P&A COFFEE NEWSLETTER
Year 14 - No. 164 - March 11, 2021

COFFIDENTIAL

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

ADVANTAGES OF "WATERING" NEWLY-PLANTED COFFEE SEEDLINGS

"Watering" coffee seedlings right after they are planted in the field is a practice that guarantees their development. The advantages are many: positive impacts on the initial development of the plants, substantial savings (it avoids the need for replacement), etc. Watering consists of placing a small amount of water next to the seedlings. Although the usual amount of water recommended is 3 to 5 liters per plant, it can vary depending on the type of soil and its humidity. Newly-planted coffee seedlings do not have a strong root system, thus facing difficulties to access water in the soil. This lack of water causes scalding of the foliage, withering, drying and even death of plants.

Source: Fundação Procafé

ENVIRONMENTAL PROJECT BENEFITS MORE THAN 150 COFFEE GROWING FAMILIES IN MATAS DE MINAS

A project called Sustainable Union is being implemented by the Technical Assistance and Rural Extension Institute of Minas Gerais (Emater-MG) in Manhumirin municipality, located in the Matas de Minas region of the state of Minas Gerais. It aims at optimizing water use and quality in two micro basins: Córrego do Ouro and Córrego Bonfim. This public-private project in partnership with trader Olam has already benefited 150 coffee growing families that now count with quality water to consume and adequate sanitation.

Source: Emater-MG

SMALL COFFEE GROWERS PRODUCE SUSTAINABLE SPECIALTY COFFEES IN MATAS DE MINAS

Small coffee growers at Matas de Minas region are producing sustainable specialty coffees with the support of Emater-MG. One of the first initiatives was to make them to learn more about the coffee universe and to think out of the box. They visited growers who were at a more advanced stage of specialty coffee production, participated at events, trade fairs and contests, and invested in coffee processing. This project, along with others, led Emater-MG to win the 11th Edition of the Hugo Werneck Sustainability & Love for Nature Award, that honors the Minas Gerais environmentalist who is considered one of the pioneers in ecological awareness in Latin America.

Source: Emater-MG

SUSTAINABLE MINAS GERAIS COFFEE PRESENTS NEGATIVE CO2 EMISSIONS

The coffee cooperative Monteccer, located in Monte Carmelo, Cerrado Region of Minas Gerais, was the first coop to receive the Rainforest Alliance group-certificate in 2007. The cooperative now moved one step further towards sustainable production by commissioning Imaflora to carry out a carbon dioxide (CO2) study that calculated the volume of gases emitted and sequestered by the plants and soil analyzed. The result was surprising: 34 coffee farms that participated in the study presented an emission of 4.02 tons of CO2 equivalent (tCO2e) per hectare per year, a much lower figure than the global average emission of 28 tCO2e/ha/year. In addition, the balance emission of this group of coffee farms was negative: -5.66 tCO2e/ha/year, which means that they sequester rather than emit CO2.

Source: CCCMG

DOCUMENTARY ABOUT AMAZON ROBUSTAS RELEASED

"Amazon Robustas - aromas, flavors and stories from Matas de Rondônia" is a documentary that presents the reality of unique, emblematic and sustainable coffee growing in this Amazon Basin Brazilian state. Produced in the Matas de Rondônia region, "Amazon Robustas" are responsible for 83% of the 2 million bags of coffee produced annually in the state. The documentary features the region's coffee production, that preserves the environment and the indigenous culture. Technology and new forms of fermentation are increasingly being adopted by growers resulting in award-winning coffees with an exotic and differentiated sensorial profile. Access the documentary, in Portuguese, here: https://bit.ly/2MYX1dR. The Matas de Rondônia region is about to be granted its Geographical Indication (GI) that will be the first sustainable GI in the world thanks to GCP - Global Coffee Platform's support and the use of its Coffee Sustainability Curriculum.

Sources: Embrapa Rondônia and P&A

BRAZILIAN FEDERAL BANK ANNOUNCES CREDIT LINE EXPANSION FOR GROWERS

Brazilian state bank Caixa announced the expansion of its credit lines for the agribusiness to R$ 12 billion (US$ 2.1 bn). This amount, available for production and trading and that includes coffee processing, has annual interest rates of 2.75% for small growers and 4% for mid-size growers. According to the bank, R$ 8 billion (US$ 1.4 bn) have already been spent with the total to be disbursed by the end of March or early April. Caixa's agribusiness credit lines have already increased fourfold and the bank aims at lending up to R$ 40 billion (US$ 6.9 bn) by the end of 2022.

Source: Ministry of Agriculture, Livestock and Food Supply (MAPA)

Brazilian Prices

Main Producing Regions / Farm Gate — **February 26, 2020**

Arabica Naturals (R$/ 60 kg bag)	
Cerrado MG	705,00 ↑
Mogiana	700,00 ↑
South Minas	700,00 ↑
Arabica Pulped Naturals (R$/ 60 kg bag)	
Cerrado MG	785,00 ↑
South Minas	780,00 ↑

+ 12.1%

Conilon / Robusta (R$/ 60 kg bag)	
Colatina-ES fair average price	465,00 ↑

BM&F (US$/60kg Arabica bag)	
Mar 2021	153,60 ↑
May 2021	155,85 ↑
Jul 2021	156,35 ↑

Real R$ / Dolar US$	
Feb 26, 2021	5,60 ↑

Source: www.qualicafex.com.br

BEYOND LIVING INCOME… A REGIONAL DEVELOPMENT CHALLENGE

The current emphasis on determining living incomes in coffee producing regions and countries will create a benchmark for economic sustainability and expose income gaps of varying magnitudes in many coffee growing areas.

What makes the statement above predictable is the following calculations. Estimates of total sales of coffee to consumers add up to US$ 200 billion out of which US$ 20 billion correspond to the total export value of coffee by producing countries. Assuming that 70% of the export price reaches farm gate, US$ 14 billion is the total income received by about 12,5 million coffee farms estimated to exist in the world. This corresponds to an average income of US$ 93 per farm per month, with costs to be subtracted and the resulting figure to be divided by the number of people depending on this profit, if any. An alternative calculation, using the total coffee producing area in the world published by FAO, of 11,160,105ha, yields an income of US$ 105 per hectare per month. These figures – US$ 93 per farm per month and US$ 105 per hectare per month – are obviously below living income!

There are countries that are increasing their production as a result, one hopes, of incomes and profits that are much higher than the average amount above. Consequently, the revised average for the remaining countries is even lower. There are large areas of the coffee world where the *net* income per person is below living income because there are too many people for too little coffee and land!

One does not need to wait for living income calculations to start addressing the root causes of the problem. There are three major possibilities: to produce more coffee at a lower cost, to have a greater share of the export price to reach growers, and to decrease the number of people who depend on coffee production for a living today.

A quick calculation shows that even if current productivity is increased three- or four-fold to equal that of the most efficient producing countries, net income will lag behind the living income benchmark, specially considering the average farm size in the world, of under 1ha, calculated using the total area and number of farms in the second paragraph above.

In order to have a larger share of the export price reaching growers one has to improve the *enabling environment,* specially the efficiency of the coffee supply chain, financing, legislation and tax system, and logistics, as addressed in the Outlook and slides published in October 2019 (https://bit.ly/30NFf0d). Improvements in the enabling environment can help increase productivity too. The October 2019 Outlook also mentions that the expansion of local coffee consumption and getting part-time jobs outside the farms can help to increase growers' income.

The third solution, to be addressed in further detail here, is to have fewer people depending on coffee production and for this to happen jobs will have to be created outside coffee farms. Easier said than done! Most resources spent today to support coffee growers, most efforts to make them economically more sustainable, focus on coffee production itself and, less often, on the coffee supply chain in producing countries. Job creation outside coffee farms for people currently devoted to coffee production is certainly beyond the scope of most if not all coffee development projects. However, this is one of the most effective mid-to-long term solutions and perhaps the only one that will make a difference. This is the reason why the title of this article hints that it is investment in regional development in coffee growing areas that will enable coffee growers' net income to go beyond the living income threshold.

It is no wonder that a study by Enveritas shows that growers' children in coffee producing countries like Costa Rica, Vietnam, Brazil and Colombia are the least likely to be coffee farmers. Knowing coffee areas in these as well as in the other producing countries, it is not a coincidence that these countries are the ones where more non-coffee jobs are available in coffee growing regions and elsewhere.

The paradigm to be broken is that the low income associated with coffee growing has to be addressed by the coffee sector alone. Much to the contrary, it is a regional development problem that has to be addressed together by the coffee sector itself, society at large and local governments. The focus of projects, programs and initiatives to support coffee growers must therefore go beyond the coffee sector and address regional economic development issues. This must be reflected in the agendas of and in the funding and resources provided by development agencies, civil society, multistakeholder initiatives and the coffee supply chain itself.

A REFLECTION ABOUT PINHALENSE'S 70 YEARS OF COFFEE MACHINERY MANUFACTURING

Coffee processing has changed substantially in these 70 years and, as a result, different coffee products have been made available to consumers. Many if not most of these products have derived from the introduction of new technologies and machines. Pinhalense had a key role in the creation and dissemination of the pulped natural system and the respective machinery to produce honey coffees. It was also Pinhalense that modernized rotary driers, after adapting them to dry naturals and making the SRE the state-of-the-art machine to mechanically simulate the sun drying of parchment and cherry coffees.

Changes went however beyond post-harvesting and into export processing, with high-yield CON and DEPOS hullers, upward flow PFA size graders designed for coffee and patented by Pinhalense, and coffee-specific MVF gravity separators, not to mention modern digital systems for blending, weighing (SMARTBAG and SMARTSAC) and sampling coffee and the partial or full automation of coffee mills. It is important to mention that not only Pinhalense machines have changed but also the way they are brought together, i.e., Pinhalense unique milling layouts and flows now have to cope with a greater diversity of both incoming raw-materials and finished products to be delivered to clients.

Proper processing infrastructure is critical to retain coffee quality no matter the conditions of the incoming products and the users' demands. Also, it must be designed to cope with harvesting peaks and the need to process coffee quickly before shipment to retain coffee quality. This shows again the interplay between machines and mill design. It is not unusual for coffee quality to be lost because of smaller than needed processing capacity, specially at the drying stage, that is the most time consuming and expensive of all operations. Weather conditions are becoming ever less reliable as a result of climate change and growers are finding that Pinhalense's SRE drying systems are more reliable quality-wise than sun drying. The introduction of CSP digital drying control systems has added to this reliability and improved the ability to simulate sun drying.

Dry milling for exports is another infrastructure area where Pinhalense excels. Flexibility of design adds much to efficiency and product customization, irrespectively of the size of the mill. A challenge that Pinhalense has overcome is to design dry milling facilities that can deliver the "world blends" used by large coffee-shop chains and single-serve brands as well as the micro-lots required by the specialty coffee sector. Sustainability, noise reduction and dust control included, is also gaining importance.

Insights from producers, e.g.: harvesting trends and qualities to be supplied, are critical inputs for Pinhalense to improve its line of products and to develop new machines. This was exactly the case behind the development of the pulped natural / honey process that happened in response to the request of three different South Minas Gerais coffee growers who were experimenting with the system at small, almost lab scale and needed machinery to move to commercial scale.

The recent evolution in the line of SRE rotary driers has also occurred in response to producers' needs: smaller lots of different qualities, greater reliance on mechanical drying, simulation of sun drying, and full control of the process. Pinhalense's response has been divided drum driers, overhead pre-driers placed above the drying drum, and digital drying control systems (CSP) that allow the monitoring of drying temperatures and moisture levels to avoid over-heating and excessive drying. This is impossible to do in sun drying.

Modern machines also have to respond to what is actually happening in production today and to retain coffee quality. For example, irrespectively of the best intentions to have 100% ripe cherries picked, what arrives at the wet mill is a mix of cherries that must be separated according to their stages of maturation. Pinhalense has been a pioneer in this field with the invention and patenting of the water-saving LSC mechanical syphons that eliminate impurities and stones and separates floaters (partially dry and dry cherries) and sinkers (unripe and ripe cherries). Another Pinhalense break-through was the introduction of the unripe cherry separators used today in the ECO SUPER pulpers to complete the separation started at the siphons. Not only ripe cherries are separated but cherries at other stages of maturation can be submitted to further processing that Pinhalense devised to get the most out of them, quality and price wise.

There is a lot more to come with much already in the pipeline to be released!

You may read more about this subject at Outlook https://bit.ly/2OsTo0y, dated May 2017.