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NUCOFFEE WORLD QUALITY-BASED WORK

NUCOFFEE fosters growers and cuppers education to meet the buying market demand

Brazil is the major coffee exporter of the world. Not all buyers are interested in quantity alone, but they rather prefer quality. It is therefore important for Brazilian growers to be aware of the special needs of the international market.

According to Agronomic Engineer Flávio Meira Borém, professor at the Universidade Federal de Lavras (UFLA) and Ph.D. in Agricultural Products Processing, "Quality is a very broad concept that is related to philosophical aspects - such as organic growing, area of origin, and the family farming characteristics among others - and to the product itself, perceived at visual and sensorial levels. Because we service several international markets, quality varies according to the preferences of each consuming market."



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As an example, he explains that Americans appreciate a drink with normal body and acidity, while the Japanese prefer a sweeter drink, with body and chocolate notes.

To foster better understanding of the specialty coffee language and encourage more quality at the growing level, NUCOFFEE has promoted several activities with growers.

WORKSHOPS

NUCOFFEE organizes workshops to promote better quality from where coffee is grown up to the post-harvesting processing. Two annual meetings are held every year in each of the four macroregions of the country – Cerrado Mineiro, Sul de Minas, Matas de Minas, and Planalto da Bahia – where growers receive technical instructions according to their current production phase. During the first semester and before the harvest, they are given information on harvesting and drying terrace structure planning.

During the second semester, when crops are developed, agronomic concepts are discussed such as cultivation, fertilization, and protection of plants against pests and diseases. Topics are presented by professionals who are experts in their respective areas, and who will introduce new technology or management skills to the field.

The next harvest will be challenged by the uneven blooming maturation - one coffee plant with green, cherry, and dry beans. A technical assessment must guide growers on how to best plan their harvest for a better productivity/cost/quality ratio.

Professor Borém is one of the professionals participating in these workshops and relates his experience: "First we check the present status of the premises and the coffee harvesting and processing philosophy, to determine whether the grower needs



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restructuring or just an adjustment of what is already working. It is a very practical type of help and, in many cases we see results as soon as 15-20 days later.”

However, the major hurdle for Borém is not at the production stage, but at the processing stage: “We come from decades of production that focused on quantity and not quality, and today we need to balance them.”

SCAA STANDARDS

The sensorial quality parameter of the Specialty Coffee Association of America (SCAA) is considered a common language for coffee buyers from different parts of the world. In Brazil, when we talk about commodity we work additionally with the Official Brazilian Classification (Classificação Oficial Brasileira - COB).

However, in the case of specialty coffees COB is not accurate enough. Focused on drink defects, this classification that uses a scale from 0 to 10, grades the drink as “rio”, hard, soft and some other variations.

The SCAA grading in turn, which goes from 0 to 100, grades the quality of the drink as to its positive characteristics, such as aroma, taste, body, acidity, and aftertaste. There is no grading for coffee below 75, from 75 to 79 it is considered superior, and from 80 above it is called specialty.

GQUALITY

Considering the important role played by methodology, NUCOFFEE engages in a gauging and standardization work with coffee cuppers – the Gquality – to allow Brazilian growers to present their product knowing that the quality it represents follows a scale used by many purchasing countries.

The group was organized at the same time that NUCOFFEE was developed. Syngenta already had five technical groups with influence in the coffee culture growing process. The Gquality has the same purpose, that of joining experts in quality to share their experiences and knowledge. It is a group of influence players up to the challenge of the NUCOFFEE platform, created to enhance the quality of the coffees from the different areas of Brazil.

The group was organized by – and most of its members are – SCAA cupping judges. Tasters meet during two days, about four times per year, to present and discuss pre-determined topics such as different brewing methods, varieties, and genetic improvements of the coffee fruit. In addition to Brazilian and other coffee cuppings, followed by feedback discussions - the gauging.

They are responsible for the promotion of the sensorial quality concept and for specifying the different areas of origin in the country, something Borém is very proud of, also in his role of president of the group: “Diversity is a key factor when aggregating value to a product in the specialty coffee scenario.”

ACKNOWLEDGEMENT

DEFINITION OF TERROIR AND ITS IMPORTANCE

Valuing its origin and the craftsmanship that goes into it are fundamentals of the coffee market

It is a complex word, with several definitions that divide specialists to this day, the French word *terroir* comes from the popular Latin *territorium* and dates back to 1229. It has changed and gained new meanings throughout these years.

In France, in the 19th Century, the word was associated with wines lacking a noble character, consumed only by the locals. Today, it has a positive connotation and while it is more commonly associated with wines, it applies to several products such as cheese, whiskey, olive oil, tequila and ... coffee.

The concept of *terroir* is quite broad: it involves geographic characteristics such as climate and soil, botanical features that include a variety of plants, in addition to different production techniques. Jorge Tonietto, Agronomic Engineer and researcher at Embrapa Uva e Vinho, is the author of a comprehensive study about the word and claims that the concept is far more reaching: “*Terroir* is linked to the region’s history of the area, social-economic aspects, and the local people who create differentiated things”.

The different sensorial attributes of coffee depend on the varieties chosen, the way it is produced and the region where it is grown. In the cup, these variations affect the aroma, flavor, body and acidity of the drink. It is also a market strategy to distinguish between the many types of beans and to distance the drink from the nightmare of being a commodity.



PHOTO GUILHERME GOMES/CAFÉ EDITORA

COMPETITION FOR THE BEST ORIGIN

Mexico, the seventh largest coffee producer in the world, was the first country to officially designate a cultivation region. The Veracruz region, located close to the Gulf of Mexico, had its Origin Denomination (Denominação de Origem) acknowledged by the government late in 2000. There are a total of 64 municipalities within the designated area that covers the Huasteca Alta, Central and Los Tuxtlas regions. The combination of production factors result in an intense aroma, pronounced acidity and notes of chocolate and spices.

The small region of Antigua, located in the interior of Guatemala, its neighboring country and surrounded by active volcanoes, is waiting for its Origin of Denomination approval. The Colombian government granted the Origin of Denomination to Café de Colombia in 2005, combining all types of beans under the same geographic denomination.

THE TREND IN BRAZIL

To classify a coffee as Brazilian – as it often happens in the external market – is to ignore the numerous qualities of the domestic beans.

The Cerrado Mineiro region, in the northwest part of the state was the first in the country to obtain the Indication of Origin (Indicação de Procedência) seal in 2005 by the Instituto Nacional da Propriedade Industrial - INPI (National Institute of Industrial Property). This is a geographic denomination that gives a unique identity to the product, and after it is granted, it can only be used by members of the location. The drink made with beans from the region has aromas from caramel to nutty, citric acidity, sweet flavor and a long lasting chocolate aftertaste.

The municipalities located on the slopes of Serra da Mantiqueira also got together and formed the association called Associação dos Produtores de Café da Mantiqueira (Aprocam). The microregion was designated in 2006 and filed the application for the Indication of Origin with the INPI. 23 municipalities will be included. The coffee from this region has unique characteristics, with floral aromatic notes similar to orange blossoms.

Both regions are working towards obtaining the Denomination of Origin (Denominação de Origem - D.O.), another type of geographical indication that is closest to the *terroir* concept. This indication certifies that the quality of the product is exclusively or essentially based on the geographical environmental, including natural and human factors. With this, a direct connection is established between the characteristics and the origin of the coffee.

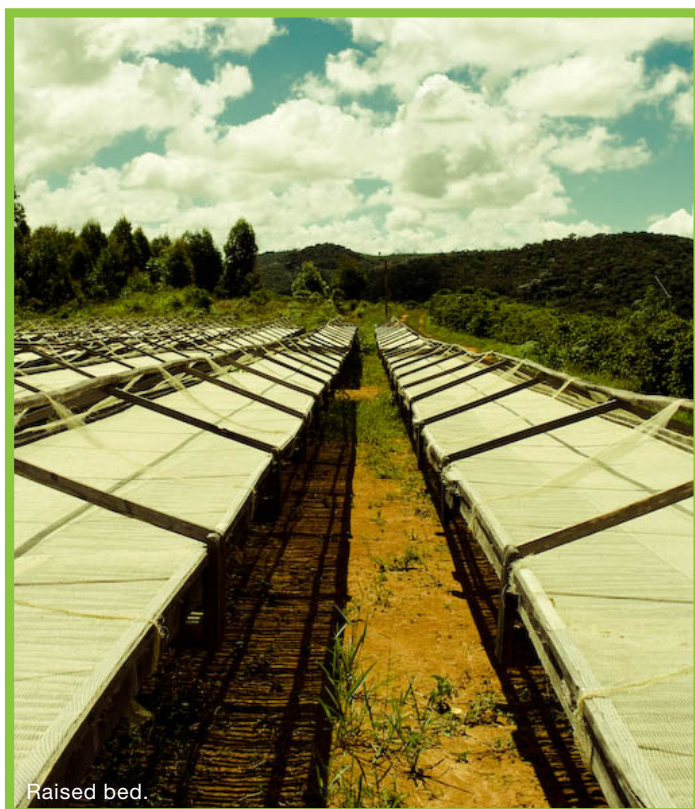
Other regions are following the work pioneered by Minas growers. Alta Mogiana, State of São Paulo, and Chapada Diamantina, State of Bahia are considering the designation of their areas.

COFFEE AND CULTURE

DRYING PROCESSES

The uniqueness and benefits of each method determine the quality of the bean

Terraces built of cement, compacted soil, covered, raised, hybrid ... There are many different coffee drying processes in Brazil and in the world. Created according to the needs of the growers and of consumers whose taste is increasingly more sophisticated, how the beans are dried can determine the success of the harvest.



The process takes place after harvesting, thus reducing the risk of bean fermentation. The fruits are placed in raffia bags by pickers and transported to the drying areas.

Among all post-harvest steps (processing, drying, storage, refining and transportation), the drying step plays a major role in preserving the quality of the coffee.

Terrace is the most common in Brazil. However, depending on the location of the property and climate factors, certain drying methods are more recommended than others are. Environments where the rainy seasons are longer call for covered terraces or an artificial machine drying.

In traditional terraces, coffee is dried naturally, by the sun. The coffee cherries are distributed in thin layers on the ground forming small ridges (raised strips of coffee between the grooves of the terrace), and redistributed in regular intervals (about 20 times per day) with the help of a dented rake (enleirador).

Listed below are some of the drying methods and their specifications.

CEMENT TERRACE

Structure: Flat concrete patio.

Procedure: Green or wet-processed beans are distributed in 3-5 cm ridges on the terrace and dried by the sun that also warms the terrace, spreading heat throughout the surface.

Advantage: It results in better quality coffee, better cleaning and more durable conditions.

RAISED BED

Structure: Rectangular wire mesh boxes, like wire screens assembled on wood platforms measuring 20-80 cm in height and 2.8-3 m in width.

Procedure: The fruits are spread on the screen that must be located on well-ventilated and sunny places, and turned over in regular intervals.

Advantage: Better quality; it prevents undesired microorganisms from growing because the beans are not in contact with the soil; it reduces the turning over frequency; its cost is lower than the traditional terrace (no earth moving needed).

HYBRID TERRACE (SOLAR AND BIOMASS OR DRYING TERRACE)

Structure: Preferably of concrete, ventilated with the air heated by a furnace; the main ducts supply hot air to specific areas of the terrace - the main duct is coupled to a furnace with a centrifuge that makes the airflow possible.

Procedure: The product is placed on the air distribution ducts to be dried by the heated air.

Advantage: It dries using solar energy during sunny days, and by biomass or gas burning in the absence of solar energy.

COVERED TERRACE

Structure: Uses a transparent tarpaulin to cover the cement, asphalt or raised beds.

Procedure: The tarpaulin retains the heat and allows - green or wet processed beans - to dry quickly, protecting them against climate changes.

Advantage: Better control of climatic factors in regions that have long lasting cloudy periods and production of superior quality beans.

ROTATING DRYER (HORIZONTAL)

Structure: Mechanical industrial drier with a cylindrical drum, perforated walls and a rotating mechanism. The hot air from the furnace is injected in a tube inside it.

Procedure: A pre-dryer or continuous dryer used with beans with high water content.

Advantage: Uniformity, easy and quick loading and unloading and less drying time.

COFFEE AROUND THE WORLD

APPRECIATING AN ESPRESSO

Understand what experts do to evaluate crema, aroma, body and flavor

Depending on where it is cultivated, the espresso coffee has a distinct balance of sweetness, acidity and bitterness, as well as aromas that can range from chocolate to floral. A wealth of sensations that are not exclusive to the experts. All you need is to educate your senses and pay attention when tasting.

DECIPHERING CREMA

Crema is a layer that safeguards aromas, oils and sugars, as well as the temperature. The crema cannot be broken otherwise it loses the best part of the drink.

The ideal layer must be consistent and uniform, with a homogenous or striped color. The good crema can have a filbert nuance, but never white and burned colors.

When sugar or sweetener is added, the crema must open up and close very quickly, and be stuck to the wall of the cup when empty. The type of cup used also affects the crema: If too narrow, the layer will seem thicker and thus disguise a poor crema.



FOTO GUILHERME GOMES/CAFÉ EDITORA

AROMA DETAILS

Even more important than the flavor, smell is one of the main senses used in cupping. The aroma can remind you of nuts, chocolate or vanilla. Smells that will be confirmed by the flavor. After we have an espresso, we keep the aromas in our memory.

Some are desirable, such as walnuts, macadamia nuts, caramel, chocolate, floral, fruity, spices and malt, while other are not, such as tobacco, hay, cigarette ashes and wet burlap.

BODY FEELING

The next step: How to define and evaluate the body of an espresso? Body is the weight of the coffee on the tongue. That is, whether the drink went down too quickly or created a heavy layer in the mouth composed of oils and sugars. To be considered as having body, coffee must have a balanced acidity, bitterness and sweetness, and be evenly spread on the tongue.

Body can be assigned ratings that go from intense to light, which should not be confused with diluted or non-existent that occur when the drink is weak.

APPRECIATING EVERY FLAVOR

Each sensation is felt by one area of the tongue: The tip feels the sweet, the backsides feel the acidity and the inner part the bitterness. Bitterness is an important coffee component that must be present but in a subtle way.

Following the espresso-tasting test, it is important to analyze the remaining sensation - the so-called residual flavor. It is an olfactory memory that will make you decide whether you want to drink it again.