

# CONFIDENTIAL

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

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## COFFEE GROWERS' OPINION

Brazilian growers do not seem interested to sell their coffee for the prices the market is offering. There may be several explanations for this, starting with high production costs in this past crop coupled with growers' capitalization as a result of good profits the crop before. A stronger Real, that makes the amount growers receive for their coffee in local currency smaller, falling interest rates, and expectations of a smaller crop than the market is forecasting add to the decision to hold their coffees. Finally, this is a moment in the yearly coffee production cycle when expenses are lower and taxes become due soon, at the turn of the year. Will the recent increases in international prices make growers change their mind?

### ☉ COFFEE LEAVES MAY HELP IN TREATMENT OF PARKINSON DISEASE

A study carried out by UFLA, the Federal University of Lavras, showed that coffee leaves, which are discarded most of the time, contain Levodopa, which is used in the treatment of Parkinson's disease. The study analyzed the metabolic "paths" of Arabica and Canephora leaves and identified important enzymes that produce Levodopa. The researchers behind the study highlight that other substances of medicinal value have been previously observed in the leaves and that in future studies it will be possible to fully understand if they may be used for health care.

Source: Portal da Ciência - UFLA

### ☉ APP TO MONITOR WATER CONDITIONS IN COFFEE AREAS

Since it is hard to measure the hydric potential directly from a plant, researchers at EPAMIG, the Agricultural and Livestock Research Institute of Minas Gerais, created a mathematical model that estimates this variable using satellite images. The app, called "Regador", was developed at UNIFEI, the Federal University of Itajubá, in 2021 and has since then undergone improvements and constant updates. EPAMIG regularly monitors water conditions in coffee areas using the app.



Source: UNIFEI

### ☉ CLIMATE CHANGE THREATENS INSECTS THAT POLLINATE COFFEE AND COCOA CROPS

Some of the main tropical crops in the world, including Brazilian coffee and cocoa, may suffer from the disappearance due to climate change of insects that pollinate their flowers. According to a new study, the availability of animals whose presence is essential for the production of a big variety of fruits may fall to less than a half in a warmer planet. The countries with the largest chances to be affected are Brazil, China, India, Indonesia and the Philippines. Among other products, cocoa and coffee are on the list of the ones that may suffer with the lack of pollinators. The study carried out by the Natural History Museum of London had the collaboration of Brazilian researchers at the Federal University of Goiás and the Federal Institute of Mato Grosso.

Source: Folha

**☪ CENTER OF EXCELLENCE FOR COFFEE GROWING OPENS IN VARGINHA, MINAS GERAIS**

The National Agricultural Confederation (CNA) and the Agriculture and Animal Farming Federation of the State of Minas Gerais (Faemg) opened a Center of Excellence for Coffee in the Varginha coffee trading hub last month. It will offer courses to train qualified professionals for the job market and be a partner in coffee growing studies in the whole country. With a total area of 5,100 square meters, the building has eight blocks, six classrooms, four labs (grading, roasting, grinding and cupping), a gourmet coffee shop, threecomputer labs, a library, an auditorium for 260 people and a lounge. The Center’s objective is to increase knowledge, to promote research and to provide students with access to good practices in management, production, trading and technological innovation in order to develop capabilities and to take advantage of opportunities that can make the Brazilian coffee business more competitive.



Source: SENAR

**☪ COFFEE WITH REGENERATIVE AGRICULTURE LABEL LAUNCHED**

Illycaffè launched the Arabica Selection Brazil Cerrado Mineiro, the first coffee with regenerative agriculture certification by Regenagri in partnership with the Cerrado Coffee Growers Federation of Minas Gerais. The certification ensures that there has been an increase in organic matter in the soil, improvement in biodiversity, rebalancing of the ecosystem’s natural functions, sequestration of CO<sup>2</sup> and an increase in the water, carbon and nutrient cycles. The Regenagri certification is based on two aspects: the agricultural practices used to produce coffee and the ability to trace information and to protect coffee identity and characteristics throughout the supply chain.

Source: DATAGRO

**☪ COFFEE IS RESPONSIBLE FOR POSITIVE IMAGE OF BRAZILIAN AGRO IN FOUR EUROPEAN COUNTRIES**

According to a survey in the UK, Germany, France and the Czech Republic, around 57% of Europeans do not know the Brazilian agribusiness. But it also shows that in these countries coffee is the main product of reference regarding Brazilian agricultural production. In the survey, Brazilian coffee stood out with over 75% of good reputation. Citizens, journalists and traders involved with the survey evaluated quality, origin, and innovation related to the product itself as well as sustainability, employment, social and ecological environment and governance related to its production.

Source: Globo Rural

**☪ BRAZIL IS THE FIRST COUNTRY TO ADOPT GLOBAL ESG REPORTING GUIDELINES**

Brazil became the first country in the world to officially adopt global ESG (Environmental, Social and Governance) reporting guidelines last month. In order to promote sustainability and climate accountability, Brazil’s Securities and Exchange Commission (CVM, for its initials in Portuguese) and the Ministry of Finance have jointly announced that all companies traded in the stock exchange in the country will have to provide annual sustainability and climate-related disclosures from 2026 onwards. This aims to help investors include sustainability criteria as part of the evaluation of opportunities and risks related to each company’s business.

Source: Estadão

**Brazilian Prices**

Main Producing Regions / Farm Gate

October 31, 2023

**Arabica Naturals (R\$/ 60 kg bag)**

Cerrado MG	905.00 ↑
Mogiana	900.00 ↑
South Minas	900.00 ↑

**Arabica Pulped Naturals (R\$/ 60 kg bag)**

Cerrado MG	965.00 ↑
South Minas	960.00 ↑

+ 7.22%

**Conilon / Robusta (R\$/ 60 kg bag)**

Colatina-ES fair average price	670.00 ↓
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**BM&F (US\$/60kg Arabica bag)**

Dec 2023	199.05 ↑
Mar 2024	200.60 ↑
May 2024	200.50 ↑

**Real R\$ / Dollar US\$**

Oct. 31, 2023	5.04 ↑
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Source: [www.qualicafex.com.br](http://www.qualicafex.com.br)

## EMPOWERING LABOR: GROWERS AND WORKERS

Last month's Outlook – Concentration of coffee production: a macro view on why and how to revert it – raised the question of why other countries whose percentages of the FOB price received by growers are close to those – of Vietnam and Brazil are not increasing their production and gaining market share. One reason is lower productivity but this may result from local conditions, e. g. shaded coffee, that is seldomly handled agronomically in a way to maximize productivity. Another more fundamental reason may be the lower productivity of labor caused by the lack of use of technology that empowers labor, be it the labor of growers themselves or that of workers. Low labor productivity results in insufficient income for growers and unattractive wages for workers that may lead to abandoning coffee production and/or seeking work elsewhere, immigration being an option in some countries.

In a visit of foreign coffee growers to Brazil last harvesting season, I was myself impressed by what I witnessed in our visit to a 2-hectare smallholder coffee grower in a steep area of South Minas Gerais. With the recourse to terraces, the family used a small tractor to help remove weeds and spray agrochemicals and to transport the coffee harvested with hand-held harvesting machines. Their efficiency was such that they were actually leasing and running another 3 hectares of coffee and making more money in response to the use of technology and economies of scale. This example shows how technology can also help address the small size of farms that predominate around the coffee producing world.

How can coffee growers survive relying on manual cultivation and harvesting techniques when the cost of living and aspirations grow? The ability to manually perform these tasks has remained the same for decades while growers' and workers' demands for income have increased year after year to meet costs of living let alone their children's aspirations.

Considering that the most important component of coffee production costs is harvesting and that in most countries this is primarily the cost of labor to pick coffee manually, the single most important item to address to empower labor is harvesting. This empowerment can start even without mechanization, by moving from manual selective harvesting of ripe cherries to stripping the branches or the parts of them where most cherries are ripe. This operational change can increase the volume of coffee harvested at least twice. Why is it not widely done? Most often because of the argument that unripe cherries have lower quality and sell for a lower price. However it will probably be the case that the savings in harvesting costs will more than offset the losses in the sale of coffee and the coffee grower will be better off!

The next step is to use the hand-held mechanical harvesters that in most areas do not require terracing. The increase in volume harvested may be up to five times in relation to selective manual harvesting depending on how selective one wants to be. The surprising fact is that with the use of these machines the percentage of unripe cherries may not be much higher than what is found today with "selective" harvesting... probably because pickers are not selective enough in order to make more money. The cost of the equipment is not high and may be paid for with the gain in harvesting productivity in two or three harvesting months in Brazilian conditions.

Two arguments that are often raised against the changes in harvesting proposed in the last two paragraphs – use of manual and mechanical stripping – are the ability of the plant to retain production in the following crop and what to do with the unripe cherries. The fear that the crop will fall is associated with the removal of flower buds or flowers during stripping. This can be avoided or minimized by "selective stripping", i. e., stripping the parts of the branches where there are no buds or flowers. Unripe cherries can be separated by pressure in modern wet milling equipment and even pulped to improve their quality. There is certainly a market for them in the countries where they are produced in order to cater for low-income coffee consumers who are in some countries drinking imported coffee with these same features.

Considering all the arguments above, it comes to no surprise that the recent living income study carried out by the Global Coffee Platform in Brazil showed that smallholder growers increase their income by providing services to other growers and/or having urban jobs. The reason for this is most probably higher labor efficiency leveraged by equipment/technology that allows them to have time (and equipment) to provide services to others or to work part-time in towns. Since Brazilian coffee farms employ many workers, it comes to no surprise either that mechanical hand-held harvesters have created a "social revolution" in the countryside with labor making more money and growers as well.

What prevents this from happening outside Brazil? Is it practical tangible limitations, the lack of trials coupled with cost-benefit calculations, or intangible barriers created for several reasons?

The way how labor can be further empowered by the use of terraces and how cooperatives, associations and extension services can support these changes, harvesting efficiency included, will be addressed in another Outlook.

## PINHALENSE HIGH-EFFICIENCY SELF-CLEANING COFFEE-SPECIFIC ELEVATORS

**COFFEE SPECIFIC** - Pinhalense offers coffee elevators specifically designed for each and every processing stage in order to avoid product damage and to retain the intrinsic quality of coffee. Fresh cherries, wet parchment, dry coffee with impurities and beans of different sizes and qualities pose different design challenges because they require specific features such as perforated buckets and bases, low-shock intake hoppers, low-friction discharge heads, self-cleaning devices, etc. Pinhalense elevators are equipped with a wide array of different pulleys for specific coffee products and processing conditions. All coffee elevators supplied by Pinhalense are selected according to specific needs and requirements when the processing lines are designed or individual machines are quoted. Sometimes different types of elevators are used in the same project or mill to cope with specific processing challenges.

**DESIGN (AND PROCESSING EFFICIENCY)** - Elevator design and construction require specific skills and technologies as well as sophisticated product development and field trials, specially so when the product to be transported is coffee. What makes the manufacturing and supply of elevators for coffee more challenging than for other products is that coffee has a much higher value and physical damage causes substantial price losses. In addition, margins in the coffee business are small which makes efficiency critical at all stages of processing. Besides the use of poorly designed or low-tech elevators available in many markets, another mistake is the use of grain elevators whose speed is much higher than acceptable to handle coffee. These elevators lack the specific features required to handle the different coffee products found along the processing chain, from recently harvested cherries to export quality green beans.



**SELF-CLEANING (AND DRY MILLING COSTS)** - One of the main competitive advantages of Pinhalense dry mills are the self-cleaning elevators that enable the processing of different coffee lots without the need to clean elevators as products are switched. Coffee mills have always handled different coffee qualities; however, the variety of coffee products has greatly increased in modern mills because of multiple origins, specialty coffees, micro lots, certification, traceability, etc. At the same time that the capacity of the mills increased, more flexibility was called for. In order to process large and small lots efficiently, a modern mill has to be able to switch products quickly, which is not possible with conventional elevators. When coffee products are changed, the base of each and every elevator has to be thoroughly cleaned in a cumbersome and time consuming process. If this is not done, different lots and qualities can be mixed, yields cannot be measured, and

traceability is not possible. This is what happens in conventional coffee mills. Pinhalense self-cleaning elevators enable the switching of coffee types without the need to clean elevators bases resulting in no time loss between lots. The use of these elevators greatly increases the efficiency of coffee mills because many hours of idle time are avoided.

**SUSTAINABILITY MATTERS** - Labor safety has always been a major Pinhalense concern in the design of both the machines themselves and the equipment layout (product flows). All Pinhalense elevators come with belt protectors, service ladders, catwalks with safety railings and other safety items. The layout of Pinhalense coffee mills takes into account minimum safety distances between machines, elevators and other pieces of equipment in order to ensure the free, unencumbered transit of operators and visitors alike. Still another area where Pinhalense minimizes or avoids the use of labor in tedious and unhealthy conditions is in the cleaning of the base of elevators every time coffee types or lots are changed in a processing line.

**ROLE AND RELEVANCE** - Elevators are often treated as a secondary component in the purchase of a coffee mill, with the focus resting only on the choice of the processing machines themselves. This is a big mistake because poorly designed and wrongly chosen elevators can impair the proper operation of the machines, cause damage to coffee, increase power consumption and negatively affect the performance of the full mill. It is not uncommon for clients to complain that their machines are not performing to satisfaction and, upon verification, Pinhalense has to explain to the client that the fault is with the non-Pinhalense elevator that is not feeding the machine properly and reducing its capacity or causing the coffee damage that has been mistakenly blamed on the machine, or else.

## **FREQUENT MISTAKES IN THE PURCHASE OF ELEVATORS**

**SPEED** - High speed of transport to increase capacity can be used to lower the cost of elevators but have the adverse impact of physical damage to coffee, not only breakage or cracking of green beans but also hulling of parchment. In a business known for small profits, the losses caused by damaged coffee can quickly offset the lower investment in the wrong type of elevators.

**CAPACITY** - It is an error to choose elevators whose prices are lower because their capacity is very close to or even smaller than those of the machines they feed in order to make their purchase more appealing. Since “families” of elevators have different average capacities for a specific coffee product, say 4 tons/hour, 8 tons/hour and so on so forth, and these capacities may not necessarily coincide with those of the machines, it is not unusual that, for example, a 5 tons/hour machine is equipped with an elevator for 4 tons/hour in order to lower investment costs. This is something Pinhalense never does because it plays safe and always offers elevators with some spare capacity to account for “lighter” (lower density) coffee, impurities, uneven feeding, etc.

**QUALITY** - Lower quality materials and components require earlier replacement of elevators and decrease the return on investment (ROI). The price of elevators is closely associated to the quality of the materials used and their durability: thickness of the metal sheet, correct choice of belts and cups, efficiency of the electric motors, etc.

**CONCLUSION** - Whenever you buy Pinhalense machines and mills with their respective elevators, you can rest assured that the elevators have been carefully selected and customized for your specific needs and the specific requirements of the machines that the elevators feed. Do not run the risk of using elevators that may affect negatively the performance of your state-of-the-art Pinhalense machines and mills.