types of soil practices that are most beneficial to a farm.

This is where you go to be humbled, to realize that though you've learned a great deal about coffee cultivation, processing

and export over the previous few days, there's another 30 years of information waiting to be expressed. God forbid you try to learn about coffee production in a dozen different origins. A human brain can only soak in so much.

The Road Behind

So what exactly is left to say about Indian coffee after a 10-day driving trip in the country? After experiencing a multitude of sights, sounds, tastes, and experiences, many were either intentionally or unintentionally omitted. There's only so much to say before thoughts start siphoning together like coffee cherries in a depulper or cars on an Indian highway. I apologize to our hosts if anything pivotal was left unsaid.

One final thought. As we drove through the coffee forests looking at coffee plant after coffee plant, our initial curiosity dimmed as we grew more accustomed to our terrain. The reality, though, never left. This is a world apart from the one that most coffee retailers and consumers know, and it is a world much different than their imaginations can conjure. In India's case, growers must put an immense amount of labor into their coffee to produce something of quality, and then they must work with other growers and the Coffee Board to improve the perceived quality of their products on an international level. If they want to achieve lasting success in a changing marketplace, they have no choice.

Many retailers, on the other hand, simply sell their coffee without thinking about their connection to the industry at large. Nobody has a concrete responsibility to run a dedicated coffee business that takes into account a broad view of the industry. But retailers who owe their living to coffee have a lot to gain from expanding their outlook on the beverage. A short trip to India can result in a long commitment to the bean.

Rivers Janssen was editor of Fresh Cup Magazine from 1998 to 2000, and currently works as a freelance writer and editor in Portland, Oregon.

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