

CONFIDENTIAL

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

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NEW ABIC APP GUARANTEES FOOD SECURITY AND TRANSPARENCY FOR FINAL COFFEE CONSUMERS

The Brazilian Coffee Roasters' Association (ABIC) has recently launched its free ABICAFÉ app whose aim is to guarantee food security and transparency as well as to bring industry and consumers closer. The new app allows quick consultation at the time of purchase to check if the product is certified and meets the ABIC Purity and Quality Standards. Information about the flavor profile and other attributes will be available at the platform that will also feature information about the association and its actions and receive suggestions and questions.

Source: Notícias Agrícolas

COFFEE EXPORTED DURING PANDEMIC HELPS PLANT NEW TREES

Fazenda Daterra, located in the Cerrado Mineiro region, created the Beanstalk Project: for each kilogram of roasted coffee exported during the pandemic, a native tree will be planted. Such action will result in more than 37 thousand native trees planted in a 20-hectare forest. Since its foundation in 1995, the company has already planted more than 610 thousand native trees. In 2016, Daterra created the Bioterra Foundation, a 200-hectare area where researchers and scientists can make their soil microbiology trials and therefore contribute to scientific innovation.

Source: Globo Rural

SUSTAINABILITY RETAINED AT COVID-19 TIMES

Coffee harvesting has employed many people who lost their jobs during Covid-19 times enabling them to earn a living and to support local businesses. This is yet another example of the sustainability of Brazilian coffee production that results from continued investment in research and development, technology and innovation. Productivity has jumped from 8 to 32 bags/ha in the past two decades. Brazil produced 18.9 million bags in an area of 2.4 million hectares in 1997 and is expected to produce 60 million bags in an area of 1.9 million hectares this year. By producing more in a smaller area and generating over 8.4 million jobs, coffee production can respond to consumers' concerns about environmental and social sustainability.

Source: CNC

INTERNATIONAL COFFEE WEEK WILL BE 100% DIGITAL AND FREE

Held annually in Belo Horizonte, Minas Gerais, the main Brazilian coffee event and one of the five largest in the world, the International Coffee Week (SIC, for its initials in Portuguese) announced that due to the pandemic its 2020 edition will be 100% digital and free of cost. Known for its extensive program, millions of dollars in deals, and a wide network of connections, SIC will be held on November 18 to 20 using an exclusive online platform. It will offer online lectures, panels, awards, courses, contests and facilities for meetings and interviews. Interested companies will be able to exhibit their products and brands within the platform and to sell their products to SIC participants. The 2019 SIC edition had a record of 23 thousand visitors from 31 different countries, R\$ 50 million (US\$ 9.3 m) of deals started, 40 simultaneous events and 220 exhibitors.

Source: International Coffee Week (SIC)

POLLINATION HELPS INCREASE COFFEE PRODUCTIVITY BY 20%

Pollination by bees plays an important role in productivity increase in many crops and coffee is no exception. An increase of 20% on productivity was registered in coffee crops that received assisted and intelligent bee pollination this season. Such technique – pollination

as bio inputs – is still new and this leaves a lot of opportunities for expansion. In addition to increasing productivity, the ecosystem services provided by pollinating animals generated savings estimated at R\$ 43 billion (US\$ 8 m) in 2018. Soy accounted for 60% of this estimated value followed by coffee, with 12%.

Source: Canal Rural

HORNETS AS GREAT ALLIES TO CONTROL LEAF MINER

A study by the Federal Institute of Minas Gerais indicated that hornets are great allies in controlling leaf miner in coffee crops. Trials took place at two different conditions, one with an abundant green area around the coffee plantation and the other without it. The study showed that simple things like having green areas, e.g.: banana trees or forests, next to coffee bring insects closer to act as a pest’s predator and to help in several other environmental services.

Sources: EPTV and G1



BRAZILIAN EXPORTS OF CONILON AND DIFFERENTIATED COFFEES INCREASE

Brazilian coffee exports reached 22.9 million bags from January to July 2020, representing the second historical record for this period. Revenues reached US\$ 3 billion, a growth of 29% compared to the previous period. Arabica represented 78.4% of the total volume exported, Conilon 11.2% – growth of 15% in relation the same period in 2019 – and soluble coffees accounted for 10.3%. Exports of differentiated coffee reached 3.8 million bags, the second largest volume shipped in the last five years, corresponding to 16.6% of the volume exported and 21.1% of the revenues.

Source: Embrapa Café

CONILON PLANTED IN SÃO PAULO STATE



Although the western area of the state of São Paulo is predominantly an Arabica-producing region, it is starting to produce Conilon as part of a 12-year old project by the São Paulo Agribusiness Technology Agency (APTA). Conilon clones were adapted to the regional conditions and the average productivity already reaches 70 bags/ha. The clones are tolerant to nematodes and present lower incidence of rust and leaf miner. Good crop development, high productivity, lower production costs and proximity to industries that demand Conilon coffee make the production of such variety a sustainable alternative for São Paulo coffee growers.

Source: Notícias Agrícolas

COFFEE GROWERS REACH FINAL CONSUMERS DIRECTLY

Growers in South Minas Gerais are going beyond planting, cultivating, harvesting, and processing coffee to reach the final consumer. This new posture is adding considerable value to the product even if they are unable to produce large volumes. Two reasons may have boosted this trend: specialty coffee quality contests and the fact that consumers are increasingly concerned with the origin of the coffee they buy/consume. The outsourcing of roasting, grinding, and packing has guaranteed the constant entry of new coffee growers into this market. Sales of processed coffee can double growers’ profits when compared with sales of green coffee beans. However, it is important to highlight that growers must offer consistent qualities.

Source: G1

Brazilian Prices: Main Producing Regions / Farm Gate August 31, 2020

| Arabica Naturals (R\$/ 60 kg bag) | | Conilon / Robusta (R\$/ 60 kg bag) | |
|--|----------|------------------------------------|----------|
| Cerrado MG | 575,00 ↑ | Colatina-ES fair average price | 411,00 ↑ |
| Mogiana | 570,00 ↑ | | |
| South Minas | 570,00 ↑ | | |
| Arabica Pulped Naturals (R\$/ 60 kg bag) | | BM&F (US\$/60kg Arabica bag) | |
| Cerrado MG | 655,00 ↑ | Sep 2020 | 133,75 ↑ |
| South Minas | 650,00 ↑ | Dec 2020 | 135,35 ↑ |
| | | Mar 2020 | 134,70 ↑ |
| | | Real R\$ / Dolar US\$ | |
| | | Aug 31, 2020 | 5,48 ↑ |

Source: www.qualicafex.com.br

COVID-19, SUSTAINABILITY AND MARKET MYTHS - 2 - FERMENTATION

In the previous 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 was addressed in the previous Outlook. We now address fermentation, that was created to remove mucilage from parchment after cherries are pulped. The possibilities of wet and dry fermentation existed from the beginning but the former was adopted much more widely.

Wet fermentation requires a lot of water, labor is needed at several stages but specially for washing the fermented parchment, and the time required, from 12 to 30 or even 40 hours, makes continuous processing impossible. Water consumption is specially high because wet fermentation usually requires a volume of water equal to two to three times the volume of the fermentation tank: one volume when the tank is filled with parchment and the conveyance water is drained off, another one of clean water to enable wet fermentation and, depending on how it is done, a third volume of water to wash the demucilaged parchment and to move it out of the tank. Mechanical devices to wash fermented coffee can decrease the need for labor but water savings are restricted to only part of the third volume required.

The first machines to remove mucilage from parchment, created in the first half of last century, did a good job of “cleaning” parchment but consumed as much or even more water than wet fermentation. On the positive side, they required much less labor and enabled continuous process from pulping to drying. These mucilage removers did not change much until the 1980s and 1990s when successive generation of machines caused water consumption to fall greatly, to a very small part of what wet fermentation requires and close to zero but not yet there. Mucilage removers can also be used to wash parchment after partial or full fermentation with no need for additional water or labor.

The use of partial wet fermentation combined with machine washing or full mechanical removal of mucilage has the benefit of shortening fermentation time and avoiding weight loss in coffee. This was not mentioned before but the time spent in fermentation causes the final product, green coffee, to weigh less. This weight loss, that depends on fermentation time and the temperature prevailing in the area, can run from 1 to 2% to up to 6 or even 9% in extreme conditions. For this reason, mucilage removers can have a great impact on the profitability of coffee production, the greatest when fermentation is not used at all.

The myth to be addressed here is that natural fermentation is required to produce quality coffee. Is this true and can it be translated into better coffee prices for growers?

It is a fact that fermentation can affect the quality of coffee but whether this is substantial and noticeable depends on environmental conditions, specially the altitude where coffee is produced. It is usually assumed that at higher altitudes fermentation will increase acidity in the cup. If this will translate into better coffee prices for growers will also depend on the extent of the increase and, very importantly, on growers' access to market, i.e., their marketing and selling ability to cash on this quality difference.

Empirical evidence shows that other than in the micro lot and upper part of the widening specialty coffee markets, where it may be possible to cash on high-quality nuances, mechanical removal of mucilage is being widely accepted rendering it really a myth that natural fermentation is needed to produce quality coffee. Truth is that blind cupping of samples of the same coffee fermented and mechanically demucilaged will not show quality differences in most terroirs.

Another factor in favor of mechanical removal of mucilage is weight gains; even assuming that the grower will be able to cash on a quality difference, will it be enough to compensate the weight loss in fermentation? Since there is also empirical evidence that fermentation for a short period of 8 to 10 hours – e.g.: overnight – followed by mechanical removal of mucilage can simulate full fermentation, weight loss can be minimized but not water consumption in the case of short fermentation followed by mechanical desmucilaging.

MUCILAGE REMOVAL

FERMENTATION



- high water consumption
- high labor requirement
- costly fermentation tanks
- weight loss
- difficult control

OR

?

+

DEMUCILAGER



- no quality losses
- continuous processing
- no weight loss
- consistent quality
- full control

It may sound odd that the word “quality” is present on the right-hand side and not on the left. However, in spite of all associations between quality and natural fermentation, that have created a myth, to avoid quality losses in fermentation requires a series of labor-related procedures that involve training and experience. Both the decision of when to stop the process to avoid unwanted fermentation and washing of fermented coffee require trained personnel and dedication. Depending on climate conditions, fermentation may end late at night or in the early hours of the morning at which time washing has to take place lest coffee quality will be lost. In addition, changing weather and specially temperatures require different fermentation times with quality differences that may reduce consistency.

Pinhalense mucilage removers DMPE avoid quality losses related to over fermentation and enable the production of coffees with consistent qualities, a roasters’ requirement that runs all the way from specialty to commercial coffees. Besides full control of the process, the DMPE machines enable continuous coffee flow, from cherry reception to parchment drying. Finally, the degree of mucilage removal can also be adjusted to produce different types of honey coffee, with a variable degree of mucilage left attached to parchment.

Pinhalense mucilage removers come in several capacities in order to receive coffee from pulping lines of different sizes. They can also be used to wash coffee that has undergone dry or wet fermentation, partial or full. The use of mucilage removers in combination with fermentation eliminates the risk of over-fermentation. The DMPEs are sold separately or may be part of a compact machine with or without a green cherry separator *before* the vertical pulper, a rotary screen (optional) and the mucilage remover itself.

