&A COFFEE NEWSLETTER

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

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(II) TECHNICAL RECOMMENDATIONS TO MANAGE FROST-AFFECTED COFFEE CROPS

Many coffee experts have recorded videos and made webinars with guidance on the management of coffee plantations in the post-frost period in order to minimize damages and impacts on coffee production. A key piece of advice is to wait 30 to 60 days to identify the real impact caused on the coffee plantation. Only after that, the grower will be able to determine practices to be adopted: pruning, replanting, complementary treatments, intercropping or else. Some of these videos are available in Portuguese at https://bit.ly/3ngd7Q4 and https://bit.ly/3l0VroG.

Sources: Revista Cafeicultura and Café Brasil

(||) ALMOST US\$ 400MM AVAILABLE TO HELP GROWERS AFFECTED BY FROSTS

Banco do Brasil, whose majority of shares is owned by the Federal Government, will release a total of R\$ 2 billion (US\$ 384M) to support growers affected by the severe frosts that hit coffee and sugarcane producing areas last July. Part of the resources for the recovery of these crops – R\$ 1.3 billion (US\$ 250M) –, will come from the Brazilian Coffee Fund (Funcafé). The remaining amount will be supplied by the bank's own rural credit lines.

Source: Agência Brasil

(||) PLATFORM TO MONITOR AND LOWER RISKS OF COFFEE CONTRACTS

The Brazilian Coffee Exporters' Association (Cecafé) and Serasa Experian, a Brazilian analysis and information company for credit decisions and business support, launched a platform that aims at preserving the security of coffee contracts, whereby farmers commit to either selling coffee yet to be harvested against advanced payments or to buy inputs and other products via barter. Coffee buyers – exporters and cooperatives – representing 70% of the market have already joined the platform. They will be able to know if a coffee grower has committed to deliver a larger percentage of the crop than expected. This will reduce business risks for the entire coffee production chain. Serasa will feed the platform with data provided by Cecafé members that joined the platform. All information provided will strictly comply with the legislation, especially the General Data Protection Regulation (GDPR). Similar platforms for soy and corn have already been implemented and are currently operating. Source: Reuters

(||) LOGISTICS BOTTLENECKS REDUCE BRAZILIAN COFFEE EXPORTS

Frequent cancellations of bookings, lack of containers available and lack of space in ships led to a reduction in Brazilian coffee exports from May onwards. 50% of coffee shipments were postponed in July. According to Rabobank, the cost of

sea freight rose 336% over last year. In addition to this drastic situation, the prolonged drought and the frost that hit the country last July are increasingly concerning the sector. In spite of the problems, Brazil is still the main supplier of high-quality coffee. Colombia, Honduras and Vietnam are also facing adverse weather issues that may jeopardize production. This further increases the concern regarding world coffee supply.

Source: Notícias Agrícolas





(I) STARBUCKS OPENS FARMER SUPPORT CENTER IN BRAZIL

Starbucks opened its first Farmer Support Center in Brazil, in Varginha, South Minas Gerais. Altogether, the company has now ten Farmer Support Centers in key coffee producing countries around the world. The new center's goals are to work with growers, suppliers and agencies to learn about the social and environmental challenges the region is facing and the cultivation techniques being used in order to promote long-term solutions to help farmers continue to improve both the quality of their crops and their profitability. Starbucks' sustainability coordinators will implement projects, workshops and training for coffee growers.

Source: Revista Cafeicultura

(I) SEED-PROPAGATED CONILON COFFEE CULTIVAR CONQUISTA DISTRIBUTED TO SMALL GROWERS IN ESPÍRITO SANTO STATE



Espírito Santo's Agricultural Research and Extension Services Institute (Incaper) and the Secretariat of Agriculture, Livestock, Fishing and Aquaculture (Seag) have distributed 230 kg of seeds of the new Conilon coffee variety "Conquista ES8152" to small coffee growers in the municipality of Mantenópolis. Unlike most Conilon cultivars, that are propagated by seedlings, the Conquista cultivar is propagated by seeds. It is vigorous, tolerant to drought and has moderate rust resistance. The plant presents mid to large coffee beans and high cup quality. As an average of 2,500 seedlings can be prepared with 1 kg of Conquista cultivar seeds, a total of 575,000 seedlings may be produced with the seeds distributed in Mantenópolis.

Source: CCCMG

(I) ABIC LAUNCHES NATIONAL TV CAMPAIGN AFTER 25 YEARS

The Brazilian Coffee Roasters' Association (ABIC) launched a new national campaign to promote coffee consumption after 25 years without costly TV ads. The campaign, named "Coffee with ABIC's Purity, Quality or Sustainability Seal means respect and safety on your table!", aims at informing consumers of the importance of buying coffees certified by the

association. The campaign, headed by the Brazilian actress, model and presenter Carolina Ferraz, will run in one of the main open-TV stations in the country. "Coffee-addict" Carolina has a YouTube channel with about 270,000 subscribers and one of her programs is called "A cup of coffee, please". In addition to broadcasting on open TV, the campaign will also be available on ABIC's digital channels (website, Facebook, YouTube and Instagram).

Source: Revista Press



Brazilian Prices

Main Producing Regions / Farm Gate August 31, 2021 Arabica Naturals (R\$/ 60 kg bag) Conilon / Robusta (R\$/ 60 kg bag) Cerrado MG Colatina-ES fair average price 742,00 1075,00 1070,00 Mogiana 1070,00 South Minas Real R\$ / Dolar US\$ BM&F (US\$/60kg Arabica bag) Arabica Pulped Naturals (R\$/ 60 kg bag) 230,25 Aug 31, 2021 Sep 2021 5,17 1185,00 Dec 2021 236,65 Cerrado MG South Minas 1180.00 Mar 2022 242,05



TYPES OF FROSTS AND IMPACTS ON PRODUCTION IN YEARS TO COME

It is very difficult to evaluate the actual impacts of frosts on production because, first, frosts affect coffee plantations at different levels of intensity – the "types" of frosts mentioned above - and, second, these types of frosts are associated with different degrees of losses in 2022 and years thereafter.

When one looks at a uniform black or brown color bird's-eye view of frost affected coffee areas, one has the impression that the impact is homogeneous all over the area. Reality is that upon field examination, impacts can be quite different in spite of the same color and uniform look from the top. This led to the consideration of three distinct impacts in what is not a scientific description but only a practical view commonly used to help laypeople understand losses caused by frosts.

An "overcoat" frost damages only the top of the tree. A "full" frost affects the adult coffee tree from top to bottom. The impact on young coffee trees, not yet producing or starting to produce, is different from that affecting adult trees.

Since an overcoat frost damages the top third or half of the coffee tree, pruning will have to take place at a given height above the soil, to be decided case by case in the area affected, usually the top third of the tree. The part of the coffee tree not pruned will produce in 2022 with productivity depending on whether the coffee area pruned will be in the "on" or "off" year of the biennial coffee cycle.

The full frost affects leaves from the top to the bottom of the coffee tree and requires pruning close to the soil. Production will not return until 2024 and may be full depending on coffee cultivation practices in the two years in between.

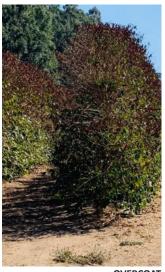
The frost damage to young coffee fields is usually total but there are two possibilities: the root system is still viable and the coffee tree is pruned close to the soil or the trees must be uprooted. In the former case there will be some production in 2024 with a full crop in 2025. In the latter, the scheme above will be delayed by one year, i.e., initial production in 2025 and a full one in 2026.

The possibilities above are summarized in the table below:

FROST TYPE	PRODUCTION			
	2022	2023	2024	2025
OVERCOAT	~ 50 to 65%	✓	✓	✓
FULL	_	_	✓	✓
YOUNG COFFEE	_	_	30 to 50 %	✓

The range of numbers currently mentioned regarding crop losses from all types of frosts in 2022 is 5 to 8 million bags, with a higher upper end coming from some sources. These estimates for 2022 will be much improved by the technical reports required to access the credit lines created to help growers affected by the frost. These reports will also shed light on crop losses to be expected beyond 2022.

Crop losses in 2022 may be increased by the droughts in the current year that many experts claim have already affected the productive potential of many coffee areas. Current temperatures are abnormally high and the city of São Paulo has had its hottest day ever in the month of September since temperatures have been recorded.



OVERCOAT





MACHINE OF THE MONTH



REENGINEERING COFFEE DRYING 1.0 AND 2.0

1.0 Rotary driers did not change much for a century and remained with the same design of a drum divided in many small compartments and the hot air distributed by perforated pipes that extended from the hot air pipe in the shaft of the drum to almost touching its perforated outer walls. Major changes came in the 1970s when Brazilian machinery maker Pinhalense decided to adapt the typical Central American rotary drum machine, used to dry washed coffee parchment only, to dry natural cherry coffee, then and now the most produced type of coffee in Brazil. Pinhalense changed drastically the internal design of the drum by, first, using one single drying chamber instead of many compartments, second, changing the air- distribution system with heat being supplied from a perforated central pipe only, and, third, using flaps to force coffee to move from one side to the other of the drum to improve the uniformity of drying.

Originally modified to dry natural cherry coffee, the new Pinhalense machine was soon tried with washed coffee in Brazil and Central America and showed itself to be a winner to dry parchment too, with benefits that were soon greater than in the case of naturals. It was only a question of time for the Pinhalense drum driers to become the standard machines to dry parchment coffee in Central America itself, with hundreds of machines sold from Guatemala to Panamá and also in other areas of the coffee world, from Ethiopia to Indonesia, from India to PNG, and from Colombia to Mexico, to mention only a few countries. Today there are more than 20,000 Pinhalense rotary driers drying parchment and cherry coffee, Arabica and Robusta, in over 30 coffee producing countries in the 5 continents.





2.0 Though there has always been a positive correlation between using Pinhalense rotary driers and producing high quality Arabica and Robusta coffees, have these rotary driers remained the same since they were launched in the 1970s? Although they did not change much in the initial years, the development of the specialty coffee market and other trends, that culminated with micro lots, led to constant improvement of the Pinhalense rotary driers

since the turn of the century. The first wave of redevelopment involved the heat source, heat exchangers that were first made compatible with burning parchment husk and then improved to increase fuel efficiency to face record low coffee prices in the first decade of the 21th century. Drying logistics and efficiency were

also improved with the addition of overhead loading silos. Features to reduce air contamination came next in response to claims for a more sustainable coffee world.

In the second decade of this century and in response to the needs of small holders and the growth of small and then micro lots of coffee, the line of small drum driers was redeveloped and the larger drums gained the option of being divided in order to handle two small or micro lots at the same time. This was also helpful at a time when the same growers started





to produce naturals and different types of honey coffee besides conventional washed coffee. Suddenly the large drier that received one single lot of washed coffee could no longer handle a smaller lot of washed coffee and smaller lots of honeys and naturals. Smaller and divided drums became a must to accommodate these new logistical needs and to produce top quality coffees. Both smaller and divided drums retained the same winning features of the larger ones but adapted to new times, needs and markets.

TO BE CONTINUED...