BRAZILIAN COCOA

Ministry of Agriculture
and Livestock

Ministry of Agriculture and Livestock

BRAZILIAN COCOA

Brasília
MAPA
2023

AROMA AND FLAVORS FOR EVERY TASTE

As a result of new varieties planted along the banks of rivers, in valleys, mountains, cerrado and caatinga (biomes of savannahs and semi-arid scrub forests), and beneath forests with genuinely Brazilian essences, cocoa produced in Brazil offers the world a wide variety of flavors and aromas capable of satisfying every palate.

The commitment to ensuring the quality of the final product has been a constant goal for decades. Research into more productive and resistant varieties, technological innovations in production systems, the development of post-harvest techniques, and rigorous monitoring and guidance for producers have collectively elevated the quality of cocoa beans produced in Brazil to compete with the best in the world.

International recognition began in 2010 when Brazilian producers received awards at the Salon du Chocolate in Paris, France, underscoring Brazil's potential as a producer of fine cocoa. Since then, Brazil has continued to receive numerous awards, and in 2018, it was acknowledged by the International Cocoa Organization (ICO) as a producer and exporter of "Fine or Flavored Cocoa."

BRAZILIAN PASSION AND TRADITION

Cocoa is an integral part of Brazil's history. It has ignited a passion for chocolate among Brazilians, leading to a significant domestic market segment that ranks Brazil among the world's top chocolate consumers. This substantial demand encourages producers to invest increasingly in the productivity, quality, and distinctiveness of Brazilian cocoa. Scientific research, particularly by the Executive Commission of the Cocoa Crop Plan (CEPLAC), plays a crucial role in this ongoing process of improvement.

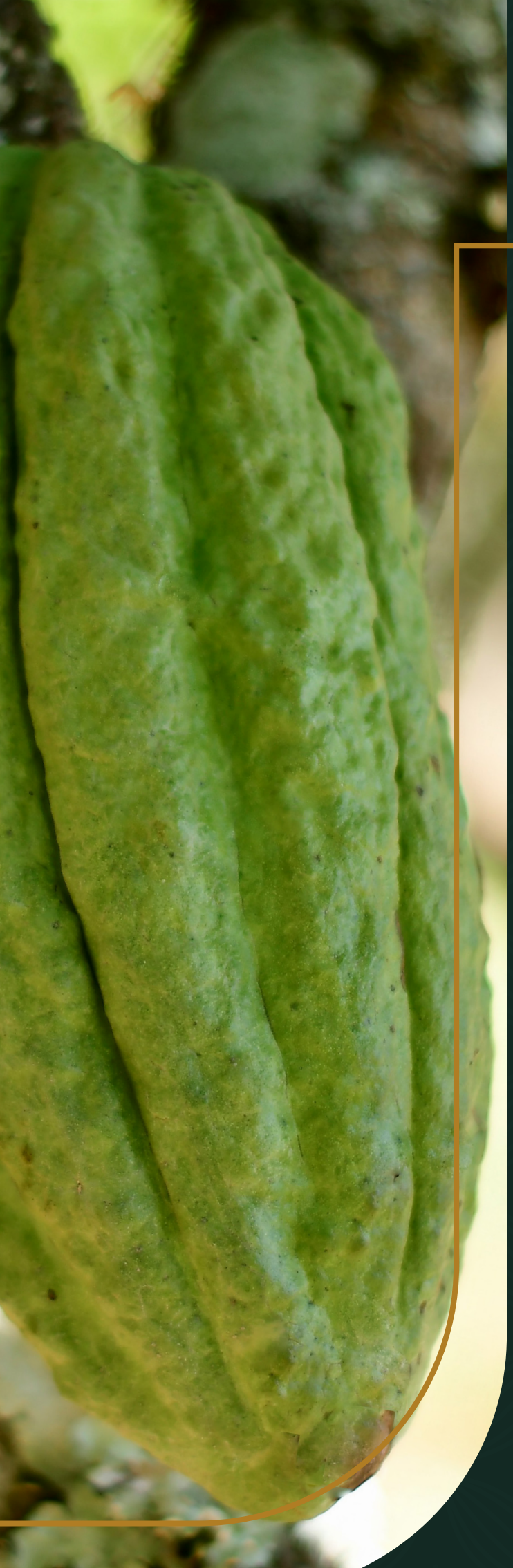
With approximately 600,000 hectares of cocoa cultivation and 75,000 producers, 60% of whom are small-scale family farmers, Brazil holds the position of the 6th largest cocoa producer globally, with an annual production exceeding 200,000 tons of cocoa beans. The states of Pará and Bahia are the primary cocoa bean producers in Brazil, accounting for approximately 96% of national production. A smaller portion is cultivated in states like Espírito Santo, Rondônia, Amazonas, and Mato Grosso, along with other states where production is in its initial stages, such as Roraima, Amapá, Ceará, Sergipe, Minas Gerais, São Paulo, and Tocantins, all showing recent expansion.

On the flip side, Brazil's cocoa processing industry, one of the world's largest, boasts a processing capacity of over 300 thousand tons of cocoa beans per year. However, with annual production falling below capacity, industries are compelled to import cocoa beans from African countries to keep their operations running. Brazil stands as the only country both producing and importing cocoa beans.

CEPLAC, an Institute of Science and Technology under the Ministry of Agriculture and Livestock (MAPA), conducts research, innovation, and technology transfer initiatives aimed at enhancing cocoa production's productivity, quality, and sustainability. The goal is to achieve self-sufficiency in cocoa bean production by 2025.

In 2021, Brazil exported 33,521 thousand tons of chocolates and nearly 55 thousand tons of cocoa derivatives, generating $226 million in revenue. Argentina is the primary destination, followed by the United States and Chile.

Brazil also stands out on the global stage for bringing together all aspects of the cocoa production chain, including cultivation, processing, and chocolate manufacturing, making it one of the world's largest consumers of chocolate.



ENVIRONMENTAL AND SOCIAL SUSTAINABILITY

Brazil ranks as the fifth-largest consumer of chocolate globally, with a burgeoning domestic market that keeps the Brazilian cocoa industry in continuous development. Environmental awareness and a commitment to sustainability in cocoa production are constants, adding to the allure of the national product.

Brazil increasingly seeks to produce cocoa in systems that not only prevent deforestation of native vegetation but also promote its conservation. One such system is the "cabruca" system, in which cocoa is cultivated under the canopy of native Atlantic Forest trees.

Agroforestry systems (AFS) with cocoa trees are the predominant form of fruit production in Brazil. These systems, especially prominent in Pará, gradually replace degraded pasture areas with cocoa trees in various models. They diversify farmers' income streams while promoting numerous environmental benefits, such as carbon sequestration, biodiversity conservation, soil erosion prevention, fire prevention, and riparian forest restoration.

Moreover, the Brazilian cocoa production chain generates almost 300 thousand direct jobs, spanning from cultivation to chocolate production. It adheres to stringent labor laws and inspections, punishing any irregularities. This commitment characterizes Brazilian cocoa farming as a source of decent work.

INTERNATIONAL LEADER IN RESEARCH

Brazil has been investing in research and innovation for cocoa cultivation since 1957, marked by the creation of the Executive Committee of the Cocoa Crop Plan (CEPLAC), an Institute of Science and Technology currently affiliated with the Ministry of Agriculture and Livestock (MAPA). CEPLAC has gained international recognition, primarily due to its genetic enhancement program aimed at developing more productive and pest-resistant cocoa varieties while infusing distinct aromas and flavors.

The advancements in genetic improvement research for Brazilian cocoa are evident in the development and release of more than fifty cloned cocoa varieties. Notable among them are PH 16, CP 49, CCN 51, CCN 10, PS 13.19, SJ 02, BN 34, FA 13, Cepec 2002, Cepec 2003, Cepec 2004, Cepec 2005, Cepec 2204, and Cepec 2176. Presently, more than a thousand progenies are undergoing extensive regional trials across 140 locations to identify new varieties suitable for commercial cultivation. CEPLAC's cocoa breeding program stands as one of the largest and most influential in the world, thanks to these developments.

Furthermore, CEPLAC boasts the title of "custodian of the world's largest Active Germplasm Bank (BAG) of cocoa." This invaluable repository houses more than 60,000 cocoa plants in both seminal and clonal forms. These specimens originate from various sources, including 22 botanical expeditions that

explored approximately 30% of the Amazon basin. Additionally, CEPLAC has undertaken numerous imports in collaboration with international partners to enrich this extraordinary collection. The entirety of this botanical heritage is located within the Cocoa Research Centers (CEPEC) managed by CEPLAC, spanning the states of Bahia, Pará, and Rondônia.

The dedication and investments in cocoa research and preservation by CEPLAC have solidified Brazil's prominent role in cocoa cultivation and biodiversity conservation, fostering a legacy of innovation and sustainability in the industry.

SEARCH FOR QUALITY IN FINE COCOA

After years of dedication and research, in 2018, Brazil achieved recognition that placed it on the list of fine cocoa-producing countries by the International Cocoa Organization (ICCO).

Research conducted by CEPLAC and its partners revealed that the cocoa variety alone does not determine whether it is aromatic or not. Harvesting and post-harvest techniques, such as fermentation, can either inhibit or enhance certain aromas and flavors. The fruits have controlled origins and come from delimited terroirs. As a result of this model, Brazil is capable of producing fine cocoa with distinct aromas such as licorice, dried fruits, and spices. It's important to highlight the Geographic Indication for Brazilian cocoa, already established in some regions, with a focus on "cacau cabruca" in the state of Bahia, Tome-Açu, and Novo Repartimento (Tuerê) in Pará, and cocoa from the Vale do Rio Doce in Espírito Santo.

The government, producers, researchers, and industries continue to work towards making Brazilian cocoa a global benchmark for quality. Currently, approximately 3% of Brazilian cocoa is considered fine, and the country has been earning numerous international awards that have recognized this segment and Brazilian chocolates for over a decade. In December 2021, Brazil achieved a unique triple award at the Paris Chocolate Salon.

MAIN PRODUCING REGIONS

PARÁ

Pará is one of the main representatives of cocoa cultivation in the Amazon Rainforest. The state has five main producing regions: Southeast, Northeast, Islands Region, Transamazonica, and West. Cultivation practices vary significantly among a diverse group of producers, ranging from wild cocoa produced without any technology to highly advanced methods. In Pará, there are approximately 205,000 hectares of hybrid cocoa trees in agroforestry systems, cultivated by 27,800 producers, with around 150,000 hectares already in production, yielding an average productivity of 960 kg/ha.

Tomé-Açu was one of the main locations for experiments with agroforestry systems (AFS) for cocoa in Brazil. Japanese immigrants settled in the region and cultivated various forms of cocoa for 45 years. Cocoa farmers transformed soils considered low in fertility into productive areas and developed cocoa cultivation in the region. Tomé-Açu also stands out for the production of unique cocoa, which allows for the creation of chocolates with unparalleled flavor and aroma, catering to a specific demand from Asian consumers. It is now the largest exporter of fine and aromatic cocoa in Brazil.

The Transamazonica region is the most important cocoa-producing area in Pará. Production is concentrated in the central part of the state, along the 700 km stretch of the national highway BR 230 that cuts through the Amazon Rainforest. Soils with medium to high fertility, combined with a hot and humid climate, favor production in eleven municipalities, responsible for 85% of all production in Pará. Due to their distinct flavor, differentiated fat content, melting point, and pigments, the almonds produced in this region have the potential to enter the international market for high-quality chocolates.

Cocoa cultivation in the Islands region takes place along the Tocantins River, in a traditional cocoa farming system. Plantations consist of native trees on fertile floodplain soils influenced by periodic river tides. Fertilization occurs naturally through periodic floods caused by ocean tides. The cocoa possesses the inherent wild characteristics of the region's almonds, capable of producing chocolate with a unique flavor and aroma in the world.

BAHIA

Bahia, together with Pará, leads national cocoa production, accounting for 96% of all cocoa produced in Brazil.

Bahia has a cultivated area of just over 400,000 hectares and 41,000 producers spread across 7 territories and 81 municipalities, with a predominance of crops in the southern region of the state.

The hallmark of cocoa farming in Bahia is "cacau-cabruca," a unique agroforestry system in the world. It involves cultivating cocoa under the canopy of Atlantic Forest trees along rivers, valleys, and mountains, where cocoa trees grow in deep, well-drained soils. The cabruca agroecosystem, at its core, contributes to the conservation of the Atlantic Forest biome, its fauna, and flora. Moreover, when well-managed, cabruca

maintains a local microclimate for cocoa trees, enabling high productivity. This system represents approximately 60% of Bahia's cocoa area.

Additionally, the state has a considerable area of cocoa trees in agroforestry systems with species such as rubber, coconut, and açaí. These systems contribute to the recovery of degraded areas, promote production diversification, make more efficient use of non-renewable resources, integrate natural biological cycles and controls, and sustain long-term agricultural productivity.

Recently, cocoa cultivation has been expanding to non-traditional areas in Bahia, such as the western region in the municipalities of Luiz Eduardo Magalhães and Barreiras, where cocoa production takes place in full sunlight, with irrigation, the use of trees as windbreaks, intensive technology use, and high-level management. Expansion into non-traditional biomes, such as the cerrado and caatinga, is also occurring.

Finally, Bahia stands out for its use of clonal cocoa cultivars developed and recommended by CEPLAC, which are self-compatible, highly productive, resistant to Witches' Broom disease and other cocoa tree diseases, and have favorable agronomic characteristics related to fruit and seed size and the weight ratio of fruit shells to seeds.

ESPÍRITO SANTO

In Espírito Santo, cocoa is grown in more than 50 municipalities, with Linhares being the main cocoa-producing municipality. Cocoa is cultivated in areas with low rainfall, along the Doce River, on flat terrain with an efficient irrigation system.

Approximately 1,400 families are involved in cocoa production in the producing municipalities. Similar to Bahia, cocoa production in Espírito Santo is predominantly in the cabruca system. Farmers primarily use eight cocoa cultivars with trinitario characteristics recommended by CEPLAC. These selected clones have shown to be of extremely high quality and well-suited to local conditions. They are early-bearing, productive, disease-resistant, and produce high-quality almonds. The cocoa from the state has received international awards and represents approximately 4.5% of the country's annual production, with an area of approximately 15,000 hectares, ranking it third in the national production of cocoa beans.

RONDÔNIA

Rondônia has a cultivated area of 12,000 hectares of cocoa, and the vast majority of these crops consist of conventional plants originating from seeds, which are gradually being replaced by high-yield clones.

Cocoa cultivation in Rondônia is primarily based on agroforestry models and involves family farming, with about 5,000 producers. The cocoa-growing region in Rondônia has a hot and humid climate and soils with medium to high fertility. Approximately 10% of the production is carried out through the recovery of degraded areas.

The state's cocoa industry is the fourth-largest in Brazil, producing 5,000 tons of beans per year, equivalent to approximately 2% of the national production.

AMAZONAS

Cocoa cultivation in the state of Amazonas occurs through the planting of native cocoa in the floodplains of the Amazon and Madeira rivers, using a natural agroforestry system. Cocoa tree management in the state does not require the use of chemical fertilizers or pesticides because tons of organic residues are deposited in the fields annually by floodwaters during river flooding.

With a cultivated area of 1,190 hectares and production of 779 tons per year in 2020, Amazonas is the fifth-largest cocoa producer in the country.

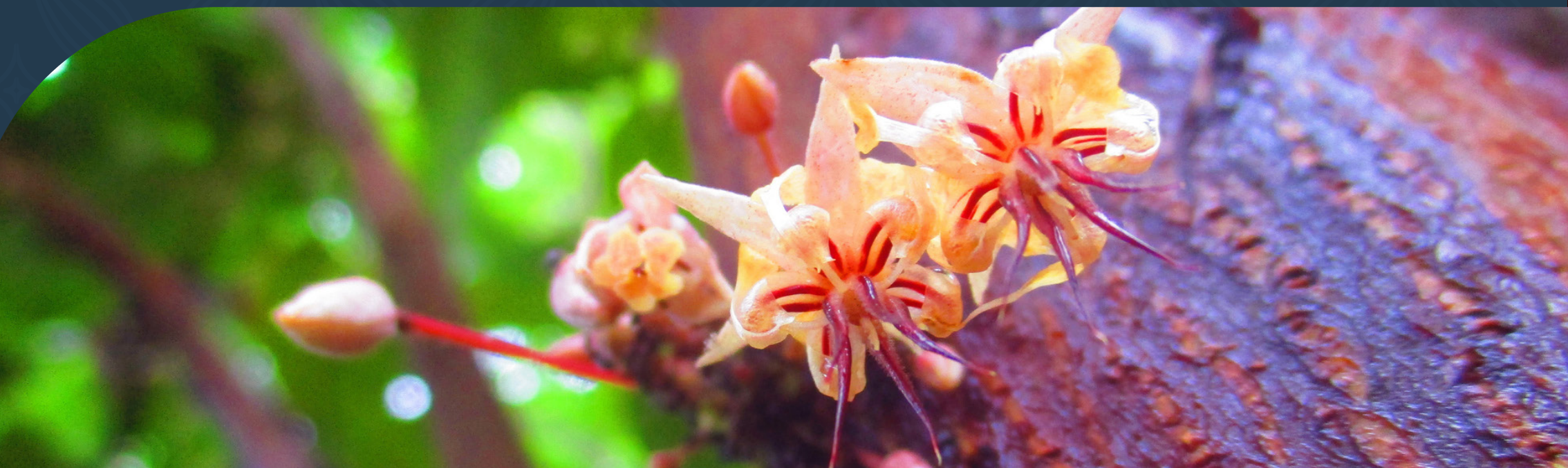
MATO GROSSO

Cocoa farming in the state of Mato Grosso is carried out in agroforestry systems with fruit trees and forest essences. The crops are concentrated in the state's Amazon biome, covering approximately 2,000 hectares, with an average yield of around 550 kg/ha of beans and an annual production of approximately 540 tons. In the national ranking, the state of Mato Grosso ranks sixth, accounting for 0.2% of the cocoa produced in the country.

NEW ENTRANTS

The quality of Brazilian cocoa has significantly improved, but the challenge has been to drive the country towards self-sufficiency in cocoa production. This involves increasing crop productivity and production area to achieve a balance between supply and demand in Brazil, avoiding the importation of cocoa, as is currently the case.

In this regard, CEPLAC has been supporting the expansion of cocoa farming through technical partnerships in various producing states and new entrants, including the states of Roraima, Amapá, São Paulo, Ceará, Sergipe, Minas Gerais, Tocantins, and in non-traditional biomes such as the cerrado and caatinga.



Comissão Executiva do Plano da Lavoura Cacaueira - CEPLAC

Esplanada dos Ministérios, Bloco D, sala 750, Brasília - DF

+55 61 3218.3720

ceplac.diretoria@agro.gov.br

https://www.gov.br/agricultura/pt-br/assuntos/ceplac

MINISTRY OF
AGRICULTURE
AND LIVESTOCK

BRAZILIAN GOVERNMENT

BRASIL

UNITING AND REBUILDING