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## STATE OF PARÁ, BRAZIL: AN OPTION FOR THE GLOBAL SUPPLY OF COCOA

From the 1970s onwards, cacao farming in the state of Pará returned to a prominent position among Amazonian agricultural alternatives. Backed by technified production systems, improved seeds, technical assistance and credit, the cacauicultura paraense has gone from its secular annual production average of 1,700 tons to 118,000 tons in 2016.

Currently, Brazilian cacao is distributed in the northeast (Bahia), southeast (Espírito Santo), Midwest (Mato Grosso) and North (Pará, Rondônia and Amazonas) regions. Provisional estimates for 2017 point to a national production of 260,000 tons of cocoa, of which the state of Pará may contribute a significant 125,000 tons, equivalent to 48.1% of national production. This dynamism is being carried out in a planted area of 170 thousand hectares, of which 130 thousand are already in production, cultivated by about 22 thousand families, accounting for the generation of more than 250 thousand direct and indirect Jobs formal and informal).

Based on agroforestry systems (SAF), established in medium to high fertility soils, exploited predominantly by small producers, regional cocoa activity is one of the most competitive in the world. Even with a low intake of inputs, the average yield of the crop in the state is around 900 kg / ha, reaching about 1,000 kg / ha in the region known as Transamazônica, where productivity is frequently recorded above 2 thousand kg /ha. These numbers are more relevant when compared to the yields practiced in the cacao region of Bahia (300 kg / ha), or with countries such as Côte d'Ivoire (660 kg / ha) and Ghana (550 kg / ha), respectively 1st and 2nd world cacao producer. Such performance, coupled with the frankly preservationist characteristics of cocoa production in agroforestry systems, selects cacao farming as one of the most interesting agricultural alternatives for sustainable rural development in the State.

The increasing demand for planting new areas of cocoa, combined with a progressive production, will allow Pará cacao farms to take better advantage of the recognized intrinsic qualities of the cocoa beans produced (higher fat content and melting point), thus guaranteeing greater participation in new blends, accessing in a more competitive way the traditional and conservative international market of cocoa.

The objective of this work is to make public the possibilities that the state of Pará presents as a large supplier of cocoa beans.

## INTRODUCTION

The Brazilian cocoa is distributed in the Northeast (Bahia), Southeast (Espírito Santo), Central West (Mato Grosso) and North (Pará, Rondônia and Amazonas). According to the IBGE / SIDRA / LSPA data, the Brazilian's cocoa production for the year 2016 is estimated at 254,497 tons, of which the state of Pará is responsible for 105.051t (41.3%) whose area for harvest will be 123,175 hectares of a total of 165,863 hectares planted. This area is cultivated by 22,000 producers, which ensures the state of Pará as the second in importance in the national scenario of this agricultural activity.

The cocoa in the state of Pará is exploited mainly by small producers established, predominantly, on average and high fertility soils, standing out as one of the most competitive in the world, especially when considering the average productivity (910 kg/ha) and the low-cost crop production (US\$ 900.00/ton), observed in the Territory of Transamazon, area that concentrates 77% of the state of Pará cocoa production.



The growing demand for planting new areas of cocoa, associated with a progressive production, will provide the Para's cocoa crop to take better advantage of the recognized qualities, intrinsic of the produced beans (higher fat content and melting point), ensuring greater participation in new blends and more competitive access in the, traditional and conservative, cocoa's international market.

Such performance, coupled with characteristics frankly preservationists of cocoa production in agroforestry systems, elects the cocoa crop as one of



the most interesting agricultural alternatives for sustainable rural development in the state of Pará, being currently discussed its inclusion as specie for legal reserve composition of farms in the Amazon.

The scope of this scenario will be achieved by increasing productivity, as the expansion of the cultivated area. Regarding productivity, great progress can be achieved in the development of hybrids more productive and more tolerant to witch's broom (*Moniliophthora perniciosa*, brown rot (*Phytophthora palmivora*) and the imminent threats such as monilia (*Moniliophthora roreri*) increasingly closer to cocoa plantations Amazon. This effort, facilitated by the wide variability available in germplasm collections of CEPLAC, at the Station of Genetic Resources of Cocoa "José Haroldo" (ERJOH) in Marituba, state of Pará, requires investments in researches can enable, in the medium and long term, the release of new hybrids or clones, based on genotypes that have been identified as productive and/or those that carry an alternative source of resistance to the witch's broom.

As for the expansion of cultivated area, the strong demand for hybrid seeds for new plantations (an average of 15 million per year) associated with the availability of more than one million hectares and high fertility soils located at the growing cocoa regions of Transamazon and South Para, by itself, already ensures space for expansion. More than that, a potential demand and environmentally more correct, is at the altered areas state of Pará, leading to this environment, its recovery in an economically viable basis, beyond contribute to restraint in advancing the use of primary forest, allowing the occurrence of "productive forest".

## THE COCOA-PRODUCING AREAS IN THE STATE OF PARÁ

### The Transamazon Region



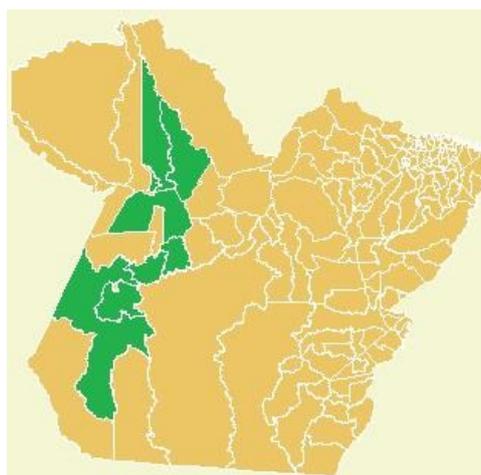
This is the most important cocoa region state of Pará. Located in the central part, having the BR-230 roadway, the axis from east to west of almost 700 km in the exuberant Amazon forest, to delineate the most promising cocoa region of Brazil. The entire lane of the Transamazon, where is the city of Medicilândia, the country's largest cocoa producer, presents red soils (Nitosoil red), considered one of the most fertile, as well as climate and rainfall conditions quite favorable.

The performance of cocoa plantations at the six municipalities (Pacajá, Anapu, Vitória do Xingu, Brazil Novo, Medicilândia and Uruará) attended by the Transamazon estimates that the region has approximately 11,000 cocoa farmers that, in 2015, produced more than 70,000 tons of cocoa, getting an average productivity 1050 kg/ha, according to Ceplac's official data.

### The Middle Amazon Region

The cocoa in the Middle Amazon, formerly called "Trombeta Polo", had its establishment from the preliminary studies made by Ceplac in the municipalities of Óbidos, Oriximiná and Alenquer, for which it was proven the existence of land with good natural fertility. This evidence gave rise to the selection of three areas of excellent conditions for cacao cultivation: Rio Branco/Mamiá, São Pedro/Ferrugem and Curuá/Maicuru, with the availability to plant up to 35,000 hectares of cocoa trees.

Another important feature in this Polo's creation was its proximity to the market and to the ease of transport by inland waterway (Amazon River and its tributaries), which guaranteed its potentiality.



To the one that once was called, at the beginning, of Trombeta's Polo, incorporated it into the municipalities of Monte Alegre, Santarém, Itaituba, Rurópolis, Trairão and in 1997 the newly municipality of Placas (a subdivision of Uruará municipality).

The performance of cocoa crop in the seven municipalities attended by the Polo of Middle Amazon, estimated that the region has about 3,000 cocoa farmers, who in 2015 produced more than 8,600 tons of cocoa, obtaining an average productivity of 640 kg/ha, according to official Ceplac's data.

### The Bragantina Region



Although this Polo has the name of a micro-region of the state, its area of operation extends beyond its territorial limits. It is formed by the municipalities of Santa Isabel do Pará, Castanhal, Tomé-Açu, Acará, Cametá, Mocajuba, Limoeiro do Ajuru, Novo Repartimento, Tucumã and São Félix do Xingu. Because of its extension, it possesses a wide variation climate between the municipalities served.

In the far northeast and at the Islands region (influence of the Tocantins River), there is a certain uniformity of the climate; mainly on the temperature - that remains an average without significant changes - and pluviometry precipitation - the rains are well distributed throughout the year. In the southern part of the Polo (Tucumã and Sao Felix do Xingu), one sees the distinction of two periods; one dry and one rainy.

In the region of the islands, prevail the hydromorphic soils, since most of the plantations are under the

influence of floodplains, benefiting of the alluvials enrichment arising from floods and ebb tides that occur at six-hour intervals. In the northeast of the state, there is the presence of the latosol soil type, chemically poor, whose need for fertilization is incontestable. In southern Pará are located the soils of high fertility (Ultisol), in a superior area than one million hectares.

This Region presents the three characteristics for the expansion of cocoa crop: traditional areas (Cametá and Mocajuba), areas with pimentais (*Piper nigrum*) on declining (Tomé- Açu and Acará) and area with high fertility soils (Tucumã and Sao Félix do Xingu).

The performance of cocoa crop in the eight municipalities estimated that the region has about 6,500 cocoa farmers, who in 2015 produced 13,200 tons of cocoa, obtaining an average yield of 727 kg/ha, according to Ceplac's official data.

### Systematic production monitoring



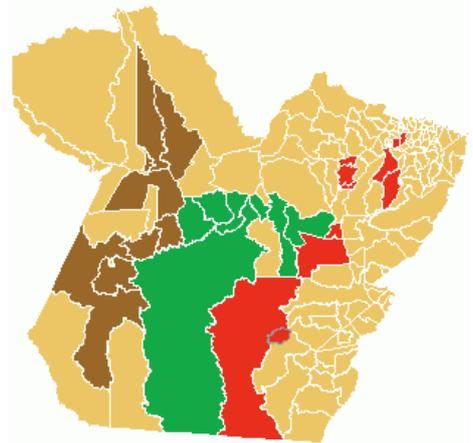
CEPLAC in the state of Para, following a national guideline, keeps the project "Forecast of Cocoa's Harvest" which has the responsibility to follow up the cocoa production. In fulfillment of this work, currently, are 41 points of data collection covering ten cocoa-producing counties in the state of Pará of which seven are among the most important, considering its relative share.

Basically, from a team of 18 well trained rural extensionists, the strategy used in the applied methodology is the, during three times a year, follow the development of fruiting these focal points (sample), making the relevant corrections in each these moments, to inform the stakeholders over the cocoa production possibilities in the State of Pará. The information on production goes through the whole calendar year (January to December) and in 2015 the state of Pará cocoa contributed

with 109,100 tons to world production and, with the collected data already held in the last week of March 2016, is expect for a growth of 10%, revealing an initial expectation of 120 thousand tons. The final numbers will only be revealed in November, when the last field prospecting will have been performed.

### Final considerations

The area planted with cocoa trees in the world, considering the sixty countries listed by FAO as cocoa farmers, is already close to nine million hectares (FAO, 2012) and, over the past two decades, the increase was just over 2.5 million hectares - revealing a geometric growth rate around 2 % - that is, as time goes on the number is minor of new planted areas. Clearly, one of the causes is related to the impossibility of adding new free areas for planting in those countries that are reaching (or have reached) the limits of their areas suitable for such.



As mentioned at the beginning of this text, the state of Pará has 165,863 hectares planted, of which 123.175 thousand hectares are in production. Therefore, the possibility of the Brazilian cacao cultivation expansion in the state of Pará has real possibilities, because it has in its environment the required favorability, which are: the wide availability of soils of medium and high fertility in already anthropized areas, both in the Transamazon region, as at the new frontier that is established in southern of Pará; the great willingness and interest of the Federal Government to contain the pressure for deforestation and expansion of cattle ranching in the Amazon, encouraging the exploration of anthropized areas by perennial crops associated with forest trees - cocoa is one of them; and the great current demand for new plantings by farmers from all over the state of Pará.

As a result, the demand for new plantations, which stood usually around 3-4 thousand ha/year, has turned in recent years, around 12 to 15 thousand hectares, still repressed by only contemplate the intent registered at the CEPLAC's local offices, which follows a determined amount depending on the availability of seeds, and does not take into account the demand of poles not achieved by the Technical Assistance.

From the Brazilian point of view it is essential and indispensable, that has to take a decision in agricultural policy with regard to cocoa crop. Brazil has know-how enough to lead the most significant points of the productive chain of cocoa. So, it is time for a bold program of expansion of cocoa crop in the state of Pará, be implemented with a Institutional partnership and with interested civil society, without disregarding the need to prepare all the required infrastructure to result on more one challenge of the cocoa national crop.