

# CONFIDENTIAL

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

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## **☞ LARGE BRAZILIAN CROP RAISES FREIGHTS AND FILLS UP WAREHOUSES**

Warehouses filled up and higher-than-usual freight rates are the result of a record coffee production combined with above-average anticipated sales that affected logistics at the end of the current season. CONAB warehouses still have available space for about 750 thousand bags in Minas Gerais and only 70 thousand bags in São Paulo. Minasul, a coffee cooperative in the region of Varginha, Minas Gerais state, had to increase its storage capacity from 1.1 to 2.2 million bags. Although full warehouses give the impression of excess production, most coffee is already sold.

Source: Valor Econômico

## **☞ HIGH TEMPERATURES AND LACK OF RAIN INCREASE UNCERTAINTY ABOUT 2021/22 COFFEE PRODUCTION**

High temperatures and lack of rain in the southeast region of Brazil may negatively impact the next coffee crop that is already expected to be lower due to the off-year in the Arabica biennial crop cycle. The current scenario concerns coffee growers as the development of coffee beans may be affected. Coffee cooperatives recommend that growers avoid anticipated/future sales due to the high level of uncertainty in the volume of coffee to be produced.

Source: Valor Econômico

## **☞ FUNDS FOR COFFEE RESEARCH MAY INCREASE 150%**

The National Coffee Growers' Council (CNC) has requested the Ministry of Agriculture, Livestock and Food Supply (MAPA) to expand 2.5 times the amount currently budgeted for coffee research. Science and research have led Brazilian coffee production to become the most sustainable and competitive in the world and such increase will enable continuous technology development and knowledge transfer to technicians and growers as well as investment in the Coffee Research Consortium labs and experimental areas, including the germplasm banks.

Source: CNC

## **☞ IAC COFFEE PROGRAM DEVELOPED 67 NEW ARABICA COFFEE CULTIVARS**

The Campinas Agronomy Institute (IAC), founded in 1887, has had a strong focus on coffee from its beginning. Its Coffee Program has 11 distinct but complementary lines of research and the development of new coffee cultivars with positive features and attributes is one of its main scopes of work. The 67 coffee cultivars created by IAC, planted in Brazil and abroad, may today account for the majority of the Arabica coffee produced in the world. Additionally, the program also works on research on post-harvesting processing, reforestation, good agricultural practices, etc.

Sources: Embrapa Café and P&A



## **☞ NEW HIGH PRODUCTIVITY CONILON CULTIVAR RELEASED**

Seeds of the new Conilon coffee cultivar Conquista have been distributed to growers in the north of Espírito Santo state by the Agricultural Research and Extension Services Institute of Espírito Santo (Incaper) and the Secretary of Agriculture, Livestock,



Aquaculture and Fishing (Seag). The new seed-propagated cultivar presents a wide genetic base – while clonal cultivars are usually formed by 9 to 14 clones, the new cultivar combines 56 different genotypes –, is resistant to leaf rust and tolerant to high temperatures and drought. Conquista cultivar presents high quality in the cup, scoring over 80 points, and productivity of 74 bags/ha, 47% higher compared to Robusta Tropical, the first seed-propagated cultivar released by Incaper in the year 2000.

Source: Incaper

### 📌 LARGEST CONILON COOP IN BRAZIL EXPORTS DIRECTLY FOR THE FIRST TIME

Coabriel, the largest Conilon coffee cooperative in Brazil, located in the municipality of São Gabriel da Palha, Espírito Santo state, has made its first direct exports of two thousand bags to the United States. Although the majority of its exports is handled by trading companies, direct trade is a growing trend and the cooperative expects to increase its share to ensure greater revenues for its members.

Source: Reuters

### 📌 “CNC IN ACTION” TO IMPROVE DIGITAL COMMUNICATION WITH GROWERS

“CNC in Action”, a new digital newsletter to be released by the National Coffee Growers’ Council (CNC) this month, aims at updating growers, coops, associations, etc. about the Council’s activities and achievements. “CNC in Action” will be available on YouTube and will be shared via WhatsApp in order to spread information in a quick and dynamic way and to ensure that it reaches all who are interested.

Source: CNC

### 📌 SOLUBLE COFFEE MANUAL FOR BARISTAS IS RELEASED

The Brazilian Soluble Coffee Industry Association (ABICS) has just released its Soluble Coffee Manual for Baristas. Processing, sensory analysis developed especially for this segment, different methods of making soluble coffee, existing certifications, etc. are among the contents of the manual that was developed and prepared by ABICS in partnership with its members industries. The main barista coffee schools in Brazil will include the manual in their programs. Soluble coffee consumption in Brazil increased 10% from January to August 2020 compared with the same period in 2019. Spray dried increased 9.5% and freeze dried 23.6%. The manual is free and can be downloaded here: <https://bit.ly/3jDOUOH>.

Source: ABICS



### 📌 CNA STUDY REVEALS HIGH POPULARITY OF SOLUBLE COFFEE IN CHINA

According to a study commissioned by the National Agricultural Confederation (CNA) in partnership with InvestSP, soluble coffee may be the entry door for Brazilian coffee products in China. The study showed that soluble coffee has wide popularity among Chinese consumers due to its convenience and easy preparation. Although coffee consumption in China is considered low – 4 to 5 cups of coffee per person per year – average annual growth is very high, ranging between 7 and 17% per year in the last five years, to be compared with the global average growth of 2% per year in the same period. Brazilian coffee exports to China increased 12% in 2019 over 2018.

Source: Estadão

## Brazilian Prices: Main Producing Regions / Farm Gate September 30, 2020

Arabica Naturals (R\$/ 60 kg bag)		Conilon / Robusta (R\$/ 60 kg bag)	
Cerrado MG	515,00 ↓	Colatina-ES fair average price	393,00 ↓
Mogiana	510,00 ↓		
South Minas	510,00 ↓		
Arabica Pulped Naturals (R\$/ 60 kg bag)		BM&F (US\$/60kg Arabica bag)	
Cerrado MG	585,00 ↓	Dec 2020	116,65 ↓
South Minas	580,00 ↓	Mar 2021	118,50 ↓
		May 2021	118,40 ↓
		Real R\$ / Dolar US\$	
		Sept 30, 2020	5,61 ↑

Source: [www.qualicafex.com.br](http://www.qualicafex.com.br)

## COVID-19, SUSTAINABILITY AND MARKET MYTHS - 3 - SUN DRYING

In the August Outlook, it was stated that market myths lead to inefficient use of labor and higher production costs. It was added that such inefficiencies go beyond labor and include avoidable environmental damage. All **myths** refer to the production of quality coffee that, according to them, requires: 1. **selective picking**, 2. **natural fermentation** and 3. **sun drying**

Selective picking and fermentation were addressed in the August and September Outlooks. We now address the myth that sun drying is required to produce quality coffee. Reality today is that there are prize winning specialty coffees that have been mechanically dried, not to say that the same holds for micro lots that have reached record prices.

Sun drying has been traditionally performed in either (1) drying yards, also called drying grounds, made of tiles, concrete or asphalt, or (2) raised screen beds of several types and with several names. In both cases parchment or cherry coffee has to be revolved frequently to avoid overheating and unwanted fermentation and to ensure uniform drying. This is done with the help of simple manual tools in the case of drying on the ground or with the hands themselves in the case of raised surfaces. When needed, coffee is covered with a tarpaulin, today usually plastic, to protect it from rainfall or dew and, in the case of parchment, from sunshine itself in some hours of the day in a few countries. This has all remained the same for centuries except for the addition of a translucent plastic or screen roof that serves several purposes and is more common above drying beds than grounds.

Mechanical drying of parchment and cherry coffee is not a new thing. It is well over a century now that mechanical coffee drying is used around the world. It started with basic static driers – a box full of coffee with air injected from below – to which stirrers were eventually added to revolve the product. It is very difficult not to say impossible to achieve uniform drying in such machines. Vertical grain driers were adapted to handle coffee, that typically requires a much greater removal of moisture/water than grains do and is also more sensitive to higher drying temperatures. There is also the risk of physical damage to parchment that is recycled with the help of bucket elevators throughout the drying period. Rotary drum driers, created in Central America at the end of the 19th Century, enabled more uniform drying of parchment coffee from the outset. Except for rotary driers, all other machines were used for parchment and cherry coffee with design changes or different adjustments/settings to dry either product.

These three different types of driers were used around the world, at times all three in the same country, but with clear regional or country preferences for one or other type and local adaptations. However, reliance on mechanical drying was not very intense until perhaps the middle of the last century when urbanization started to render labor more scarce and costly at the same time that larger volumes of coffee started to be produced and dependence on dry weather became a greater risk. Also, larger producing countries in Latin America, like Guatemala, Colombia and specially Brazil, started to rely more intensely on mechanical drying.

A decisive change in the intensity of mechanical drying and the preference for a given technology took place in the late 1960s and early 1970s when Brazilian machinery maker Pinhalense redeveloped the traditional Central American Guardiola rotary driers *for parchment* to dry *natural coffees*. These changes, that improved drying markedly – efficiency, uniformity, capacity and quality – soon proved to work not only for cherry but also for parchment coffee and a new paradigm was established to dry coffee around the world. These modern rotary drum driers are today the machine of choice in most Arabica producing countries. In the case of Robustas, there is still a preference for vertical driers, except for Brazil and growers and processors concerned with quality elsewhere.

An argument in favor of sun drying to obtain high quality Arabicas is based, to the best of my knowledge, on unclear empirical evidence that coffee gets a unique bluish-green color if it is exposed to at least a given number of hours of sunshine. Independently of whether this is true or not, what does the color of green coffee matter to consumers of the final product, cuppers included?

Another argument has to do with the *possibility* of overheating coffee in mechanical drying. This is less and less likely as driers have become more sophisticated and digital temperature controls and drying profiles have been developed and introduced. However, irrespectively of these rather recent developments, overheating in sun drying is also possible and it is in fact becoming more prevalent due to lack of labor to revolve coffee frequently and the reliance on untrained personnel.

The conclusion is that there is plenty of evidence around the world today that the same coffee *properly dried* under the sun and in state-of-the-art machines cannot be taken apart, i.e., identified in blind tests, even by top cuppers!

It is obvious that if the sun drying facilities exist, trained workers are available and weather permits, sun drying may be a better choice. Nevertheless, it is also obvious that weather change is a fact, trained or not labor is becoming scarce, and the investment to build or maintain and the cost to operate sun drying facilities are increasing markedly. This explains the increasing reliance on mechanical coffee drying, with emphasis on the use of efficient rotary drum driers, if possible equipped with digital controls.

In summary, it is indeed a myth that sun drying is a requirement to produce quality coffee today!

## STATE-OF-THE-ART PARCHMENT AND CHERRY DRIERS REVISITED

As advanced in the Outlook article, Pinhalense had a key role in demystifying coffee drying. From its seminal contribution mentioned in the Outlook – the redevelopment of the rotary drum driers to make them the standard machines to dry parchment and natural coffee – to its updating for a new reality of micro lots, revival of naturals and different requirements for specialty, differentiated and commercial coffees, Pinhalense has reinvented its SRE rotary driers over the years with a lot done recently to retain their condition of **state-of-the-art driers for coffee anywhere in the world**. It is therefore no wonder that Pinhalense has sold over 25,000 SRE rotary driers to large, mid-size and small drying mills and for coffee growers of all sizes, including those who produce micro-lots, in over 45 coffee producing countries. The SRE rotary driers remain the single best-selling product in the large and diversified Pinhalense line of products and their exports are increasing further as a result of **recent and exclusive product development**. Let's review what has been changed, improved and introduced in drums, transmission, heat exchangers, pre-drying overhead silos and digital controls.

**Drums - from large to micro lots** - The rotary drums have evolved to accommodate **different sizes of batches of coffee** to be dried and to **increase drying flexibility** with the introduction of divided drums of several capacities to accommodate different types of coffee and **micro lots**. As new sizes were introduced, changes in the drums themselves included digital laser punching to ensure a more reliable air flow area and design improvement in the air distribution system.

**Transmission - different options** - Gear boxes have been added as an **alternative** to the traditional easy-to-maintain cog-and-wheel transmission system.

**Heat exchangers - investment and fuel efficiency** - Different types of heat exchangers have been used over the years and two types are currently offered in order to **adapt to the intensity of use and clients' budgets**. The husk feeding system has been improved to **increase fuel efficiency** and optional equipment to control emission is also available (spark control and after burner).

**Pre-drying overhead silos - faster pre-drying with quality** -The conventional overhead loading silos have been completely redeveloped to become a new product: an overhead pre-drier connected to the heat exchanger that **cuts drying time by several hours without negative impacts on quality**. Equipped with its own hot-air fan and heat distribution system, the pre-drier is an alternative to the standard overhead loading silo. This is described in detail at the Machine of the Month in Confidential No. 131 (June 2018) – <https://bit.ly/33tMIC9>.



**Digital control system - the ultimate simulation of sun drying** - The three-point temperature measurement system is unique in the market and allows heat supply to be stopped before the temperature of coffee reaches the set limit. This avoids the overheating of coffee that always happens if fuel supply is only interrupted when the limit temperature is reached. This digital system, that can be operated from mobile phones, enables **automatic temperature control** in the coffee mass (lower temperature oscillation and the use of customized drying curves), **shorter drying time, lower fuel consumption, better control of coffee quality and simulation of sun drying conditions**. This is further described at the Machines of the Month in Confidential Nos. 140 and 141 (March and April 2019) – <https://bit.ly/2QoSfob> and <https://bit.ly/2whj6M8>.