

SUGAR, MILLS, AND SMALL-SCALE SUGAR WORKS IN NINETEENTH-CENTURY AMAZONIA: A HISTORICAL ACCOUNT

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ABSTRACT

In this article, using the various sources (newspapers, inventories, government reports, customs documents, reports of travelers), not disregarding the historiography, we present a contribution to the history of sugarcane mills, gadgets and crops in the Amazon, throughout the nineteenth century, although it retreated for better understanding to the colonial period. Thus, we pay attention to the characteristics and aspects related to these rural properties, especially with regard to the association between agriculture and extractivism, as well as to polyculture, there being no plantations in the region. Also observing the configuration of the world of work with the use of free people and slaves. As well we approach the economic history of sugar in the Amazonian valley of the 19th century, understanding its importance in the province of Grão-Pará as a product traded largely with Portugal and regularly in exports from Grão-Pará in the 19th century.

Keywords: sugar, sugarcane mills, Amazon.

RESUMO

Neste artigo, fazendo uso das fontes variadas (jornais, inventários, relatórios de governo, documentos alfandegários, relatos de viajantes), não desmerecendo a historiografia, apresentamos uma contribuição à história dos engenhos, engenhocas e lavouras de cana-de-açúcar na Amazônia, ao longo do século XIX, ainda que recuando para efeito de melhor compreensão ao período colonial. Desta forma atentamos para as características e aspectos relativos a essas propriedades rurais, marcadamente no que diz respeito à associação entre agricultura e extrativismo, bem como à policultura, não havendo na região a constituição de *plantations*. Observando também a configuração do mundo do trabalho com o uso de sujeitos livres e escravos. Bem como nos acercamos da história econômica do açúcar no vale amazônico oitocentista, compreendendo a sua importância na província grão-paraense como produto negociado em larga medida com Portugal e constante de forma regular na pauta de exportações do Grão-Pará no século XIX.

Palavras-Chaves: açúcar, engenhos, Amazônia.

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Introduction

In the late sixteenth and early seventeenth centuries, in the Amazon region, the English and the Dutch were already attempting to cultivate sugarcane and introduced the first enslaved Africans into the area (Barata, 1915, 21–22; Reis, 1993, 09–22).³ Yet, after expelling the other European contenders—including the French—the Portuguese began their effective occupation of the region from the mouth of the Amazon River and its adjacent areas, establishing sugarcane plantations alongside other agricultural crops. On April 14, 1655, for example, the *Regimento* [*Regulation*] issued by the king to André Vidal de Negreiros, governor of Maranhão and Grão-Pará, stated in chapter 18: “Grão-Pará, which also falls under Your Government, is regarded as a conquest full of great expectations, both for the vastness of the Captaincy and for the quality of the land, well-suited for sugar mills and cattle raising” (Cruz, 1963, 89).

What the king desired was likewise desired by the settlers. At the end of the seventeenth century, for instance, Sebastião Gomes de Souza, “with the intention of setting up a mill and cultivating the land,” settled in what is now the district of Icoaraci (in Belém), clearing the forest and beginning the “construction of a dwelling house made of rammed earth.” In 1701, he obtained a “Charter of Grant and *Sesmaria* [NT.: a Portuguese Crown land-grant system in colonial Brazil] for that league of land, known as Paracuri, which extended from the igarapé of the same name to Ponta do Melo or Mel” (Cruz, 1963, 70–71).

Throughout the colonial period, the Portuguese Crown granted titles of *Sesmarias* and Letters of Grant to settlers, aiming at the cultivation of commercial products, particularly sugar, in the areas surrounding Belém.⁴ Thus, along the banks of the Guamá, Capim, and Moju rivers, several important sugar mills were established. On the Guamá, for example, Lourenço Malheiro Corrêa was a “wealthy owner of the Pernambuco Estate,” which he later donated to the Carmelites (Cruz, 1963, 71). Among the properties near

³ Regarding the Dutch presence in the Amazon, see for example: Edmundson (1903); Cardoso (2017); Hulsman; Guzman (2016); Hulsman (2011); Hulsman (2009); Oliveira (2015). Regarding the English, see: Lorimer (1989).

⁴ Regarding the Portuguese policy of conquering and occupying the Amazon region, with the distribution of land grants aimed at agricultural activities, during the 17th century and the first half of the 18th century, see: Chambouleyron (2005); Chambouleyron (2014); Chambouleyron (2005); Chambouleyron (2012).

Belém, “a league and a half distant,” the Murutucu Mill stood out, located between the Tucunduba and Uriboca creeks, bordering the Utinga Estate.

In short, *sesmarias* were distributed “in lands suitable for agriculture or livestock raising, situated near the commercial centers of Belém and Santarém (in the Lower Amazon, western Pará),” although even in the distant Captaincy of Rio Negro (Amazonas), in the Barcelos region, there were plantations worked by enslaved labor (Weinstein, 1993, 57).⁵

It is on the sugar mills, *engenhocas* [small sugarcane mill], and sugarcane plantations of the Amazonian rural world—although other crops certainly existed, in which “most planters depended on African slaves or the forced labor of Indigenous people” (Weinstein, 1993, 58).—that this article focuses.

Our emphasis is on the nineteenth century, the period in which enslaved-labor sugar production reached its greatest expression in the Amazon, particularly in the areas surrounding Belém, in the Guajarina Zone and the Lower Tocantins. In other regions where African slavery was present with some significance—namely northeastern Pará, Cabo Norte (Amapá), the Marajó archipelago, and the Lower Amazon—the presence of mills, *engenhocas*, and sugarcane plantations was more scattered and limited.⁶

It is worth recalling that, in the 1940s, in his history of the municipality of Igarapé-Mirim (Lower Tocantins), Ernesto Cruz underscored the importance of studying sugar mills in Pará (1945), a topic he also addressed in his *História do Pará* (1963). He criticized the work of Maria Anunciada Chaves who, in her study “*O Açúcar na História do Brasil*” (Chaves, 1950, 1999), had not considered sugar production in the Amazon.

Sugar and cachaça mills were mentioned—albeit briefly—by Manoel Barata in 1915 in his history of early production in Pará, as well as by various memoirists (Garcia; Lobato, 2011). They were also referenced in works by Salles (1988), Arlene-Kelly (1988), Acevedo Marin (2000), Bezerra Neto (2011), and Batista (2014), particularly within studies on slavery

⁵ Regarding the Rio Negro, see: Sampaio (1997).

⁶ Regarding these regions, see also Salles (1983); Bezerra Neto (2012).

However, it was only from the early twenty-first century onward that the historical importance of mills, *engenhocas*, and sugarcane plantations in the Amazon region became a sustained object of academic research, addressing their many social, economic, and material dimensions. Notable among these are the works of Marques (2004), Cunha (2009), Nascimento (2016), Macêdo (2021), and Medeiros (2022).⁷ Even so, important aspects remain underexplored, such as the place and significance of sugar in the nineteenth-century Amazonian economy—beyond cachaça production—as well as the social and economic facets of enslaved and free labor on these properties, and the combined roles of polyculture and extractivism in mills that did not align with the classical definition of a plantation.

Understanding how sugar production in the Amazon diverged from established models in Brazil is therefore essential. In short, the presence of mills and *engenhocas* in the Amazon merits this historical note, especially because they remain largely overlooked in Brazilian historiography.

Sugar Mills and *Engenhocas* in the Rural Landscapes of Amazonia

João Lúcio de Azevedo, cited by Cruz, had already noted that “agricultural establishments, with their mills, spread over large tracts of land, always along the water’s edge, extending the boundaries of effective land possession to the benefit of the conqueror,” beginning from the urban nucleus of Belém as early as the seventeenth century (Cruz, 1963, 53). The *várzea* [floodplain] vegetation of Grão-Pará’s soils explains the preference of rural landowners for building their mills along the rivers, in addition to the practicality of fluvial transport. According to the memoirist Eládio Lobato:

Sugarcane and sugar mills shaped human occupation along the Brazilian coast all the way to the upper Amazon rivers. The *várzea* lands offered excellent and highly favorable conditions for planting cane. Fertile and abundant, these low floodplain areas along the large, seasonally inundated rivers have been the settings in which cane has flourished for centuries (Lobato, 1985, 65).⁸

⁷ We can also cite the work of Anderson (1991) on the decline of floodplain sugar mills and the patrimonial inventory of sugar mills and contraptions in Pará carried out by Iphan (Sarquis, 2023), as well as some studies on agriculture and its practices in the Amazon since the colonial period, among which: Ângelo-Menezes (1994; 1999; 2000), Nunes (2014) and Barbosa (2018).

⁸ Original version: A cana e os engenhos, marcaram a ocupação humana do litoral brasileiro, até aos altos rios amazônicos. As terras de várzeas, são de ótimas condições e propícias ao plantio de canas. Terras férteis

Sugarcane harvesting in the Amazon was also determined by the region's rainfall patterns. The heavy and prolonged rainy season—from November to March—characterized the so-called “Amazonian winter” and directly affected cane production. Because of the intense rains, the harvest period was shortened; the rains made it difficult to transport the cane to the mills, increasing the burden on enslaved laborers. Although short, the harvest season was a period of intense activity.

This contrasted sharply with what took place in the mills of Bahia, where the harvest lasted eight to nine months under an implacable work rhythm that generally began in August and extended until May of the following year—an uninterrupted regime of 270 to 300 days. In the Bahian case, the intense labor—which could rightly be described as “hellish”—was prolonged (Schwartz, 1988, 97).

Cane fields planted in *várzea* soils typically lasted between five and seven years before becoming completely exhausted. This may seem like a considerable period capable of yielding good harvests, but when compared with the cane fields of the Bahian Recôncavo, planted in *massapé* [black clay soil] soil and lasting between thirty and fifty years in the same period, it was relatively short (Medeiros, 2022, 132).

As for the type of cane, although there was a native Amazonian variety initially exploited, it was replaced at the end of the seventeenth century by the Madeira Island cane, as Barata recounts (1915, 24). In 1797, the “Cayenne cane”—originating from French Guiana—was introduced and quickly became the preferred variety among Pará planters because it produced “thick, fibrous, and very succulent stalks whose leaves could grow up to four meters long” (Marques, 2004, 41), ensuring six to eight good harvests.

Regarding the types of mills in Grão-Pará, there were three main modalities: those powered by animal traction, those using steam energy, and the “water mills” or “tide mills,” the latter being the most common. They were so called because they harnessed the force of the tides to grind the cane; “in other words, the tidal flow determined the pace of production, the movement of raw material, the grinding process—in short, it was the guiding force that drove the mill's factory” (Medeiros, 2022, 137).

e abundantes; têm sido justamente em torno dessas terras baixas ao longo dos rios grandes e alagadiços que a cana vem florescendo há séculos (Lobato, 1985, 65).

Figure 1 – Representation of the São José Mill, tide-powered, located in Igarapé-Mirim. Source: Marques (2002, 28).

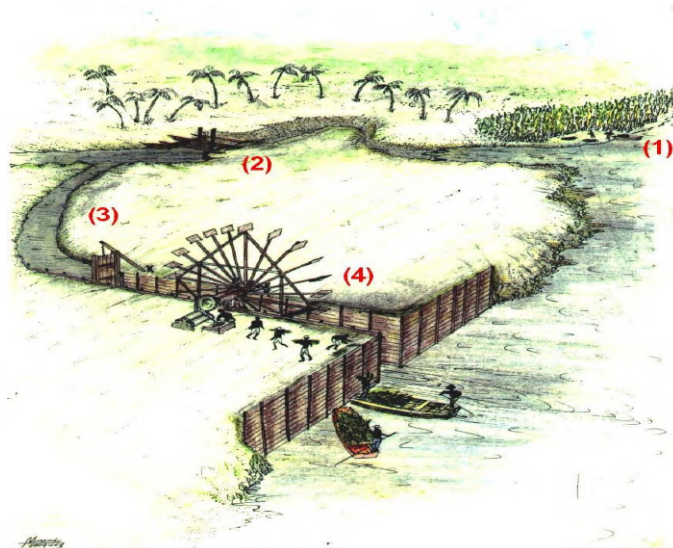


Figure 1 depicts a typical water-driven mill. As Marques explains, “during the flood tide or high tide (1), the water enters through the channel, flows into the reservoir or weir where it is held back by a dam (2), diverted through a channel (3) into the chute (4), and then, during the ebb tide, it turns a water wheel”(MARQUES, 2002, 28).

This type of mill appears in several probate inventories used in this study, such as the water mill of Catarina Margarida de Jesus, called the Laranjeiras Mill, located in Ponta de Pedras in the Marajó Archipelago;⁹ the Carnapijó Mill owned by Josefa Joaquina de Souza in Barcarena (Guajarina region);¹⁰ the Val-de-Cans Mill or estate of Colonel José Duarte Rodrigues in Cameté (Lower Tocantins);¹¹ the Jaguarari estate of the judge Joaquim Clemente da Silva Pombo in Moju (Lower Tocantins).¹² and the mill of Cônego

⁹ Center for Amazonian Memory. Odon Rhossard Registry Office (2nd Civil Court of the Capital District). Post-mortem inventories, box – 01 (1810-1812). Inventory of Catarina Margarida de Jesus, 1817

¹⁰ Center for Amazonian Memory. Sarmento Registry Office (14th Civil Court of the Capital District). Post-mortem inventories. Inventory of Dona Josefa Joaquina de Souza, 1846.

¹¹ Center for Amazonian Memory. Odon Rhossard Registry Office (2nd Civil Court of the Capital District). Post-mortem inventories, box – 01 (1810-1812). Inventory of Colonel José Duarte Rodrigues, 1845.

¹² Center for Amazonian Memory. Fabiliano Notary Office (11th Court of the Capital District). Post-mortem Inventories. Inventory of Joaquim Clemente da Silva Pombo, 1839.

Sebastião Antônio Pereira, unnamed, in the Acará (Gujarina region)..¹³ Several of these mills will be discussed in the following sections.

Near Belém, directly across from the city on Ilha das Onças, there was one such estate and sugar mill that Spix and Martius visited in 1819, describing it as “a wealthy estate belonging to the Farias family.” According to their account, the Faria Mill “provides us, better than any other, an example of the type of farming practiced here.” In addition to sugarcane, they found rice, corn, and manioc under cultivation, illustrating the polyculture typical of Amazonian rural properties. Notably absent was cacao—the region’s main export crop at the time—because of the estate’s location.

Cane cultivation was associated with the production of molasses and especially cachaça; the travelers made no mention of sugar manufacturing. They noted the presence of stills “properly built... in England,” capable of producing not only “excellent fine-quality brandy,” but “especialmente anisette” (Spix & Martius, 1976, vol. III, 45). The estate also possessed a water-powered mill for dehusking rice.

As in other large estates of Grão-Pará, polyculture coexisted with factory-like installations and machinery, and both free and coerced labor—including Indigenous workers and enslaved Africans—were employed.

Still on the Faria Mill, Spix and Martius described the importance of fishing and cattle raising for local consumption, though dried meat and fish—particularly pirarucu—came largely from Marajó Island. Cattle raising also supplied milk, but butter was not produced locally and was instead imported from Europe. English or French butter was an expensive and refined consumer good, accessible only to a limited few; others relied on turtle butter (Macêdo, 2014). Tallow was used to make soap, and other animal by-products—hides, horns, etc.—were exported from the province. Pigs were raised, though carelessly and in small numbers; sheep were virtually absent.

In such rural estates, the combination of agriculture with livestock and fishing did not necessarily make them self-sufficient, but it allowed owners to maximize labor and natural resources while expanding profit margins and reducing operational costs. The

¹³ Center for Amazonian Memory. Sarmiento Notary Office (14th Civil Court of the Capital District). Post-mortem Inventories. Inventory of Canon Sebastião Antônio Pereira, 1846.

integration of polyculture, cattle raising, and extractivism was characteristic of Amazonian rural life.

Indigenous and African-descendant labor was far more common in farms, mills, *engenhocas*, and rural sites in the Amazon than often imagined (Bezerra Neto, 2011). On the Capim River, for example, lay the São José Mill owned by Mr. Calixto (Cruz, 1963, 107–112). According to the naturalist Alfred Russel Wallace, who visited in 1848, the property had around fifty enslaved Africans and an equal number of Indigenous workers engaged in “the cultivation of cane and rice, in the mills, and aboard the canoes.”

Calixto reportedly told Wallace that he made Indigenous workers labor alongside enslaved Africans because this system yielded “better and greater work performance” from the Indigenous laborers (Wallace, 1979, 82). Calixto explained:

Indians do not submit well to discipline when they work alone; but when they work together with the slaves—who have fixed hours to begin and end their tasks, as well as designated duties—they submit to all the requirements, cheerfully undertaking the same obligations (Wallace, 1979, 82).¹⁴

There is no doubt that Calixto was a staunch defender of enslaved labor, for despite the high prices of enslaved people, he reportedly assured Wallace that “he buys slaves, but never sells any except as a final punishment for incorrigibly bad conduct”—a situation that he claimed rarely occurred, given his ability to discipline his slaves (Wallace, 1979, 82).

Although rice and sugar were cultivated and processed on the estate, Wallace informs us that *cachaça* production was preferred, as it offered greater profit margins. In a detailed account of life at São José, Wallace also noted that among the workers there were “shoemakers, tailors, carpenters, blacksmiths, canoe builders, stonemasons—both slaves and Indians—some of whom could even make good locks for doors, trunks, and chests, as well as various utensils of tinsplate and copper” (Wallace apud Salles, 1988, 119–121).

¹⁴ Original version: Os índios não se submetem bem à disciplina, quando trabalham sós; porém, quando trabalham juntamente com os escravos, que têm horas certas para começar e deixar o serviço, bem como tarefas marcadas para realizar, eles se submetem a todas as exigências, executando alegremente as mesmas obrigações (Wallace, 1979, 82).

Traveling further with the naturalists, we learn more about other mills. On the banks of the Guamá River, where several rural properties existed, Martius spent the night at the Mocajuba Estate, remarking on the fertility of its lands, especially suited for sugarcane intended for cachaça production, and noting the existence of “a large distillery” there (Spix & Martius, 1976, vol. III, 53).

Navigating the Moju River, Spix and Martius encountered the Jaguarary Mill—seven hours by boat from Belém - a large estate belonging to Colonel Ambrósio Henriques, son of Judge Joaquim Clemente da Silva Pombo, who “amassed vast wealth and was the most affluent capitalist of his time in Pará.” In 1819, Ambrósio Henriques, regarded as the “wealthiest mill owner and farmer of the period,” hosted Spix and Martius at his *rocinha* [a small country residence] in Belém.

Regarding the Jaguarary Mill, the naturalists reported that it “processed cane planted in the vicinity to produce sugar and especially cachaça.” At the time, cachaça production reached 1,500 barrels per year. As for the sugar produced there—some of which was likely exported—it also served the provincial market. For example, on 27 March 1847, the *Treze de Maio* newspaper advertised the sale of “first-, second-, and third-quality sugar manufactured at the Jaguarary Mill, available at the warehouse of A. Campbell & Co. on Açougue Street [in Belém]” (*Treze de Maio*, 27/03/1847, 4).

The grandeur of the Jaguarary Mill is further evident in the 1839 probate inventory of Joaquim Clemente da Silva Pombo, in which the property was valued at 50:534\$000 (fifty *contos* and five hundred and thirty-four mil *réis*) and described as a “cane-grinding mill driven by a large water wheel.”

As expected, the inventory provides a meticulous description of the estate: “a noble two-story house serving as residence with nine front areas supporting a large veranda”; “a large, old chapel with images and ornaments”; “a foreman’s house, warehouse, and kitchen, all of stone, lime, and tile, with ample capacity”; a sugar house; “a purging house with structures below and tanks to collect molasses”; “three houses to receive cane juice and cachaça”; “two stills and additional houses used as dwellings”—the stills imported from England, which, according to Spix and Martius, produced “excellent fine-quality brandy and especially anisette, for which anise seeds were imported from Portugal and Gibraltar” (Spix & Martius, 1976, vol. III, 71).

The estate also had “a filtering house for refining sugar and sheds for storing bagasse, which served as a stable and pottery workshop with two ovens for firing and another for producing lime.” For mill operations, there were three boats, three *igarités* [traditional river canoes], a *batelão* [a flat-bottom river barge used to transport cargo], and two *montarias* [dugout canoes], used to transport people and cargo.

The livestock inventory listed 21 sheep, 14 lambs, 6 oxen, 6 castrated rams, 4 steers, 2 cows, 1 heifer, 1 calf, and 1 male goat.¹⁵

Polyculture and subsistence agriculture—alongside commercial production and animal husbandry—coexisted on the lands of Ambrósio Henriques’s estate. As the estate manager told the travelers, the fields were worked “exclusively by the numerous black slaves of the farm,” since “the local Indians occupied themselves almost solely with fishing and their small plots, and, dominated by an invincible aversion to serving whites, could not be employed reliably” (Spix & Martius, 1976, vol. III, 61).

In Pombo’s previously cited inventory, 147 enslaved people were listed, many living and working at the Jaguarary estate. Like other landowners in the region, Ambrósio Henriques lived in Belém, where he owned urban property that included slave quarters “housing several families of Black slaves” (Spix & Martius, 1976, vol. III, 61).

Sailing farther up the Moju River, Spix and Martius arrived at Jacari—“river of caimans”—where they found “a farm with a small mill for producing and distilling cachaça. Some cacao was also cultivated.” They noted that cacao husks were dried and burned to ash “in order to prepare potash soap with cattle tallow or andiroba oil.” Pigs were also raised, alongside a tapir that the farmer had domesticated and that insisted on mingling with them (Spix & Martius, 1976, vol. III, 62–63). “The banks of the Moju are suitable for any kind of tropical cultivation; besides cane, there is coffee, manioc, corn, and rice,” they reported.

Henry Bates similarly noted that eleven large sugar mills had existed along the river’s margins (cited in Cruz, 1963, 110).

In the Igarapé-Mirim area, there was, for example, the São Domingos Mill owned by the Baron of Igarapé-Mirim. Between the town of Igarapé-Mirim and Belém, on Carnapijó Island, there were also sugarcane estates. In the Bay of Carnapijó, at the Cafezal

¹⁵ Center for Amazonian Memory. Fabiliano Notary Office (11th Court of the Capital District). Post-mortem Inventories. Inventory of Joaquim Clemente da Silva Pombo, 1839.

channel, stood the mill of the same name (the Sant’Anna do Cafezal Mill), which, according to Salles, was “perhaps the largest of the old mills of Pará” (1988, 118).

In 1846, an advertisement announced the sale of this mill “located at the mouth of the Ayracaú igarapé, three hours from the city, with ample lands for fields and cane plantations, a ready-to-operate mill with a steam still, cattle and sheep, a dwelling house, and an oratory”(Treze de Maio, 29/10/1846, p. 3).

Also on Carnapijó were the São Mateus Mill of the Portuguese landowner Mateus Magno Ferraz de Araújo, and, in Barcarena, the Madre de Deus Mill of former *cabano* [a participant in the Cabanagem revolt in Pará, 1835–1840] president Eduardo Angelim, who possessed 72 enslaved workers. In Abaeté, there was the São Francisco Mill of Antônio Francisco Corrêa Caripuna; and on the right bank of the Tucumanduba River, the São José Estate and Mill belonged to José Honório Roberto Maués (Cruz, 1963, 136–139). On the Tocantins River there were others as well, such as the Vista Alegre Mill, ox-powered and visited by Wallace and Bates (Cruz, 1963, 107–112).

In summary, the oldest and most traditional sugar-producing areas of the Amazonian territory were located along the Acará, Guamá, and Capim river basins, as well as those of the Moju and Tocantins rivers—corresponding to the Guajarina Zone around Belém and the Lower Tocantins around Cameté.

Table 1, which lists mills and *engenhocas* in these two regions between 1810 and 1850 based on probate inventories, offers a clearer view of their geographical distribution in the Amazonian landscape.

Of the 21 properties listed, 14 (67%) were mills and 7 (33%) were *engenhocas*. Among the 14 mills, 5 (36%) were classified as water mills. Out of the total 21 properties, 5 (24%) possessed the largest enslaved labor forces—over 100 enslaved individuals—two of which were water or tide mills.

Another 3 (14%) had between 71 and 88 enslaved people, one explicitly identified as a water mill (the Carnapijó Mill). Seven (33%) properties—four *engenhocas* and three mills, one of them a water mill (the Laranjeiras Mill)—had between 24 and 47 enslaved workers. Finally, six properties (29%) had between 2 and 18 enslaved people, three of which were *engenhocas*.

That is, 62% of mills and *engenhocas* had fewer than 50 enslaved workers, even though at least 40 to 50 enslaved laborers were considered necessary to operate a medium-sized mill. This is illustrated in an advertisement by Joaquim Pedro Gonçalves de Campos, who, “due to circumstances,” was obliged to sell the Mucajuba Mill “because it requires a workforce of over forty slaves, and its current owner does not have them, due to the lack of the slave trade.”

Indeed, with the end of the Atlantic slave trade and the consequent rise in slave prices (recalling Calixto’s complaints to Wallace), the shortage of enslaved workers increasingly became a critical issue for sugarcane agriculture, especially in the 1870s and 1880s, and most severely after abolition in 1888 (Nascimento, 2016). This labor crisis profoundly affected sugar production in the province, leading not only to the cessation of sugar exports and increasing sugar imports, but also to a near abandonment of sugar manufacturing altogether, with producers turning predominantly to cachaça, as we shall see below.

Table 1. Mills and Small Sugarworks in the Guajarina Zone and Lower Tocantins (1810–1850)

Owner	Property Name	Type	Location	Number of Slaves	Property Value (in réis)
Domingos José Monteiro	<i>Santa Maria Farm</i>	<i>Engenhoca</i>	Belém	18	280\$000
Joana Tereza de Roiz	<i>Menino de Deus Mill</i>	Sugar Mill	Moju	45	1:250\$000
Catarina Margarida de Jesus	<i>Laranjeiras Mill</i>	Water Sugar Mill		27	400\$000
Catarina Ignacia do Nascimento		Sugar Mill	Igarapé-Miri	24	800\$000
Antônio Jose Antunes de Souza	<i>Carmelo Farm</i>	Sugar Mill	São Miguel do Guamá	88	4:800\$000
Anna Raymunda de Carvalho	<i>Santa Quitéria Farm</i>	Sugar Mill	Moju	79	800\$000
Josepha Joaquina de Souza	<i>Carnapijó Mill</i>	Water Sugar Mill	Barcarena	71	5:000\$000
Francisca Siqueira de Queiros	<i>Nossa Senhora do Rosário Farm</i>	Sugar Mill	Acará	120	3:000\$000
Francisco José de Paiva		<i>Engenhoca</i>	Barcarena	27	300\$000
Cel. José Duarte Rodrigues	<i>Val-de-Cãns Farm</i>	Water Sugar Mill	Cametá	158	12:000\$000
Joana Antônia de Oliveira Pantoja		<i>Engenhoca</i>	Moju	24	700\$000

João Soares da Costa	<i>Sami Farm</i>	<i>Engenhoca</i>	Moju	25	500\$00
Joaquim Clemente da Silva Pombo	<i>Jaguarari Farm</i>	Water Sugar Mill	Moju	147	50:534\$000
Joaquim Clemente da Silva Pombo	<i>São José do Capim Farm</i>	Sugar Mill	Capim	2	2:600\$000
José Carlos Correia de Miranda	<i>Nossa Senhora das Mercês Mill</i>	Sugar Mill	Igarapé-Miri	13	1:200\$000
Manoel Gomes Ribeiro		<i>Engenhoca</i>	Benfica	26	1:000\$000
Cônego Sebastião Antônio Pereira		Water Sugar Mill	Acará	15	850\$000
Sebastião Lopes Castelo		<i>Engenhoca</i>		4	200\$000
Tenente Coronel Francisco Marques D'elvas Portugal	<i>Murutucu Mill</i>	Sugar Mill	Capital	142	12:600\$000
Joaquim Maciel Coutinho	<i>Desterro Farm</i>	Sugar Mill	Acará	104	
Sebastião Lopes Castelo	Farm with Mill	<i>Engenhoca</i>	Igarapé Cajari-grande	4	600\$000
Total: 21	21			1.159	

Source: MEDEIROS, 2022.

But to close this topic, beyond polyculture and the association between agriculture, livestock, and extractivism—sustained by enslaved labor and the coerced labor of free Indigenous people—another defining feature of the Amazonian rural world, already noted but worth emphasizing, appears clearly in another passage from the travel account of Spix and Martius:

Many of these wealthy landowners send their products [cacao, coffee, cotton, indigo, ...] in their own canoes to Pará [Belém], so that the numerous intermediaries [*regatões*] are left chiefly with the trade carried out with the Indians of the Tapajós, who usually deliver their goods only in small quantities. (Spix & Martius, 1976, vol. III, 91).¹⁶

Thus, it was the landowners—the proprietors of rural estates—who also commanded the rivers, navigating their vessels with their laborers through the Amazonian

¹⁶Original version: Muitos desses opulentos donos de terras remetem os seus produtos [cacau, café, algodão, anil, ...], em suas próprias canoas, para o Pará [Belém], de sorte que ao grande número de intermediários [regatões] resta sobretudo o comércio com os índios do Tapajós, que habitualmente entregam seus artigos só em pequenas quantidades (Spix & Martius, 1976, vol. III, 91).

waters. There were no large or comfortably situated landowners who did not possess their own boats (see above the case of Joaquim Pombo, whose Jaguarary Mill owned several vessels), although smallholders also had canoes, more modest in scale. In other words, rivers, igarapés, channels, bays, lakes, and lagoons effectively constituted the watery pathways or “water roads,” giving rise to a riverside culture or civilization—what we may call fluviosity. The rivers were not only essential for flooding and fertilizing the *várzeas* or powering the mill wheels; they were literally the routes along which people and goods—including cachaça and sugar—circulated.

Rethinking sugar in the economy of Pará

Since the colonial period, agriculture and livestock had played roles of greater or lesser importance within the Amazonian economy. Between 1796 and 1811, products such as cacao, cotton, rice, coffee, hides, and cachaça ranked among the ten most important exports, while among the forest products of greatest commercial value were fine clove, sarsaparilla, and copaíba oil (Barata, 1915; Arruda, 1976).

It is worth noting that although cachaça was exported during the colonial period—an example being the shipment to Portugal in 1812 of “376½ barrels at 50\$000 each” (Barata, 1915, 24)—by the nineteenth century, Grão-Pará had practically ceased exporting cachaça. Even though mill owners preferred to produce cachaça rather than sugar, almost all of it was consumed within the province, and local production was insufficient to meet provincial demand, leading to imports from other Brazilian provinces.

Thus, in 1862, Francisco Brusque, president of Grão-Pará, stated that practically none of the cachaça produced in the province was exported; on the contrary, 500 barrels were imported annually (Pará, 1862, 54). Only at the end of the nineteenth century did cachaça exports resume—precisely at the moment when it became the principal output of mills and *engenhocas* in the Amazon, accompanying the decline and abandonment of sugar production.¹⁷

With respect to Amazonian sugar, during the colonial period the Portuguese Crown prohibited its export by means of a decree dated June 6, 1761, determining that

¹⁷ Despite the greater interest of mill and small sugarworks owners in producing rum (aguardente), as well as its widespread consumption, the economic importance of rum in 19th-century Amazonia still deserves closer study, as documentation already exists for the colonial period.

production be limited to “that which is necessary for the consumption and internal trade of the State” (Barata, 1915, 24). Nevertheless, according to Manuel Barata, between 1773 and 1800, 2,055 arrobas of sugar were exported to Portugal (1915, 24).

Sugar, however, did not figure among the ten principal export products of Grão-Pará between 1796 and 1811 (Arruda, 1976).

Contrary to the colonial pattern, however, once the nineteenth century began, sugar production in the Amazon Valley appears to have gained greater significance, though still insufficient to meet provincial demand. In 1862, the provincial president Francisco Brusque estimated that 60,000 arrobas of sugar were imported annually from Maranhão and Pernambuco—especially from the latter—although part of that sugar was re-exported from Pará to the province of Amazonas.

Despite Brusque’s expectation that the introduction of new machinery and techniques, together with cane cultivation, would enable the province to reach self-sufficiency in sugar (Pará, 1862, 38), this prognosis did not come to pass. On the contrary, sugar production declined in the final decades of the nineteenth century—particularly after 1888 with the end of slavery—while Pará’s dependence on imported sugar, especially from Pernambuco, persisted (Macêdo, 2014).

This can be clearly seen in table 2.

Table 2. Sugar Imports from Other Provinces by Grão-Pará, 1846–1873 (Selected Years), in arrobas.

YEARS	ORIGIN					TOTAL
	Bahia	Maranhão	Pernambuco	Rio de Janeiro	Paraíba	
1846-1847		15.453@	4.896@			20.349@
1849-1850		4.358@	20.963@		150@	25.471@
1870-1871	145@	4.659@	18.324@			23.038@
1871-1872	3 libras	2.073@				2.073@ 3 libras
1872-1873	6@	3.614@	100.843@	1.021@		105.484@

Sources: For the fiscal years 1847 to 1850: “Collecção dos Mappas Estatísticos do Comércio e Navegação do Império do Brasil exercido por meio d’importação, exportação, reexportação e baldeação, sob a inspecção e fiscalização das alfândegas e mesas do consulado nos annos financeiros de 1841-1842; 1842-1843; 1846-1847; 1847-1848; 1848-1849 e 1849-1850.” Rio de Janeiro: Typographia Nacional, 1848, 1854, 1855. For the fiscal years 1870–1873: SOARES (1876; 1877; 1879; 1881; 1883).

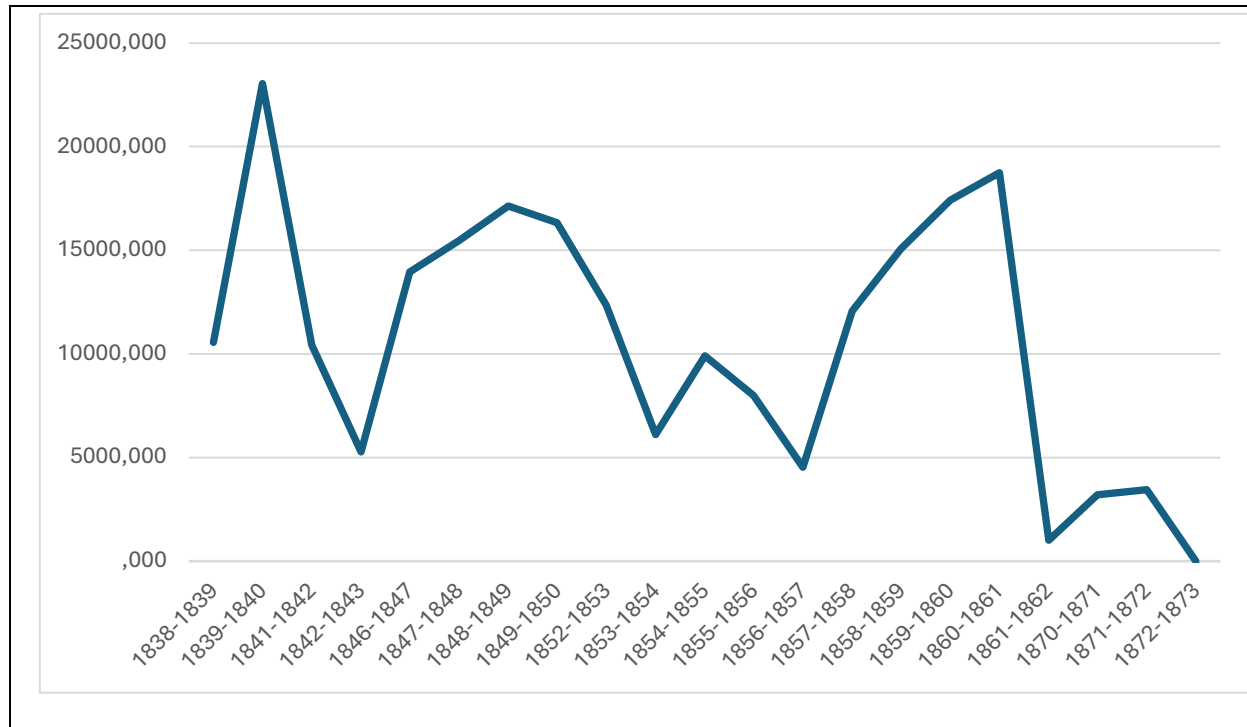
Practically very little—or almost no—sugar from Bahia was imported, despite that province being the most important exporter of the product. There were also occasional or residual imports of sugar from the provinces of Paraíba and Rio de Janeiro, but Maranhão played a comparatively larger role, even though its participation declined throughout the period between 1846 and 1873. In contrast, the volume of sugar imported from Pernambuco increased steadily. Pernambuco was another major producing province and supplied most of the sugar consumed in the national market. During this period, in fact, Grão-Pará was the principal destination for sugar traded within Brazil, since part of this sugar was re-exported to the province of Amazonas through the markets of Grão-Pará.

Although local demand for sugar was not met, exports of raw, white, or brown sugar nonetheless occurred with some regularity over much of the nineteenth century. Between the fiscal years of 1838–1839 and 1872–1873, we observe in Graph 1 that 1839–1840 registered the highest export peak, with 23,049 arrobas, followed by three additional moments of high export volume: in 1848–1849 with 17,144 arrobas; in 1859–1860 with 17,413 arrobas; and in 1860–1861 with 18,734 arrobas.

On the other hand, in 1842–1843, exports dropped to 5,260 arrobas, marking a decline after the high peak of 1839–1840. In the late 1840s and early 1850s, volumes rose again, only to fall to 6,113 arrobas in 1853–1854. A brief upward trend followed, succeeded by another downturn in 1856–1857, when exports fell to 4,525 arrobas. Exports then increased once more, reaching in 1860–1861 the second-highest peak among the years listed.

In 1861–1862, however, exports reached their lowest level for the entire series, with only 1,021 arrobas exported. A modest recovery occurred in 1870–1871, with 3,914 arrobas, followed by renewed declines to 3,443 arrobas in 1871–1872 and 2,530 arrobas in 1872–1873.

Graph 1: Sugar Exports from Grão-Pará (19th Century), in arrobas.



Sources: For the fiscal years 1838–1840, see *Jornal Treze de Maio*, 1841; for the fiscal years 1841–1850, see *Collecção dos Mappas* (1848, 1854, 1855); for the fiscal years 1852–1862, see *Pará* (1862); and for the fiscal years 1870–1873, see Soares (1876, 1877, 1879, 1881, 1883).

Advancing into the final years of the nineteenth century, according to data presented by Cordeiro (1920, 188), in 1898 Pará exported only 136 arrobas of raw sugar, with no indication of sugar exports for the subsequent years—1899, 1900, 1901, and 1902. This fact is corroborated by Raymundo Diniz Pinto Marques, Director of the *Recebedoria* of the Secretary of Finance of the State of Pará, who, when listing the products exported in the fiscal year 1900–1901, identified seventeen items with their respective quantities and values, without mentioning sugar at all (Pará, 1902, 88). Thus it is not surprising that, in 1915, when discussing sugar mills in his economic history of early production in Grão-Pará, Manuel Barata provided no figures for sugar production or exports from Pará, limiting himself instead to listing several important mills before concluding almost laconically: “All now extinct or in ruins” (Barata, 1915, 26).

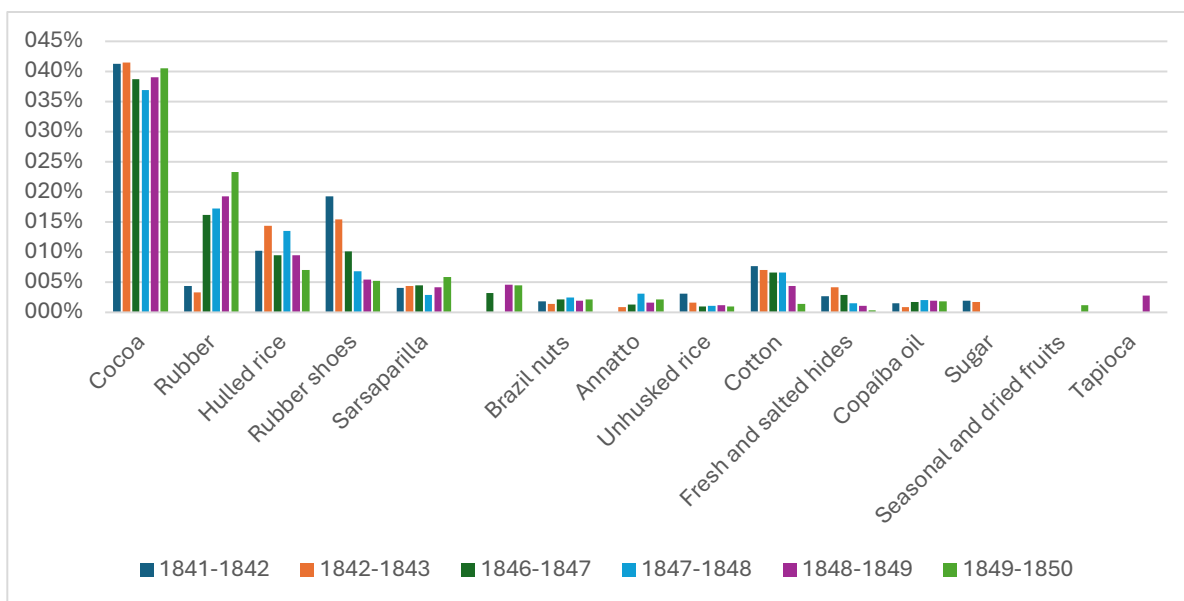
This reality helps explain why, in the 1920s and 1930s, when the state of sugarcane cultivation in Brazil was addressed in studies published at the time, nothing was said

about Amazonian mills and *engenhocas*. Even though they had ceased producing sugar, many were still active and continued to produce cachaça. Examples of such works include that of Hermes Júnior (1922) on sugar as a factor in public wealth in Brazil, as well as the studies by Gileno de Carli on sugar in Brazilian economic formation (1937) and his “*Geografia econômica e social da cana de açúcar no Brasil*” (1938). A reader of these works would be left with the impression that the history of sugar in the Amazon region simply did not exist.

It is true, however, that Pará in the nineteenth century was far from being an important sugar producer or exporter. The province’s economic profile was defined instead by the export of products such as cacao, sarsaparilla, Brazil nuts, dried and salted hides, and rubber. Between the fiscal years of 1858 and 1863, for example, sugar did not appear among the five principal export products of Grão-Pará, whether measured in arrobas or in value (*mil-réis*). During this period, the two leading commodities were rubber and cacao, respectively; followed by salted and dried hides, then sarsaparilla, and in fifth place cotton (Scully, 1866).

Based on data from the Mesa do Consulado do Pará, covering most fiscal years between 1841 and 1850 and presented in Graph 2, we observe that sugar appears only very modestly. Sugar surpassed the 2% threshold of total export value (in *mil-réis*) only in 1847–1848 (2.07%). In 1842–1843, by contrast, it fell below 1% (0.91%). Usually in tenth place from 1841 to 1847, sugar rose to eighth place in 1847–1848, ranking ahead of cotton (1.13%) and copaíba oil (1.47%), as well as Brazil nuts (0%)—the latter two being forest products. Sugar maintained this position in 1848–1849 and 1849–1850, despite the recovery of Brazil nut exports, which surpassed 4% for the first time. Meanwhile, the share of rice with husk declined in 1848–1849 (1.63%), and the share of green and salted hides fell in 1849–1850 (1.42%), both dropping below the share contributed by sugar for the first time.

Graph 2. Sugar and the Main Export Products of Grão-Pará (1841–1850).



Fonte: *Collecção dos Mappas* (1848, 1854, 1855).

Considering the Brazilian context, between the fiscal years of 1841 and 1850, for example, the amount of sugar exported from Pará—measured in arrobas—did not exceed 0.21% of the total sugar exported by Brazil. In terms of value, expressed in mil-réis, it did not surpass 0.18% of the total revenue generated by Brazilian sugar exports to foreign markets during the same period, as shown in Table 3.

Table 3. Pará in Brazilian Sugar Exports (1841–1850).

Years	Brazil	Pará	%
1841-1842	8.841.744\$182	16.244\$000	0,18
1842-1843	4.860.218@11pound	10.432@16 pound	0,21
1842-1843	9.998.574\$949	7.428\$780	0,07
1843-1844	5.209.721@17pound	5.260@	0,11
1846-1847	14.728.066\$710	22.509\$382	0,15
1847-1848	7.098.843@03pound	13.961@11pound	0,20
1847-1848	14.121.177\$892	23.364\$200	0,17
1848-1849	7.768.319@14pound	15.465@	0,20
1848-1849	15.879.101\$284	25.348\$560	0,16
1849-1850	8.505.659\$14pound	17.144@1/2pound	0,20
1849-1850	15.026.419\$139	26.517\$600	0,18
1850-1851	7.933.586@10pound	16.339@	0,21

Collecção dos Mappas (1848, 1854, 1855).

Nevertheless, despite the limited importance of Amazonian sugar within the overall framework of Brazilian exports—where Bahia and Pernambuco competed for first place and jointly accounted for most of the nation’s exported sugar, followed typically by Rio de Janeiro and São Paulo in third and fourth place, respectively, and with Alagoas, Sergipe, and Paraíba fluctuating between fifth and seventh positions—Grão-Pará almost always occupied eighth place. It thus ranked behind all major producers and even behind the mid-level exporters, although still ahead of the remaining provinces with the lowest participation in the Brazilian sugar export market. This pattern can be observed in the data for various years between the fiscal years of 1841 and 1850. In other words, among the provinces with minimal participation in the national export market, Grão-Pará consistently led its category, as shown in Table 3.

Table 4. Sugar Exports by Province (1841–1850)

Years	Bahia	Pernambuco	Rio de Janeiro	São Paulo	Alagoas	Paraíba	Sergipe	Grão-Pará	Rio Grande do Sul	Demais Províncias
1841-1842	35,60%	39,02%	10,44%	6,74%	2,81%	1,83%	3,32%	0,21%	0,01%	0,02%
1842-1843	39,05%	44,10%	10,85%	3,32%	0%	2,50%	0%	0,11%	0,02%	0,05%
1846-1847	42,23%	40,82%	5,05%	5,35%	2,21%	1,95%	1,90%	0,20%	0,16%	0,13%
1847-1848	43,81%	42,51%	4,94%	3,68%	2,83%	0%	1,92%	0,20%	0,09%	0,02%
1848-1849	39,36%	49,07%	2,71%	2,74%	3,88%	0,00%	1,70%	0,21%	0,24%	0,09%
1849-1850	47,59%	37,32%	5,69%	2,61%	1,70%	2,23%	2,57%	0,21%	0,06%	0,02%

Collecção dos Mappas (1848, 1854, 1855).

To conclude this topic—though it is by no means less important—we may now answer the following question: What was the principal import market for Amazonian sugar in the nineteenth century? Examining the data in Table 4 regarding Pará’s sugar exports by country of destination across various fiscal years between 1841 and 1873, we see that—with the sole exception of the fiscal year 1846–1847, when France imported 6,898 arrobas and Great Britain 3,804 arrobas, surpassing Portugal’s 3,253 arrobas—Portugal was, in every other year listed, the main consumer market for Pará’s raw sugar, whether white or brown. In 1872–1873, Portugal was even the only importing market.

France, for its part, almost always appeared in second place, while Great Britain typically occupied third place, surpassing France only in 1849–1850. The United States of America imported only residual amounts, with consistently modest volumes, and there were also occasional and sporadic markets such as Denmark and the Hanseatic Cities, whose imports tended to focus on other products rather than sugar.

Also visible in Table 4 is a small amount designated for “Domestic Consumption” in the fiscal year 1847–1848—an uncommon occurrence.

Table 5. Pará’s Sugar Exports by Country of Destination (1841–1873)

YEARS	COUNTRIES							TOTAL
	PORTUGAL	GRÃ-BRETANHA	FRANÇA	EUA	DINAMARCA	CONSUMO	CIDADES HANSEÁTICAS	
1841-1842	9.958@	104@	278@				90@	10.432@
1842-1843	5.193@	10@		57@				5.260@
1846-1847	3.253@	3.804@	6.898@	6@				13.951@
1847-1848	8.968@	745@	5.206@		535@	11@		15.465@
1848-1849	16.732@	1.787@	2.207@	18@				20.744@
1849-1850	12.361@	2.004@	1.959@	15@				16.339@
1870-1871	2.253@	1.500@						3.753@
1871-1872	2.589@	854@						3.443@
1872-1873	2.530@							2.530@

For the fiscal years 1847–1850: “*Collecção dos Mappas*” (1848, 1854, 1855); for the fiscal years 1870–1873: Soares (1876, 1877, 1879, 1881, 1883).SOARES (1876; 1877; 1879; 1881; 1883).

Throughout the nineteenth century, therefore, Portugal remained the principal market for Amazonian sugar, just as it continued to be the main destination for rice—whether in husk or milled—cotton, sarsaparilla, and clove, although its share in cacao imports declined. In other words, Portugal functioned as a long-standing and traditional market for the consumption and re-export of Amazonian products to Europe, a role it had played since the colonial era. Despite the opening of Brazil’s ports to Portugal’s “friendly nations” in 1808 and the growing participation of other countries in export and import

activities through the commercial hub of Belém do Pará, Portugal continued to be one of the key trading partners of the province of Grão-Pará throughout the nineteenth century. This remained true even as the country gradually lost ground to the United States, Great Britain, and France—so much so that, by the 1870s, Portuguese participation in Amazonian imports had diminished significantly, as illustrated in Graph 3.

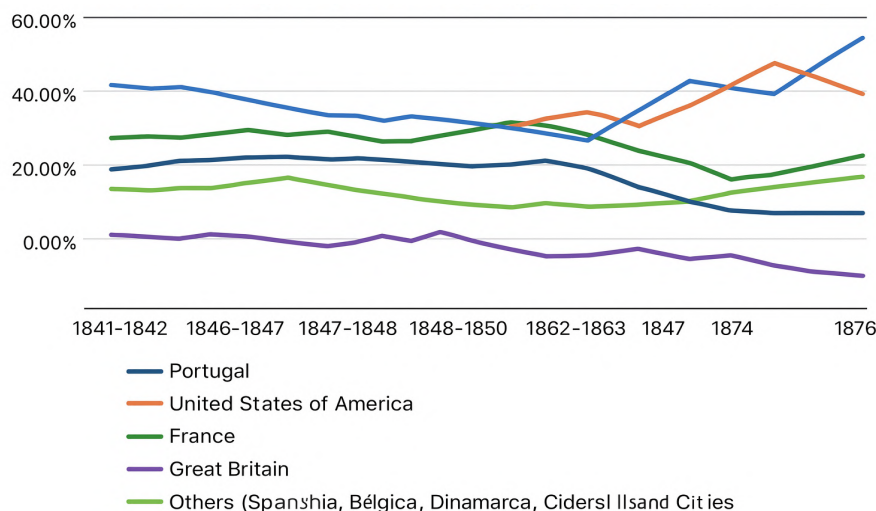
As shown in Graph 3, in the early 1840s—based on fiscal-year data from July 1841 to June 1842—Portugal still held the largest share of Amazonian export trade, accounting for 33.84% of the region's export value. The United States followed closely with 31.91%, then France with 15.68%, Great Britain with 11.32%, and the remaining destinations (Hanseatic Cities, Spain, and Belgium) with 7.25%.

In the following fiscal year (1842–1843), export trade with the United States (34.02%) surpassed that with Portugal (30.06%), placing Portugal in second position. By 1846–1847, Portugal had fallen to third place (19.87%), with the United States remaining in first (26.52%) and France in second (25.13%).

Several years later, in 1862–1863, the British Empire dominated Amazonian exports with 34.62%, followed by the United States with 29.30%, France with 23.78%, and Portugal in fourth place with 10.35%. Other destinations (Hanseatic Cities, Sardinia, and the Netherlands) together accounted for 1.95%.

By 1874, Portuguese participation had dropped to 5.82%. The United States held first place with 48.38%, followed by Great Britain with 35.37%, while France declined to 6.99%. Remaining in fourth position with 3.40%, Portugal trailed behind France (13.21%), the United States (26.63%, likely feeling the effects of the 1876 crisis, which may explain the drop in its share), and Great Britain, which had returned to the top with 51.61%.

Graph 3. Grão-Pará's Exports by Country and Destination (1841–1876)



For the fiscal years 1841–1850: *Collecção dos Mappas* (1848, 1854, 1855); for the fiscal year 1862–1863: Scully (1866); for the years 1874 and 1876: Cordeiro (1920).

In any case, although Portugal's share declined steadily over the course of the nineteenth century—particularly in its second half—it is clear that Great Britain, the United States, France, and Portugal together accounted for more than 90% of all export trade from the Amazon region. The participation of other nations was minimal or occasional, including that of the German cities (Hanseatic Cities), the Italian states, the Netherlands, Belgium, Denmark, and Spain. However, depending on the specific product exported, the composition of trade with each destination varied considerably.

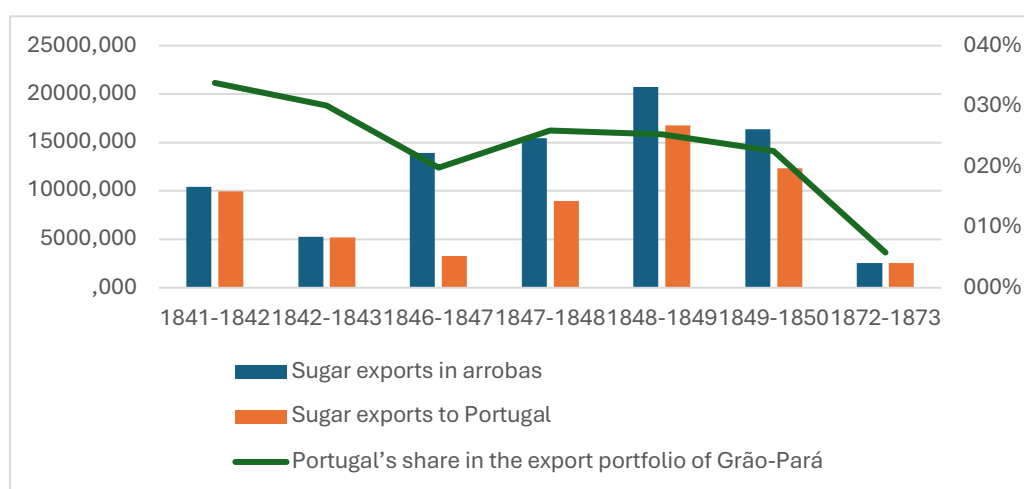
The United States and Great Britain, for example, were the most important importers of rubber and rubber goods (such as shoes), which explains the sharp rise in exports to those countries as the rubber economy became more significant beginning in the 1850s. France was the principal importer of Amazonian cacao. Portugal, for its part, stood out for importing clove, sarsaparilla, rice (both in husk and milled), cotton, and sugar—as mentioned earlier and emphasized once again here.

Thus, although British and French sugar imports reached several thousand arrobas (see Table 4), Portugal almost always absorbed the largest share of the sugar exported from the Amazon region. In 1841–1842, it accounted for 95.46%; in 1842–1843, 98.73%; in 1847–1848, 57.99%; in 1848–1849, 80.66%; and in 1849–1850, 76.65%. The sole

exception was the fiscal year 1846–1847, when France imported 49.40%, Great Britain 27.25%, and Portugal, in third place, 23.32%.

It is therefore no coincidence that the decline in sugar exports from Grão-Pará proceeded in step with Portugal’s diminishing share within the province’s export portfolio—this in addition to the endogenous difficulties previously discussed, especially the chronic shortage of labor within Amazonian sugar production. Graph 4 makes this relationship clearly visible.

Graph 4. Amazonian Sugar Exports and Portugal’s Share (1841–1873)



For the fiscal years 1847–1850: “Collecção dos Mappas” (1848, 1854, 1855); for the fiscal years 1872–1873: Soares (1876).

Conclusion

Even today, the presence and significance of African slavery in the Amazon region—alongside Indigenous enslavement and the coerced labor of free subjects—remains largely unknown to Brazilian society. It is therefore unsurprising that knowledge about sugar mills and *engenhocas* in the region, built on enslaved labor among other agricultural activities, is equally limited. Because the world of labor in the sugar economy during the colonial and imperial periods is often associated primarily with the enslavement of people of African origin, the assumption that Afro-descendant slavery in the Amazon was residual or nearly nonexistent has contributed to the near-total eclipse of the region’s sugar mills and *engenhocas*. The Amazon has thus long been depicted as a society rooted in extractive economies, reliant on Indigenous and local labor—focused

during the colonial era on the *drogas do sertão* [commodities from the *sertão*], and during the Empire and the Republic on rubber and Brazil nuts.

Agricultural crops such as tobacco, cacao, cotton, rice, manioc flour, and sugarcane—alongside others such as maize, beans, and coffee—and livestock activities, especially cattle raising, have long appeared to hold little or almost no importance in the region’s historical narrative. Economic histories have privileged extractivism, particularly the rubber economy (Santos, 1980; Weinstein, 1993). At the same time, an assumed opposition between extractive and agricultural/livestock activities—always to the detriment of the latter—as well as the belief that slavery and extractivism were incompatible, together with the supposed absence of plantations in the Amazon, resulted in the consolidation of an interpretive model portraying the region as a place devoid of a slave-based agricultural economy.

In reality, this was more a lens imposed on the Amazon than an accurate diagnostic of its economic life. Embedded within this reality were sugar mills, *engenhocas*, and sugarcane fields that produced and exported sugar, while their English-imported stills produced and sold cachaça. Within these rural properties, agricultural and livestock activities coexisted with extractivism, marked by polyculture and by the combined exploitation of Indigenous labor, the coerced labor of free nationals, and enslaved Africans.

Thus, even without attaining the importance of the sugar economies of the Northeast (Bahia, Pernambuco, Alagoas, Paraíba, Sergipe) or the Southeast (Rio de Janeiro, São Paulo)—far from it—this article, in dialogue with the recent scholarship cited throughout, offers a contribution to the history of sugar, and therefore to the history of the sugar mills and *engenhocas* of the Amazon Valley.

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