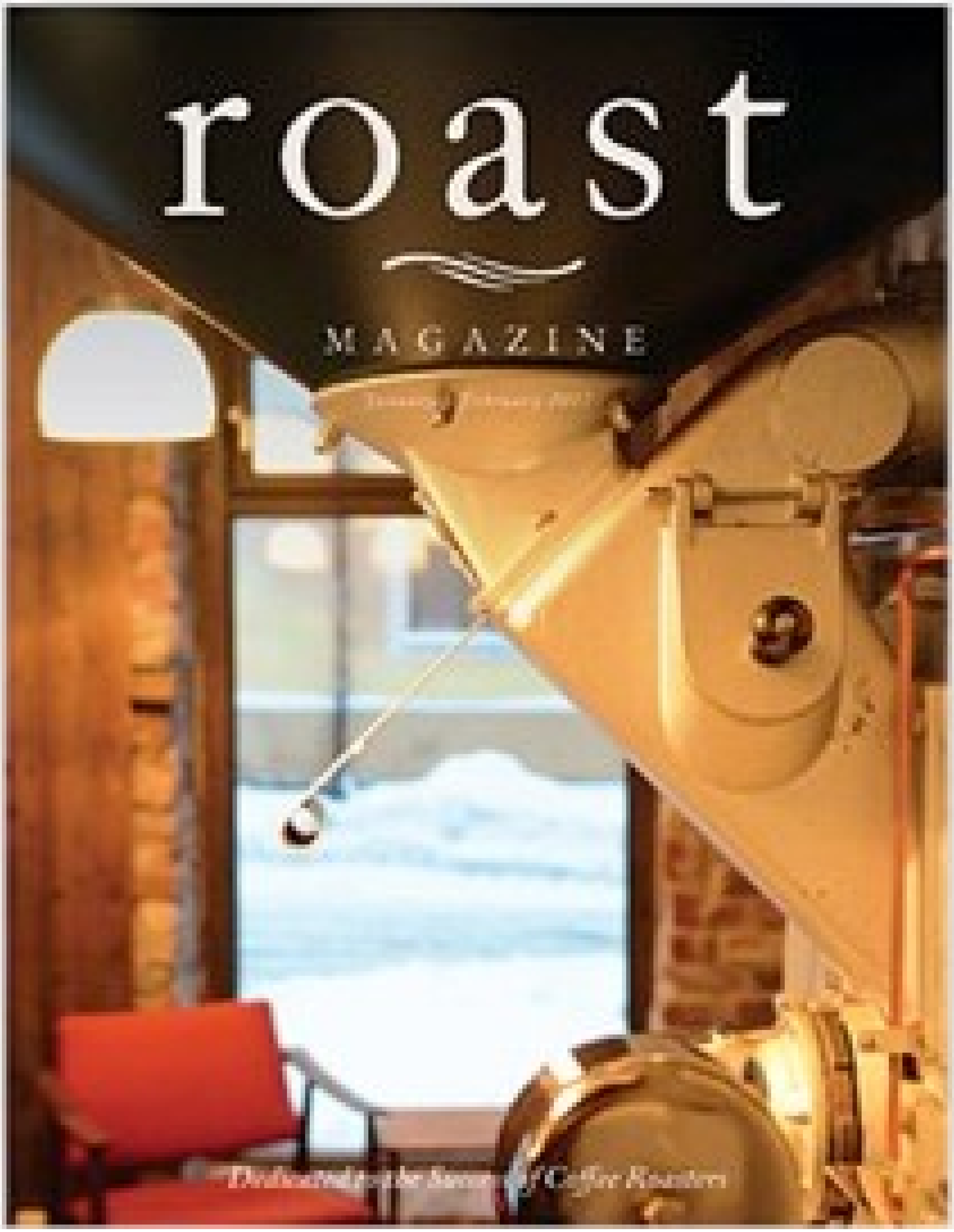

roast
MAGAZINE

FROM LEFT Nobletree's Fazenda Monte Verde farm, Sul de Minas, Brazil. | *Photo courtesy of Nobletree Coffee* • Tending raised beds on Fazenda Primavera, Minas Gerais, Brazil. | *Photo courtesy of Ally Coffee* • Harvest season on Fazenda Matilde, Minas Gerais, Brazil. | *Photo courtesy of Ally Coffee* • Coffee ready to be shipped. | *Photo by Connie Blumhardt*

Vertical INTEGRATION

SUCCESSFUL CASE STUDIES FROM BRAZIL AND SUMATRA

BY RACHEL NORTHROP

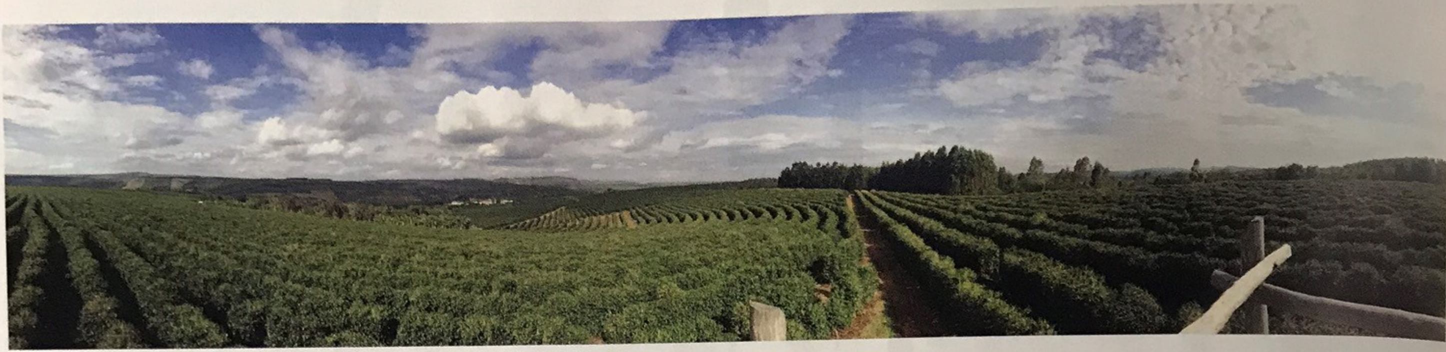
In recent years, roasters have become increasingly involved upstream in the coffee supply chain, visiting farms and consulting with producers about how changes in production can impact final cup quality in the pursuit of specific coffee attributes. But there is also a willingness among businesses at the beginning of the chain to be further involved downstream. This is the process of vertical integration, a supply chain structure in which companies involved in operations at the source integrate their business models to include activities closer to the final consumer.

What Is Vertical Integration?

This type of integration means the company that produces the original product continues to own that product in its different forms, and also owns the operations that transform the product from one form to another. In the case of coffee, this means retaining ownership as the coffee is processed from a raw fruit to a dry seed, and from a stored seed to an exportable foodstuff.

Traditionally, coffee has not been as vertically integrated as other agricultural crops, such as fruits or grains, where the same company will produce, transport, process and warehouse the raw material.

CONTINUED ON PAGE 42 ▶



Fazenda Matilde, Minas Gerais, Brazil. | *Photo courtesy of Ally Coffee*

Unless coffee is grown domestically, there is a crucial and often lengthy export/import stage for coffee consumed in the United States, Europe, Asia and Australia, and there are multiple processing phases before coffee can be roasted for consumption or for use as an ingredient.

Vertical integration can begin at the farm or the mill. The term indicates that a single company owns the same coffee during multiple logistics stages, rather than selling it to a separate company which then sells it again at the next stage in the chain. When farms and mills maintain ownership over their coffee through the sale to a roaster, they can provide a fully traceable product that is often more affordable, as each transfer of ownership incurs logistic costs. Vertical integration also tightens the feedback loop between production and consumption.

Case Studies from Brazil and Sumatra

No business strategy functions in isolation. The examples that follow show that vertical integration is most effective when undertaken by companies that also practice diversification and innovation, and are firmly established in their main activity.

ORIGIN: Minas Gerais, Brazil

For the first case study in successful vertical integration, we look to Brazil, the world's highest-volume producer of coffee, and also one of the world's highest-volume coffee consuming countries.

Coffee at Fazenda Matilde is grown under the shade of mahogany and other trees. | *Photo courtesy of Ally Coffee*

Grupo Montesanto Tavares produced more than 80,000 bags of arabica coffee between its four farms in 2016. The group owns and operates three milling facilities, with a total capacity of 1.3 million bags; three Brazilian trading houses handling both internal commercialization and international export; and a U.S./European importing company with commercial and specialty divisions.

Ricardo Tavares is CEO of Grupo Montesanto Tavares, overseeing all agricultural and logistical operations. His passion for coffee started at age 18, when he traveled to northern Brazil with his father, who bought and sold green coffee for Brazil's domestic roasting companies. It was that trip that inspired Tavares years later to acquire Café Tres Corações, one of Brazil's largest roasted coffee brands. From there, he built Brazil's largest national juice and pulp company, Sucos Mais, eventually selling it to Coca-Cola.

The infrastructure retained from these previous businesses facilitated Grupo Montesanto Tavares' model of streamlined integration, as Tavares explained when he spoke at the second annual New York Coffee Festival World Coffee Portal CEO Forum in New York in September 2016.

"When I sold Café Tres Corações, I did not sell the warehouses. I kept them separate from the roasting business. So when I started exporting coffee again, I already had the warehouse structure for coffee in place," Tavares explained at the forum. "Similarly, the Montesanto Tavares freight company was created for Sucos Mais, and in transitioning back to coffee, we shifted the freight category from juice to grains."

In any business environment, especially a heavily industrialized country like Brazil, large-scale logistics are the most viable, and Tavares' previous businesses allowed him to link farms smoothly to mills and to port.

The group mills and prepares coffees from its own farms, and on a fee-for-service basis for other producers and exporters. Diversification is a recurring theme in the context of vertical integration. While the mill's function is always to hull and sort coffee to prepare it for shipment, this step can include multiple types of clients. One benefit of an integrated business is having more areas that can respond to changes. If production on the farms dips, for example, profit can be recovered in milling services.

Several Montesanto Tavares farms also are diversified, with shade-grown coffee planted under African mahogany.

CONTINUED ON PAGE 44 ▶

Drying beds at Fazenda Matilde. | *Photo courtesy of Ally Coffee*

"In Brazil, shade-grown coffee is minimal. Scale-wise, it's innovative," says Tavares. "After visiting Central America, I saw that some of the region's best coffees were grown under shade. In addition to quality, it is a sustainable practice because when we have a down year in coffee, we harvest the mahogany to supplement the income for the farm."

While long-term financial and environmental sustainability measures help bolster integrated businesses, investing simultaneously in multiple aspects of the same business requires significant capital. Because an integrated coffee company is conducting many functions before the coffee is sold to roasters, there is a delay in final payout that can strain operations, which is why integration and scale are an expensive combination. Investments made upstream, such as planting a particular variety, continue to influence the company until that coffee is sold, and a miscalculation early on cannot be passed on to another company; it remains the responsibility of the integrated business.

Bruno Tavares Borges, nephew of Ricardo Tavares, is the CEO of Florida-based import company Ally Coffee, with a specialty division in South Carolina. He explains how Ally's dual role serving as the U.S. and European importing

Adjacent farms Fazenda Primavera and Fazenda Matilde in Chapadas de Minas, Minas Gerais, Brazil. | *Photos courtesy of Ally Coffee*

arm of Grupo Montesanto Tavares and sourcing specialty coffee from other origins provides a unique perspective on production and consumption.

"We have the structure of a full trading house, and a team who really knows what the specialty coffee market needs," he says. "We see our projects on our Fazenda Primavera as a pilot teaching farm. For our next specialty projects in Cerrado and Sul de Minas, we will apply best practices based on the pilots in Primavera."

For roasters looking to market a coffee as single-origin and verify its source, an integrated company can provide a clearly documented history from farm to port. For roasters buying on price and quality specs, however, the internal logistic and financial structure of the company or companies that produced and processed the coffee is less of a factor. Depending on its size, an integrated operation might offer a limited variety of products, making it less attractive to customers looking for specific options.

"Integration speaks volumes in the buying interaction between growers and roasters," says Darrin Daniel, an independent consultant and former sourcing director for Allegro Coffee. "As a coffee buyer,

CONTINUED ON PAGE 46 ▶

integration certainly provides added value to know that a group or an organization understands all the key metrics for success and the hazards that come with an agricultural commodity such as coffee. From a competitive approach, integration allows small and large roasters a clearer sense of supply chain intricacies."

Being part of an integrated group also can mitigate some of the risk involved in pioneering applied research, as demonstrated by Nobletree Coffee, owned by FAL Coffee. Byron Holcomb, Nobletree's director of agribusiness, explains that while an integrated business might take more risks with production because it is also the company selling the final product, that risk must be managed carefully.

"The two major factors that counterbalance the risk of vertical integration are margin and control," notes Holcomb, who moved his family from Brooklyn, New York, to Brazil to manage Nobletree's farm development. "In big multinationals, vertical integration allows each sector to push margin around [between segments of the company]. We operate as individual silos. Each one needs to show a profit."

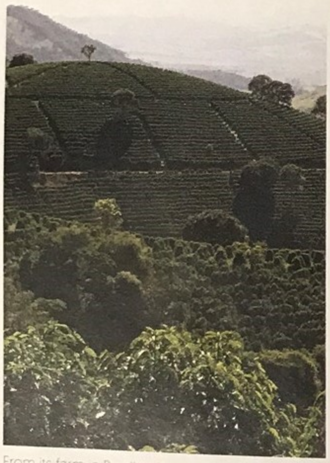
While Montesanto Tavares focuses on production through import, Nobletree also operates a roastery in Brooklyn.

"Control is vital to produce quality coffee, and by owning the 'soil to sip,' as we call it, we are provided a transparent vehicle to move our coffee from the farm to the final consumer," Holcomb says. "If our roaster, Eric Taylor, loves a coffee, he knows the entire life story of those beans. If a lot shows up that he doesn't like, we can trace the problem back to the root."

Defects detected in the cup can be traced back to any number of variables, from faulty equipment to unexpected weather patterns and beyond. Sometimes these variables can be adjusted relatively easily. Other times there are larger systemic issues that require more time and effort to address.

This feedback loop by which farm practices and consumer preferences inform each other is central to the integrated model.

"When I go back to Brazil," Holcomb says, "I always take coffee from other origins—Kenya, Costa Rica—to the farm staff. When buyers visit, they give short presentations about what they do with our coffee. We have the opportunity to show how coffee starts as carbon dioxide, soil, water and sunlight and ends up in a Manhattan cafe. It is vital that our farmers and baristas know each other. Our farmers head out to work with rubber boots and leather gloves and our baristas head out with tampers and aprons, dealing with coffee the whole time."



From its farm in Brazil to its roastery in Brooklyn, New York, Nobletree calls its vertical integration model "soil to sip." | *Photos courtesy of Nobletree Coffee*

ORIGIN: Aech, Sumatra, Indonesia

Everything about the Aceh province on the northern tip of the Indonesian island of Sumatra is different from Brazil. Politics, language, weather, currency, topography and processing tools are worlds apart, but the goal is the same: Connect components of the coffee supply chain to improve transparency, quality and efficiency, and to help everyone earn fair wages and avoid unnecessary costs.

"Vertical integration starts with strategically placing people who can interpret the needs of both sides," says Matt Fury, an independent sourcing consultant. "It has to come from vertical involvement. For producers to make investments in farm practices, they have to know why those improvements matter. The more that roasters and importers are involved by educating themselves about and visiting origin, the more they can be a part of this involvement." (It's important to note, however, that while roasters can offer information about consumption habits, they do not have the expertise to offer farming advice, any more than farmers can advise roasters how to roast.)

TOP LEFT Coffee seedlings near Lake Toba. **TOP RIGHT** New drying patios near Lake Toba.
BOTTOM LEFT Ketiara co-op is a women-run producer initiative in Sumatra.
BOTTOM RIGHT Processing facilities in Medan, Sumatra. | *Photos courtesy of Greenfolia*

In the case of Aceh, integration can guarantee a specific quality, which historically is tricky in a region where terms like "Gayo" can refer to a general quality of coffee rather than to coffee from the Gayo region of Aceh.

"Vertical integration is a way for terms like 'Gayo' to be connected to real meaning," Fury says. "Does Gayo mean a specific flavor profile or a specific place? When there is a space at origin that allows for that conversation, the roaster can understand that the reason he's getting a certain cup profile is that the coffee came from a specific place with specific conditions. The profile is replicable within that specific chain, rather than the replicable thing being general specs."

The operating principles of vertically integrated export/import company Greenfolia, based in Medan, Sumatra, and in Los Angeles, cut through the potential complexities that arise from integrating coffee.

"Our success comes from simplicity," says the company's director, Stanley Soebianto.

CONTINUED ON PAGE 48 ▶

Greenfolia exported 25,000 bags from Sumatra in 2015. A total of 1.07 million bags of arabica was exported from Indonesia that year, according to the International Coffee Organization, which does not track exports by island.

"Buy. Prep. Ship. That's what we do," Soebianto says. "Sorting is a critical piece to our quality, but also important is our team in Medan. Our amazing general manager for quality control is both a Q and R grader who understands the U.S. markets and expectations, both commercially and in premium markets. Export-ready coffee is almost impossible to find, so we start with the coffee as the farmers are selling it and maintain traceable quality all the way until the green coffee arrives to the roaster."

Integrated farm estates in Aceh are rare, and Greenfolia's partnership with the Takengon mill, operated by the Amirta family, has allowed Greenfolia, also a family business, to focus on reliably sourcing coffee—a process that requires deep knowledge of local politics. Soebianto cites inter-island shuffling of coffee as one of the biggest threats to quality.

Sumatra's tropical climate on display. | *Photo courtesy of Greenfolia*

"Because Sumatran arabica coffee has a certain price and reputation, everyone wants their coffee to be from here, especially producers in Java, Bali, Sulawesi," he says. "By purchasing coffee from producers in the area surrounding the mill, and processing, sorting, sorting again and loading it ourselves, we can guarantee the coffee's source for the end buyer."

Indonesian coffee production is the antithesis of production in industrialized Brazil. Here, smallholders sell their coffee in all stages—cherry, wet-hulled, semi-washed.

"We pay the producers upfront," says Soebianto. "Cash and carry. We have to. That's how they eat." This is a common practice for mills, particularly in Indonesia, but less common for integrated companies that sometimes ask producers to wait to be paid until the final sale, a practice that might earn growers incrementally more money eventually, but asks them to delay those earnings from several months up to a year.

Though Aceh is thousands of miles from Minas Gerais, the benefits of vertical integration are similar in both origin countries.

CONTINUED ON PAGE 50 ▶

The warehouse of Ketiara co-op, a new initiative in producer involvement in Sumatra. | *Photo courtesy of Greenfolia*

"We find the main advantages are control of quality—to be able to influence the quality during the milling process and to troubleshoot any issues that come up," Soebianto concludes. "Anyone who knows Indonesia knows that managing quality is the most difficult piece. We are a fairly small operation, but that allows flexibility and customization for our roasting clients."

Ketiara co-op offices. | *Photo courtesy of Greenfolia*

While vertical integration looks quite different in the contexts of Minas Gerais and Aceh, all the iterations of integration—farm to import, farm to roaster, mill to import—work toward the same goal: a supply chain that better understands itself. Integrated models are not the right solution for every context, but companies pioneering new models for uniting coffee production, export/import logistics and even roasting are redefining the pattern of the supply chain and demonstrating that, in coffee, there is no one way to do things well, and certainly no such thing as business as usual.

RACHEL NORTHROP *is the northeast United States and Canada sales representative for Ally Coffee's specialty importing division. Her coffee journey began researching production in the mountains of Latin America, and today she writes about the nuances of supply chains for several trade publications.*