

CONFIDENTIAL

YOUR BEST SOURCE OF INFORMATION ABOUT THE BRAZILIAN COFFEE BUSINESS. THIS ISSUE:

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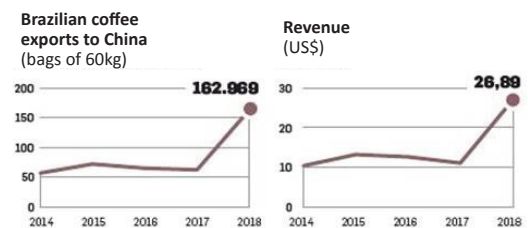
FOSTERING STARTUPS AND TECHNOLOGY DEVELOPMENT IN COFFEE

The Coffee Research Consortium has partnered with the Federal Universities of Lavras (UFLA) and Viçosa (UFV) in a pilot project to accelerate coffee start-ups in Minas Gerais state. *Avança Café's* first phase will contemplate hackatons – IT-based marathons – to develop apps focused on coffee; its second stage will train teams, previously selected during the hackatons, on product development, strategic planning, marketing, finance and team building, among other subjects, during a 12-week immersion program. The goal of the project is to boost innovation and technological solutions in coffee while promoting entrepreneurship.

Source: Embrapa Café

CHINA ATTRACTS BRAZILIAN COFFEE EXPORTERS

The habit of drinking coffee instead of tea, especially among the younger population, is making China the newest promising market for Brazilian coffee exports. Sales of the Veloso Green Coffee Company to China have grown 30% per year. In 2018, the company exported 192,000 bags to about 30 countries and China accounts for a share of 5% to 10% of its sales abroad. Chinese coffee importers usually pay between 10 to 15% more than the average price. Volumes shipped to China in 2018, mostly green coffee, grew 162% over the previous year and totaled 162,900 bags. Revenue increased 143% and achieved US\$ 26.9 million compared to 2017 according to the Brazilian Coffee Exporters' Association (CeCafé). Coffee consumption in China rose from 300 thousand to 3.8 million bags between 2008 and 2018, an increase of more than 1,000%, according to the United States Department of Agriculture.



Source: O Estado de S. Paulo

MARKET LEADER TRÊS CORAÇÕES PLANS TO ENTER NEIGHBORING COUNTRIES

Brazil's largest coffee roaster, with 27% of the market, plans to expand in South America through acquisitions in Argentina, Chile, Uruguay, Paraguay and Bolivia. Três Corações, which is a joint venture between the Brazilian São Miguel and the Israeli Strauss groups, has acquired eight coffee companies in Brazil since 2005 and greatly contributed to consolidation in the national coffee market. Três Corações coffee sales reached R\$ 4.8 billion (US\$ 1.3 billion) in 2018.

Source: Bloomberg

SEVERE DROUGHT CAUSES ABORTION OF COFFEE CHERRIES

Prolonged water deficits have been causing the abortion of coffee cherries in specific Brazilian regions. Research has confirmed that coffee trees lose leaves in productive branches and this causes the abortion process of fruits that are not hydrated after spending a long period under water stress and even with the occurrence of small amounts of rain.

Source: Revista Attalea Agronegócios

BRAZIL'S SHARE OF GLOBAL COFFEE EXPORTS TO GROW

According to the Brazilian Coffee Exporters Association (Cecafé), the Brazilian share of world coffee exports should reach 32% in 2019 in response to rising consumption in several markets. Brazil exported 35.2 million bags in 2018 (including green coffee, soluble and R&G), of which 31.5 million were green coffee, 15% more than in the previous year. Differentiated coffees, those with higher quality

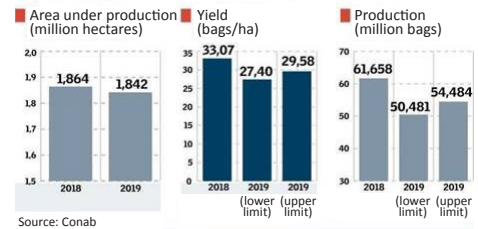
and/or sustainable, already account for 17.7% of the shipments. The largest buyers of coffee from Brazil in 2018 are the USA (6.2 million bags), Germany (5.6 million bags) and Italy (3.1 million bags). Brazilian green coffee exports to Colombia grew 7327% and reached 466 thousand bags.

Sources: Valor Econômico, ABIC and CONAB

2019 COFFEE CROP 12 TO 18% LOWER CAN BE OFF-YEAR RECORD

Brazilian coffee production is expected to reach from 50.5 million to 54.5 million bags of 60 kg in the 2019/20 crop according to the first Conab estimate. The volume may be 11.6% to 18.1% lower than the record 61.7 million bags registered in 2018/19. The decrease was already expected due to the off-year in the Arabica biennial production cycle but the volume expected is high for a crop with this characteristic. Arabica coffee production is expected to reach between 36.1 million and 38.2 million bags, a reduction of 19.6% to 23.9% compared to the last crop. Conilon should reach between 14.4 million and 16.3 million bags, an increase of 1.3% to 15.2%, due to the favorable climate and the fact that the biennial cycle does not affect Conilons as much as it does Arabicas.

Coffee in Brasil
First Conab crop estimate 2019/20



Source: Valor Econômico

COFFEE AMONG TOP FIVE AGRICULTURAL PRODUCTS

The total revenue from Brazilian farming totaled R\$ 383.9 billion (US\$ 103 billion) in 2018. The five products with the highest revenues were soybeans (37% of the total), sugarcane (16%), corn (12%), cotton (9%) and coffee, with R\$ 24.92 billion in revenue and 6.5% of the total. Preliminary studies show that gross coffee revenue should decrease around 10% in 2019 due to the smaller crop.

Source: Embrapa Café

PINHALENSE CONVENTION UNVEILS NEW TECHNOLOGIES AND PRODUCTS

The majority of Pinhalense/P&A representatives, who cover 43 coffee producing countries, attended the International Convention held at Pinhalense's head office at the end of January. With talks and discussions on several subjects and areas, the event also included visits to the three Pinhalense factories, its Workers' Club and P&A's office besides field visits to wet milling, drying and dry milling facilities in the Pinhal area. Highlights of the convention were the presentation of recent innovative projects and new technologies. New large projects presented included a central wet mill in Colombia, a dry mill in Nicaragua, the most modern in the country and one of the largest in Central America, and a drying, hulling and export processing mill in Peru with state-of-the-art negative pressure dust aspiration system. The new technologies covered included how to introduce novel approaches to fermentation into milling, innovative drying options using existing and new Pinhalense machines, the ever more intense use of electronic flow and big-bag scales, milling of micro lots from seed to exports, husk and dust handling and automation, to mention a few. The detailed evaluation filled out by the representatives rated the convention at 9 out of 10 points and included very relevant suggestions for the next event.

Source: P&A



Brazilian Prices

Main Producing Regions / Farm Gate

December 28, 2018

Arabica Naturals (R\$/ 60 kg bag)		Conilon / Robusta (R\$/ 60 kg bag)	
Cerrado MG	415,00 ↑	Colatina-ES fair average price	310,00 =
Mogiana	410,00 ↑		
South Minas	410,00 ↑		
Arabica Pulped Naturals (R\$/ 60 kg bag)		BM&F (US\$/60kg Arabica bag)	
Cerrado MG	435,00 ↑	Mar 2019	127,70 ↑
South Minas	430,00 ↑	Sep 2019	135,05 ↑
		Dez 2019	134,90 ↑
		Real R\$ / Dolar US\$	
		Jan 31, 2019	3,66 ↓

+ 6.10%

Source:

www.qualicafex.com.br

A REFLECTION ON COFFEE PRICES

Our recent International Convention brought to our home town of Espírito Santo do Pinhal, state of São Paulo, Brazil, our Pinhalense/P&A international representatives who together accounted for 94% of Pinhalense exports to the 5 continents in 2018. We had the privilege to spend the last days of January with business persons who have unique access to what happens in their producing countries because they sell to stakeholders at all levels of the coffee supply chain, from small growers to large exporters, including coops if not government themselves.

Although our presentations and exchanges focused on technology, new products, sales techniques, marketing, after-sales service and the like, the current low-level of coffee prices was a recurring subject in small group and one-to-one exchanges. Specialty coffee apart, it is obvious that current prices leave very little profit if any to growers in most coffee producing countries.

What to do? As an economist, I do not have much of a problem to understand why prices are low. Having written an end-of-course graduation paper on coffee production costs around the world, what I heard from our representatives only confirmed what I expected about the profitability of growers. As a believer in the power of the market, it will be survival of the fittest and further concentration of production in the most efficient growers unless the less efficient ones change.

Is this change possible? Two recent examples in Colombia – the launching of a hand-held mechanical harvester and the opening of a large central wet mill, reported in the last issue of *Coffidential* – show that change may be possible. Coincidentally, in two separate unrelated events Colombia started to attack two inefficiencies that are found in many producing countries: high-cost of selective manual harvesting and lack of scale in wet milling by small growers.

Focusing on harvesting and post-harvesting, some of the sources of inefficiencies and high production costs are quite obvious: manual harvesting, sun drying (especially with climate change) and small-scale processing at all stages. These sources will have to be addressed and change may in some cases have to be radical rather than incremental.

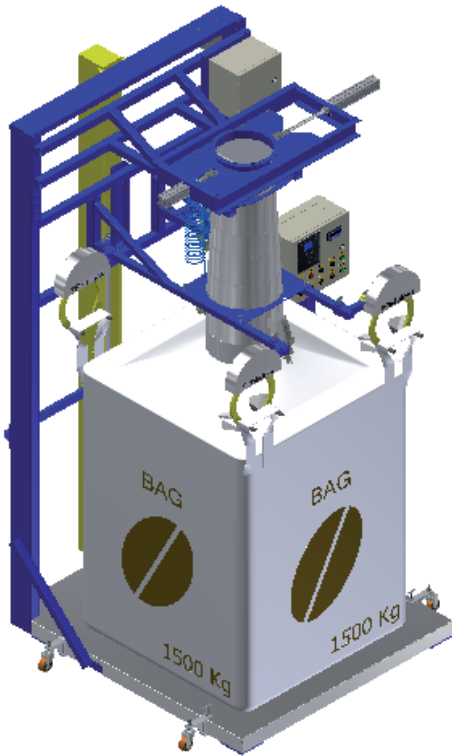
Lower cost harvesting may bring in a larger percentage of unripe and over-ripe cherry but this may be addressed by machines like the mechanical siphon and the unripe cherry separator. The domestic and soluble markets may absorb these lower quality products and growers will be better off at the end, with a somewhat lower income but much lower costs.

Wet milling by individual small growers has tremendous inefficiencies and lack of scale and makes it very difficult to produce the ever larger lots with consistent quality that are demanded. Economies of scale can be achieved not only by large central mills but also by mid-size and small central mills that bring together smaller groups of growers with the same modern technology. Central facilities also minimize wet milling losses and improve overall coffee quality.

High quality mechanical drying, for example using modern rotary driers, may not only save on infrastructure and labor costs but also eliminates losses caused by unfavorable climate. Drying is by far the most expensive post-harvest processing step and a frequent cause of quality losses, which makes it a potential source of both cost savings and income increases.

It is high-time we question the romantic view of small growers picking coffee selectively, pulping it themselves, each one separately, and drying coffee under the sun. One may argue that this is the perspective of a machinery seller. Indeed it is but it is also the solution to get coffee growers out of poverty unless they can produce and market specialty coffees.

ELECTRONIC BIG-BAG AND FLOW SCALES FOR COFFEE AND MANY OTHER PRODUCTS



The use of big bags in modern mills and warehouses is not restricted to shipment of finished products to clients. Much to the contrary, big bags are ever more used to store products received from growers and to replace conventional bags and silos at intermediate storage of incoming, semi-finished and finished products. This may require the deployment of big-bag weighers and fillers in several different positions in the processing line, from reception to dispatching. In addition, warehouse logistics – transport and storage of big bags – has to be designed for and/or adapted to these new conditions.

Different countries and companies operate with different sizes of big bags. Likewise, different clients require the shipment of products in different sizes of big bags. As a result, millers and exporters have to fill and weigh products in different sizes of big bags in their mills, often with the use of different pieces of equipment for different size bags. Pinhalense has reacted to this need and developed the SMARTBAG electronic scale that can fill and weigh big-bags with sides from 1.00 to 1.50m and heights from 1.00 to 2.00m.

Another trend in milling is to have better control of the weight of products coming in and going out of the processing line or specific machines in order to control product losses and the efficiency of the machines. This type of control is becoming critical in a business where a few percentage points may be the difference between profit and loss.

Pinhalense's response has been to create what is possibly the most competitive, space saving and efficient flow scale offered in the market today, the SMART-FLUX. Its compact size and reduced height combined with direct connection to the feet of elevators allow the insertion of the SMART-FLUX into existing installations with minimum changes.

Pinhalense projects for new mills and warehouses may include, upon the client's request, the inclusion of SMART-FLUX flow scales at critical control points, the use of SMARTBAG big-bag scales, and the design of storage facilities for big bags that maximize the use of floor space with the use of unique solutions. These new machines have been already sold to many clients in Brazil and exported to several countries.

More information, technical specifications and advantages of the new Pinhalense electronic scales can be found at past Confidential newsletters: the SMARTBAG at No. 68 (March, 2013) and the SMART-FLUX at No. 97 (August, 2015).

A video of the SMARTBAG in operation is available at <https://www.youtube.com/watch?v=loD3b50WRrA>. Pictures of both machines in processing mills are found at <https://bit.ly/2WS08Yd>.

