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Rice Cultivation and the Struggle for Subsistence in Early Colonial Suriname (1668–1702)

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Abstract

The Black Rice Debate discusses the agency of enslaved Africans in rice cultivation in the Americas from the seventeenth century onward. With regard to Suriname, it was considered highly unlikely that rice grew there before 1730 and that Africans at that time knew how to grow rice. This contradicts Maroon oral history, which dates circa 1690 as the time that their first ancestors escaped into the interior forests with

rice. Based on Dutch archival records, we show that rice was present in Suriname before the Dutch conquered the colony in 1668. Shortly afterward, it became a staple food as a means to mitigate the ongoing food scarcity. Enslaved Africans played a crucial role in the establishment of designated plantations to grow subsistence crops. Archival records also indicate that conditions were present as early as 1686 for enslaved Africans to escape slavery, bringing rice with them. Our research highlights the importance of connecting archival data to geographical, botanical, and oral history research to reveal misrepresented historical actors, such as enslaved Africans.

Keywords

rice cultivation – subsistence – Suriname – colonialism – African agency

Judith Carney's book *Black Rice* (2001) discusses exhaustively the African influence on the origins of rice cultivation in the Americas. Carney railed against "the institutional white denial of the intellectual or skilled capacity of bondsmen," a denial which in her view proliferated due to the paucity of historical records on the lives of the enslaved (Carney 2001:81). Her arguments in *Black Rice*, therefore, depended primarily on geographical sources. She compared the rice cultivation methods of South Carolina—which emerged during the eighteenth century—with those in West Africa—which had been in place since 200 B.C.E.—and found many similarities in the techniques practised for cultivating, winnowing, milling, and cooking rice.¹ Carney also argued that African rice (*Oryza glaberrima*) was cultivated widely in the Americas before it was replaced by Asian rice (*Oryza sativa*), since the latter was easier to process in water-driven mills (Carney 2001:142–55). *Black Rice* makes a strong case for the importance of African rice and skills in the development of rice cultivation in the Americas.

In the so-called "Black Rice Debate" that followed, different perspectives and methodologies have led to various characterizations of African agency.² David Eltis, Philip Morgan, and David Richardson (2007 and 2010), who were Carney's main critics, attributed the emergence of rice cultivation in South

1 For an elaborate description of the history of rice cultivation in West Africa, see Fields-Black 2008.

2 For a more extensive summary of their version of the Black Rice Debate, see Watkins & Carney 2022. For an overview about how the Black Rice Debate relates to other histories and historiographies of rice, see Bray 2015.

Carolina to European colonizers, reasoning that it was their experimental and commercial mindset that gave the main impulse to the flourishing rice economy. Furthermore the scholars discounted the probability of African agency and claimed that the slave trade hardly provided the Americas with enslaved Africans knowledgeable about rice-growing techniques in the early years of the Middle Passage. To back their claims, Eltis and colleagues depended heavily on the extensive SlaveVoyages database.³ However, this database has limitations, which Gwendolyn Hall has pointed out. The SlaveVoyages data often mentioned ships leaving from an “unspecified” African port and excluded mention of the trade in enslaved Africans and other goods carried by smugglers and pirates (Hall 2010). The Black Rice Debate has successfully shown the subjectivity of historical databases in colonial historiography. While colonial archives mostly preserved governmental bureaucracy and therefore maintained biases in white historiography, Carney’s geographical approach enabled her to construct a narrative about people who themselves left few written records.

Carney did not limit her research to commercial plantations but also included subsistence agriculture, a matter that concerned not only the colonizer but also the enslaved. In this respect, colonial Suriname figured prominently in the Black Rice Debate because its inhabitants depended on rice as a staple food well before they started to commercialize this crop in the early twentieth century (Maat & Van Andel 2018). Carney identified two corridors for the introduction of rice to Suriname: a Brazilian route—which brought rice and rice-growing skills from Africa to the colony via the pioneering subsistence conventions in Dutch Brazil—and a direct African route (Carney 2005). She further highlighted the importance of rice cultivation in Suriname for Maroon populations, people of African descent who had run away from the plantations and survived in the forests of Suriname. Eltis, Morgan, and Richardson, on the contrary, dismissed any possibility of African involvement in the introduction of rice cultivation to early colonial Suriname. According to them, between 1667 and 1730 “there is neither hard evidence nor much probability that people with rice-growing skills arrived in Suriname on Dutch slave ships” (Eltis, Morgan & Richardson 2007:1344). In that period, the Dutch hardly purchased any enslaved Africans in Upper Guinea, the region between Senegal and Ivory Coast where rice cultivation was widespread. Instead, Dutch trade in people and food crops was concentrated along the “Slave Coast” (currently Benin) and Central Africa, where no rice was cultivated. Eltis, Morgan, and Richard-

3 The database that Eltis, Morgan & Richardson developed is also known as the Trans-Atlantic Slave Trade Database, <https://www.slavevoyages.org/voyage/database>.

son contended that “there is no evidence that [enslaved Africans in Suriname] had any memory of rice,” a statement which contradicts the oral history of the Maroons (Eltis, Morgan & Richardson 2007:1344). The first Maroon ancestors were thought to have escaped around 1690 (Price 1983). Tinde van Andel, Harro Maat, and Nicholaas Pinas found oral histories about Maroon women who allegedly escaped with specific rice varieties between 1690 and 1739 (Van Andel, Maat & Pinas 2023). Subsistence-oriented research into the history of rice cultivation in Suriname will help clarify the question of African agency in the distribution of rice varieties and rice-growing skills.

The rich body of archival letters exchanged between the governors of Suriname and the representatives of the colony in the Netherlands can provide answers to important questions about African agency such as: what written evidence exists on rice cultivation in Suriname in the early days of Dutch rule?; and what role did rice play in the food supply of the colony? Here we present a reconstruction of the emergence of rice cultivation in Suriname based on Dutch archival records dating from 1668 to 1702 and we show how rice became part of the subsistence strategy of the colonial authorities. Thanks to recent digitization efforts and the availability of AI-assisted methods for transcription, Dutch colonial records are more accessible than ever before (Keijser 2020).⁴ We searched for references to rice in the archives of the consecutive Dutch rulers of early colonial Suriname—the Staten van Zeeland and the Sociëteit van Suriname—whose archives are housed respectively in the Zeeuws Archief in Middelburg and the Nationaal Archief in The Hague. Our queries included different Dutch spellings (some of which are old) for rice: *rijst*, *rijs*, *reis(t)*, *reijs(t)* and *rys*. The AI-generated transcriptions of the archival documents used in this article, albeit rudimentary, have been improved and made public on the website of the Nationaal Archief. In this article, the resultant reconstruction of early rice cultivation in Suriname mostly follows a chronological order. While in the first instance, this approach provides a governance perspective, the focus on rice as a subsistence crop allows us to question and ascertain to some degree the contributions of plantation owners and enslaved Africans.

4 The search engine designed by Gerhard de Kok, <https://dekok.xyz/htrsearch/>, was used to conduct a search of the AI-generated transcriptions of the Nationaal Archief (NA) in The Hague. The search engine available at the website of the Zeeuws Archief in Middelburg was used to search through the digitized and transcribed documents of the archive of the Staten van Zeeland en Gecommitteerde Raden, <https://www.zeeuwsarchief.nl/onderzoek-het-zelf/archief/?mivast=239&mizig=210&miadt=239&miview=inv2&milang=nl&micode=2>. Due to the low ratio of digitized and transcribed documents in the Zeeuws Archief, we mostly relied on sources found in the Nationaal Archief.

1 Reconstructing the Emerging Rice Cultivation in Suriname Based on Dutch Archival Records

1.1 “Rice Grows Well Here”

The first reference to rice in Suriname found in the Dutch archives comes from a letter written in 1668 by Abraham Crijnssen, who oversaw the colony of Suriname as commander at the time. Crijnssen had just conquered the colony for the second time within a year. Ownership of the colony by the Dutch provincial government of Zeeland, the Staten van Zeeland, was secured through peace negotiations between the English and the Dutch in Breda (Fatah-Black 2019:34). Crijnssen’s letter shows that the colony had to deal with subsistence problems from the very beginning. Among other foodstuffs, rice was mentioned as part of the solution: “Rice, beans and radish grow very well here, but these will soon no longer be available, although they will still be needed; but by investing a lot of work, everything can be cultivated over time.”⁵ Crijnssen did not mention who had planted the rice field that he described, nor the type of soil, nor the variety of rice growing there. Later the same year, the Staten van Zeeland instructed the newly appointed governor of Suriname, Julius Lichtenberg, to allow his soldiers to grow their own food for sustenance, including rice.⁶ These early references substantiate the suggestion by Carney that Major John Scott was referring to the presence of rice in Suriname when he took note of rice as a commodity of “Guiana” in 1669 (Carney 2005:327).⁷ Written evidence pinpoints the introduction of rice in Suriname to as early as 1668, with possibly even earlier references in English colonial archives.

Subsequent archival references to rice in Suriname date from after 1683, when the Sociëteit van Suriname (hereafter Society) had taken over ownership of the colony from the Staten van Zeeland. The Society—a private initiative

5 Zeeuws Archief, Abraham Crijnssen, August 3, 1668, 2035.1_58_5, “Van rijs, boontjes, radijs, groijt hier seer wel maar sal soodra bij d’handt nijet connen sijn, als wel van noode soude wesen, maar door neersticheijt sal alles mettertijt aengequeeect werden.” <https://hdl.handle.net/21.12113/763D934BCBFC4DC1AE6A9580E452452C>.

6 Zeeuws Archief, Staten van Zeeland, November 1668, 1606.2_297, <https://hdl.handle.net/21.12113/440AA9780E8247C899C8744DE9081F31>.

7 Major John Scott was a soldier, planter and geographer for the British king. In his *Description of Guiana*, a manuscript from 1669 (British Library Sloane collection, Mss No. 3662, Fol. 37^v–42^v), he writes “The Commodities of Guiana are Gold, Silver, Annotta, (a Due) Rich-Gums, Balsams, Honey, Wax, specklewood Justick, many Physical Drugs, Sugar, Cotton & Rice.” Because Scott describes the area between the Orinoco River (Venezuela) to the Sinnamary River (French Guiana), it is not clear what commodities were found where, <https://www.angelfire.com/mb2/jodensavanne/scott.htm>.

managed by the municipality of Amsterdam, the Dutch West India Company, and Cornelis van Aerssen van Sommelsdijck (hereafter Van Aerssen)—was constituted for the sole purpose of governing the colony of Suriname (Fatah-Black 2019:46). As governor of Suriname, Van Aerssen became responsible for the daily management of the colony. His letters from 1684, addressed to the directors of the Society in Amsterdam, clearly describe the state of subsistence in Suriname at the time. Immediately upon his arrival, Van Aerssen realized the lack of sufficient provisions for the inhabitants of the colony. He wrote that planters, who focused primarily on the highly profitable production of sugar, had neglected the need to grow food to sustain themselves and their enslaved workforce (Bijlsma & Van Aerssen van Sommelsdijck 1923/1924:429), which made Van Aerssen prioritize the establishment of large gardens for the supply of provisions. He wrote that in August 1684 “thirty-one slaves from the latest slave ship, the *St. Jan*, have started, at the expense of the Society, to work on a plantation for subsistence crops here next to the fortress” (Bijlsma & Van Aerssen van Sommelsdijck 1925/1926:181). The governor’s remark shows that enslaved Africans were put to work on the Society’s plantation from the onset of its existence. Furthermore, the location of the plantation can be deduced from the letter. The fortress that Van Aerssen was referring to was Fort Zeelandia, which served to protect the colony from attacks from the sea and was situated near the mouth of the Suriname River, where the town of Paramaribo was starting to develop. Both the Society’s plantation and the fortress appear on the “Labadist map” of 1686 (see Figure 1). On the map, the plantation owned by the Society was named “d’Alibert for the Society,” indicating that it was not Van Aerssen, but the Frenchman d’Alibert du Mas Rouge who was directly in charge of the plantation.⁸ Initially, before rice was planted on the plantation, Van Aerssen expected that tuber crops would be cultivated there (Bijlsma & Van Aerssen van Sommelsdijck 1925/1926:181). In 1685, however, rice became part of the strategy of the Society to ensure food security in the colony.

A year after his arrival, Van Aerssen received instructions from the Society to sow rice on its plantation, which indicates an increasing interest in rice cultivation among the Dutch. The directors of the Society requested specifically to plant rice on “sandy soils” because it would grow there well and they sent some

8 D’Alibert du Mas Rouge is referred to as director of the plantation of the Society in archival records and was one of the many French people living in the colony at the time (van Lier 1977:24). NA, Jacob Boreel, Paulus Godin, and Philippe Van Hulten, June 15, 1689, 1.05.03_19_169, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/19/file/NL-HaNA_1.05.03_19_0169.



FIGURE 1 Map of the Suriname, Commewijne and Cottica rivers with adjacent plantations

Note: The map is a copy of the Labadist map from 1686. The insert in the upper left corner shows in more detail the town of Paramaribo and the fortress Zeelandia, a windmill, and a plantation of the Society named “d’Alibert voor de Sociëteit.”

SOURCE: ADAPTED FROM WALGRAVEN (1715) BY THE AUTHORS

milling instruments to facilitate processing the crop.⁹ The need for expertise to grow rice successfully was underlined several times by Van Aerssen. In 1686 he wrote that the rice had not grown as expected because of “our agricultural incompetence.”¹⁰ In the same letter, he also addressed the difficulty of milling rice due to a lack of knowledge of the process of dehushing rice grains and an inability to operate the mill. When Van Aerssen sent a sample of “uncleaned

9 NA, Jacob Boreel et al., December 10, 1685, 1.05.03_90_125, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/90/file/NL-HaNA_1.05.03_90_0125.

10 NA, Cornelis van Aerssen van Sommelsdijck, October 3, 1686, 1.05.03_216_25–26, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/216/file/NL-HaNA_1.05.03_216_0026.

rice” to the Netherlands in 1687, he specifically asked for help in finding ways to mill it.¹¹ In a subsequent letter from 1687, Van Aerssen complained about the lack of people with expertise to grow not only rice but also indigo, tobacco, cotton, and roucou.¹² The need for agricultural expertise to grow subsistence crops in the new environment of the colony of Suriname was thus well understood.

1.2 *“There Have Never Been Curious People”*

The exchange of letters also shows that Van Aerssen was partial toward the different bodies of knowledge: while he complained about a lack of experts, by whom he meant European experts in Suriname, he showed a clear ignorance of Indigenous agricultural expertise. In 1687, he wrote “There have never been curious people here, or people somewhat knowledgeable about agriculture, which makes it unsurprising that nothing has been undertaken and that everything cannot be made nor found in a single day.”¹³ He attributed differences between Indigenous farming methods and the plantation economy to a lack of knowledge. Whereas Indigenous farming was based on polyculture and shifting cultivation, plantation agriculture was based on a scalable system where crops and laborers, isolated from their traditional environments, were introduced to land on which local people were displaced and the natural vegetation destroyed (Johnston 2020). The plantation as such had no antecedents in the New World. Although Van Aerssen did not regard Indigenous people as valuable sources of knowledge, they could have provided significant assistance with growing tobacco, cotton, or the red colorant roucou (*Bixa orellana*), since they had been growing these crops for centuries (Clement 1999).

Another important reason for Van Aerssen’s ignorance of Indigenous farming practices and the knowledge behind such practices could be the often violent character of encounters between European colonists and Indigenous tribes in Suriname. Before Dutch rule, the English had turned the ongoing battle between two major Indigenous tribes, the Arawaks and the Caribs, to their

11 NA, Cornelis van Aerssen van Sommelsdijck, June 10, 1687, 1.05.03_216_547, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/216/file/NL-HaNA_1.05.03_216_0547.

12 NA, Cornelis van Aerssen van Sommelsdijck, July 25, 1687, 1.05.03_217_31, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/217/file/NL-HaNA_1.05.03_217_031.

13 NA, Cornelis van Aerssen van Sommelsdijck, July 25, 1687, 1.05.03_217_31, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/217/file/NL-HaNA_1.05.03_217_031.

advantage by allying with the Arawaks (Dragtenstein 2002:23). The Dutch initially took a more peaceful stance toward the Indigenous tribes and attempted to establish good contacts with both the Arawaks and the Caribs, but the tribes joined forces in an eight-year war from 1678 to 1686 against the colonists (Dragtenstein 2002:37–38). The native people strongly resisted European dominance, which forced them off their lands and subjected them to European laws. Indigenous people specifically objected to the enslavement of their own kind or members of an allied tribe, a colonist practice that was common at least until 1677. After the war, the relationship between European colonists and Indigenous people remained troubled until around 1700 (Dragtenstein 2002:55). Since Van Aerssen's remark about the lack of curious people in Suriname was made a year after the war, his lack of respect for Indigenous knowledge seems to have stemmed from his vision for the plantation economy that did not align with Indigenous farming practices and also from the violent character of intercultural encounters.¹⁴

It is also likely that Van Aerssen was similarly unaware of, or disinterested in, African agricultural knowledge because his relations with the enslaved, like those with Indigenous people, were shaped by a firm belief in White superiority and dominance. While enslaved Africans who arrived either from the former Dutch Brazil or directly from Africa would have known how to grow rice (Carney 2005), archival records show no indication that Van Aerssen was aware about such skills. This would explain why the governor depended on the advice and directives of the Society and on his own experimental rice cultivation practices.

1.3 *"There Are Two Kinds of Rice Here"*

Van Aerssen started to experiment with planting rice on sandy soils, as instructed by the directors of the Society, as well as in swamps. He also saw to it that an effort was made to drain swamps into polders and to invest in water management by building sluices, thereby creating fertile alluvial soils.¹⁵ In West Africa, almost all of such microenvironments found in the landscape from estuary to highland forest could be exploited for the cultivation of rice because

14 Indigenous agricultural knowledge was not always neglected by Dutch colonial authorities: in 1627 more than 40 Arawaks were shipped from their colony British-Guiana (now Guyana) to Barbados to assist the English in growing and processing cotton, tobacco, cassava, and maize (Gragg 2003:88 and 114).

15 NA, Cornelis van Aerssen van Sommelsdijck, April 7, 1686, 1.05.03_215_104–105, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/215/file/NL-HaNA_1.05.03_215_0104.



FIGURE 2 Traditional rice varieties, currently grown by Suriname Maroons and considered to be the same varieties of rice brought by their ancestors during their escape from slavery

Note: Picture A shows Asian rice with white bran (Alisi Seei, NP131); picture B shows Asian rice with red bran (Ma Paanza, NP121); and picture C shows African rice with red bran (Baaka alisi, NP65).

SOURCE: PHOTOS COURTESY OF NICHOLAAS PINAS

of elaborate local knowledge of rice-growing techniques and the many rice varieties that were adapted to the multitude of local environments (Dapper 1668:395–96; Fields-Black 2008). In Suriname, however, despite the availability of knowledge on rice cultivation, the number of rice varieties and the knowledge of their different characteristics and needs were limited, which made rice cultivation successful only in specific environments.

We know little about the exact types of rice found in Suriname at the end of the seventeenth century, but archival evidence shows that both the African species, *Oryza glaberrima*, and the Asian species, *Oryza sativa*, had reached the colony. Van Aerssen wrote in 1688 that “there are two kinds [of rice] here, like white, and black, which in the fatherland is known as red.”¹⁶ The white type of rice can only mean *O. sativa*, while rice varieties with red bran can be either *O. sativa* and *O. glaberrima* (see Figure 2, A and B; Sweeney & McCouch 2007), but only *O. glaberrima* has a black husk (Figure 2, C). Both rice species could have reached Suriname from West Africa, where *O. glaberrima* was domesticated, and *O. sativa* was introduced sometime after 1500 through Portuguese coastal trade around the African continent (Gilbert 2015).

The results of Van Aerssen's rice-growing experiments give further insight into the available rice varieties. In 1686, the governor wrote that the rice grown in swamps grew too lushly, resulting in a lack of ears, while rice grown on the sandy grounds of the plantation of the Society, in contrast, grew beautifully.¹⁷

16 NA, Cornelis van Aerssen van Sommelsdijck, January 1, 1688, 1.05.03_217_202–203, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/217/file/NL-HaNA_1.05.03_217_0202.

17 NA, Van Aerssen van Sommelsdijck, October 3, 1686.

The growth pattern of rice cultivated on sandy ground and in swamps suggests the presence of upland rice varieties that did not produce high yields on the heavy clay soils of Suriname's coastal polders.

Apart from growing rice, processing the rice panicles into edible grains also required specialized knowledge. Rice processing can be distinguished into three steps: threshing, milling, and winnowing. After a short period of drying, threshing is performed to remove the grains from the panicle; milling serves to remove the husk from the grain, and winnowing separates the chaff from the grain, which is the desired end product. Milling the rice to remove the husk with a wooden mortar and pestle, as it has been done in West Africa for millennia, is notoriously difficult.¹⁸ Not only is it a very labor-intensive process, but doing it wrongly would shatter the grain. Carney writes that the rice grain can be obtained wholly by "a skilled tapping and rolling motion, where loosening the pestle grip at the right moment before striking the rice minimizes grain breakage" (Carney 2001:125). During the early colonial days in Suriname, the Dutch seem to have introduced another, unnecessary step after rice grains were obtained: polishing. They attempted to remove the red bran that is characteristic of African rice and some traditional varieties of Asian rice, especially rice that is grown in West Africa (Sweeney & McCouch 2007).¹⁹ While red bran is perfectly edible and even more nutritious than white bran, the idea that high-quality rice should be white has persisted to this day in Europe and the United States (Sweeney et al. 2006). Removing the red bran without shattering the grain proved, however, extremely difficult. The amount of labor and skill involved in processing rice led Dutch rulers to look for non-manual means of processing the rice from the early days.

We did not find any documents in the digital archives that provided details on how d'Alibert du Mas Rouge, the director of the Sociëteitsplantage which was the Society's plantation behind Fort Zeelandia, managed his rice fields, nor whether his enslaved workforce had any knowledge about growing the crop. However, it is also possible that (Central) Africans without experience in rice cultivation could have learned such skills under these circumstances. In any case, the experiments with rice growing were so successful that, in 1687, three oxheads of uncleaned red rice, the equivalent of a thousand kilograms, could

18 A wooden mortar and pestle found in Nigeria was radiocarbon-dated to 885 C.E. $\pm$ 120; the tools have probably been part of West African agriculture for a much longer time (Seddon 1968).

19 NA, Van Aerssen van Sommelsdijck, June 10, 1687; Paul van der Veen, July 4, 1697, 1.05.03_225_24–29, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/225/file/NL-HaNA_1.05.03_225_0024.

be shipped to the Netherlands.²⁰ The goal of the shipment was twofold: first, obtaining assistance in the development of mechanical methods to process the rice and, second, finding out the potential of rice as a commercial good. In response to the call for assistance with rice processing, the directors of the Society appointed Christoffel Van Lenenbergh as a miller. Van Aerssen wrote about the unexpected arrival of Van Lenenbergh in 1688, when there was no rice stored in Suriname. But they initiated building a rice mill from the materials taken from a watermill previously used to process sugar.²¹ In the Netherlands, windmills to dehusk rice were developed only around 1815, but the expertise in the use of windmills to remove the chaff from barley was developed much earlier (Groten 2019). It was around 1700 when wooden winnowing mills were developed in the Netherlands with large hand-driven paddle wheels that generated an air current that blew away the chaff and dust from the dehusked grains (Bieleman 2010:97–98). There are no records indicating whether Van Lenenbergh was able to remove the rice husks without shattering the bare grains and whether he succeeded in winnowing the rice efficiently with the makeshift rice mill that was constructed from material taken from the watermill.

The exploration of the commercial potential of rice during Van Aerssen's governorship seems to have been more promising. Since the idea to start exporting rice was born out of the fear that the sugar market would collapse, the directors of the Society urged Van Aerssen in 1686 to encourage planters to start growing indigo, tobacco, cotton, ginger, black pepper, melegueta pepper (*guinees grijn*), roucou, and rice.²² They asked for samples of some of the newly grown crops, including rice. The directors commented in 1688 that the rice grown in Suriname was "found to be good and of pleasant taste but [that it] only raised around two-thirds of [the price of] Italian rice." Nonetheless, they hoped to receive another sample, not only of red rice but also of white rice.²³

20 One oxhead is equivalent to 230 liters. Ritzo Holtman, "De oude Nederlandse maten en gewichten," <https://mgw.meertens.knaw.nl/>, accessed October 23, 2023. Given that the density of milled rice is 1.45 g/ml (Bhattacharya 2011), 1000 kg rice was shipped; NA, Van Aerssen van Sommelsdijck, June 10, 1687. 7.

21 NA, Van Aerssen van Sommelsdijck, January 1, 1688, 1.05.03_217_0202, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/217/file/NL-HaNA_1.05.03_217_0202.

22 NA, Jacob Boreel, Paulus Godin, and Philippe van Hulten, August 9, 1686, 1.05.03_90_163–164, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/90/file/NL-HaNA_1.05.03_90_0163.

23 NA, Jacob Boreel, Paulus Godin, and Philippe van Hulten, May 29, 1688, 1.05.03_91_31, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/91/file/NL-HaNA_1.05.03_91_0031.

There are no records of a second shipment of rice to the Netherlands in the subsequent years and the production of rice in Suriname as a commodity for an international market was postponed until the early twentieth century (Maat & Van Andel 2018:82–84). The exploration of rice as a commodity and experimenting with rice growing in Suriname was probably hampered by the murder of Van Aerssen in July 1688. The governor was killed by his soldiers after he had refused to hear them out about their frustrations with the high workload and meager rations. His death is therefore indicative of a subsistence policy that was considerably inadequate (Fatah-Black 2019:80).

Abraham van Vredenburg, who succeeded Van Aerssen as governor of Suriname for the duration of a year, also believed in the importance of a plantation for subsistence crops. In a letter to the directors of the Society of 1689, Van Vredenburg advised the directors to designate the plantation of the Society for growing crops instead of yet another sugarcane plantation. He wrote that “nothing is more necessary and more beneficial than a sizeable plantation for subsistence crops, from where bread, and other needs for the subsistence of the military and the slaves, can be provided, and this can all be arranged by the work of 40 slaves.”²⁴ Although rice is not mentioned, Van Vredenburg’s letter gives us an estimate of the size of the plantation then. He did not await a response from the directors to start growing provision crops on the plantation, for the food scarcity already took on life-threatening proportions and he hoped to relieve the directors of the expenses they had made for shipping foodstuffs to Suriname.

1.4 *Smuggler Ships*

Early during his governorship, in August 1688, Van Vredenburg made a curious mention of the arrival of a slave ship that was provisioned with rice. It concerned a “small Portuguese vessel with around 70 to 80 negroes, mostly small boys, and all were starving. They had no water and not more than a little rice, which they ate uncooked.” The name of the ship and the port of embarkation of the African boys were not mentioned, but Van Vredenburg reported that they were “revitalized” in Suriname and sold soon afterward.²⁵ Because of the West Indian Company’s monopoly on the slave trade in the Atlantic region, including Suriname, at that time (Fatah-Black 2019), the Portuguese were not allowed to trade in enslaved Africans in Suriname. This archival reference may

24 NA, Abraham van Vredenburg, March 8, 1689, 1.05.03_219_299, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/219/file/NL-HaNA_1.05.03_219_0299.

25 NA, Abraham van Vredenburg, August 7, 1688, 1.05.03_218_342, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/218/file/NL-HaNA_1.05.03_218_0342.

be indicative of the illegal slave trade as well as the introduction of rice and African knowledge about rice cultivation. It is therefore important to consider this point in the context of the emergence of rice cultivation in Suriname.

Fourteen years later, in 1702, the governor of Suriname Paulus van der Veen made mention of another slave voyage that depended on rice for provisions. The Dutch captain of this ship, which was stuck on a mudbank on the Atlantic Coast, told Van der Veen that he had exchanged some rice near Cape Verde outside of the region controlled by the Dutch West India Company, and was on his way to the Dutch Republic (implying that he was not engaged in any slave trade), but his ship was blown off track due to a storm, crossed the Atlantic and landed by accident on a beach in Suriname. Van der Veen did not trust this story and assumed that they were smugglers who had secretly landed their cargo of enslaved Africans without informing the authorities.²⁶ Ruud Paesie has traced this smuggler ship in West Africa. Named *St. Joseph*, it had sailed in 1701 to Sierra Leone and Cape Verde to trade in enslaved Africans and other “African products” before heading off to Suriname in 1702 (Paesie 2008:125).

The illegal slave trade made up an impressive proportion of the total slave trade around the turn of the seventeenth century. Between 1674 and 1730, Dutch smugglers alone were responsible for the transport of 55,000 to 60,000 enslaved Africans to the Americas, thereby constituting a third of the total Dutch involvement in the Atlantic slave trade during these years (Paesie 2008:258). Eltis, Morgan, and Richardson, who discounted the probability that African arrivals from Upper Guinea to Suriname between 1667 and 1730 had knowledge about rice cultivation methods, were reluctant to consider the significance of the illegal slave trade because they failed to recognize the biases in the SlaveVoyages database which they used for statistics on legal trade, bureaucracy, and Anglophone sources (Eltis, Morgan & Richardson 2007:1344; Hall 2010). However, since the purchase of rice in West Africa for provisions during slave voyages strongly indicates that enslaved Africans were being shipped,²⁷ the illegal slave trade between Upper Guinea and Suriname can be said to account for the arrival of Africans with knowledge about rice cultivation methods as early as 1688.

26 NA, Paul van der Veen, May 12, 1702, 1.05.03_229_252, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/229/file/NL-HaNA_1.05.03_229_0252. The Dutch captain of this ship was named Cornelis van Doren. Both Sierra Leone and the Cape Verde archipelago were a major trade hub for enslaved Africans, rice, ivory and other desired products in the early period of the transatlantic slave trade (Green 2011).

27 Both Carney (2005) and Eltis, Morgan & Richardson (2007:1344) view rice as part of provisions of slave ships as convincing evidence for the Atlantic transfer of African rice-growing skills.

1.5 “*Rice Is a Weed That Ruins Plantations*”

When Jan van Scharphuysen succeeded Van Vredenburg as governor in 1689, the colony was dealing with subsistence problems to the extent that many enslaved people died from starvation or escaped into the interior forests of Suriname. The directors of the Society were shocked to hear of the food scarcity in Suriname since they believed that Van Aerssen's legacy included a flourishing plantation dedicated to the production of food crops. They were especially surprised to hear that even the workforce of the Society did not have anything to eat. The directors again urged the cultivation of food crops, especially rice, since from what they understood it grew so well in Suriname.²⁸ In an attempt to manage the unrest caused by the lack of food, Van Scharphuysen commanded every planter to provide their domestic servants a minimum amount of food that included rice.²⁹ In 1693 and 1696, the instructions to grow rice for subsistence were repeated by the new directors of the Society.

Correspondence dating from 1696 and 1697 between the directors of the Society and the new governor of Suriname, Paulus van der Veen, sheds light on how different subsistence strategies related to conflicting commercial interests. The commercial interests of the directors of the Society consisted primarily of the establishment and maintenance of a trading monopoly with Suriname to maximize their profits (Fatah-Black 2019:43–44). Therefore, engaging Suriname planters to trade in food crops was perceived as a threat to the Society's interests, because they feared regional trade with agents of colonies that were not under Dutch control. To counteract such trade, the directors advised that plantations growing food crops in Suriname should be maintained. Van der Veen, in contrast, was under the impression that obligating plantation owners to grow more provisions would harm their business since the land, time, and work allotted to growing food would reduce the amount of sugar they could produce. According to the governor, rice processing was such a strenuous effort that “a planter ... finds it more profitable to buy rice from sailors for five or six *stuivers* per pound, than to use his slaves to process his own rice.”³⁰ To Van der Veen, local trade was the most logical solution to a subsistence problem that not only

28 NA, Paulus Godin and Cornelis Valckenier, December 7, 1689, 1.05.03_91_156, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/91/file/NL-HaNA_1.05.03_91_0156.

29 NA, Jan van Scharphuysen, January 7, 1692, 1.05.03_187_54–55, https://www.nationaalarchief.nl/onderzoeken/archief/1.05.03/invnr/187/file/NL-HaNA_1.05.03_187_0054. It is not known whether these domestic servants were enslaved Africans or whether they included white servants.

30 NA, Van der Veen, July 4, 1697. <https://dekok.xyz/htrsearch/transcriptie?scan=70982&query=rijst&varianten=2&archief=SVS>.

involved securing sufficient foodstuffs but also safeguarding the production of the most profitable export product of Suriname, sugar.

The arguments that Van der Veen brought forward in his plea against obligatory plantations for subsistence crops give a valuable insight into the state of rice cultivation in Suriname ten years after Van Aerssen's experiments. Van der Veen wrote that "rice does not grow except in shallow and swampy grounds, where, by its rapid and exuberant growth, when a heavy blow of wind comes together with heavy rain, which happens here three to four times every twenty-four hours, the rice is beaten to the ground, and all the work and effort are lost."³¹ But Van der Veen's attempt to grow rice in swamps ended up yielding not even half the rice that was sown. The inspiration for growing rice in swamps was probably taken from the East Indies, from where Van der Veen had heard that the people "do not eat anything but rice" and where rice was primarily grown in waterlogged paddy fields.³² Furthermore, growing rice in swamps had the beneficial effect of not competing with sugarcane for suitable land. The rapid growth and subsequent low yield from rice grown in swamps mirrored the results of Van Aerssen's rice-growing experiments. Since Van der Veen also wrote about the difficulty of removing the red bran from the rice grain, he was dealing either with the same African rice variety (*O. glaberrima*) as Van Aerssen had reported (see Figure 2C) and/or with an Asian rice variety (*O. sativa*) with red bran (see Figure 2B). Unlike Van Aerssen, however, Van der Veen did not appreciate the fact that rice grows well on sandy soils but complained that rice appeared to grow as a weed on the plantations. Van der Veen's commercial interests prioritized the production of sugarcane over the production of subsistence crops, thus ignoring the potential of rice as a home-grown staple food.

The characterization of rice as an invasive species is curious and deserves more attention. Van der Veen wrote that rice "is to such an extent a weed, that it can ruin a whole plantation, and that it is as bad as if one would sow *hirk* or *duijvels naeijgare* on good soil in the homeland."³³ The analogy is striking for it could be the case that, unlike the species of Dutch weed that Van der

31 NA, Van der Veen, July 4, 1697, <https://dekok.xyz/htrsearch/transcriptie?scan=70982&query=rijst&varianten=2&archief=SVS>.

32 In Java, where Dutch colonizers settled in the seventeenth century, wet-rice agriculture had flourished before the Christian era (Geertz 1966:38–52).

33 *Hirk* refers to charlock (*Sinapis arvensis*) and used to be known in the Netherlands as a weed on agricultural land (Weeda et al. 2003:48–50). The name *Duijvels naeijgare* refers to several vines in the Netherlands, of which only hedge bindweed (*Calystegia sepium*) is considered an undesirable weed (Pombo Geertsma et al. 2024).

Veen used in the analogy, rice that was growing in the plantation was deliberately sown. Enslaved Africans, constantly experiencing food shortages and familiar with rice cultivation, might have seized the opportunity to sow rice in between the sugarcane rows on the plantations where they worked. Birds provide another explanation for why rice was found growing “wild.” The black husks of *O. glaberrima* may have attracted the attention of seed-eating birds in Suriname, which would have resulted in the spread of rice plants throughout the country. Such a narrative resonates with oral histories from Maroons, who say that their ancestors not only took rice from plantations but also found it growing wild in savannas and natural clearings in the forests (Van Andel, Maat & Pinas 2023:13). While Van der Veen was of the opinion that rice plants growing in sugar plantations were weeds, there were many others, people and animals, who could have benefited from its presence among plantation crops.

The unsatisfactory yield from rice grown in swamps and Van der Veen's antagonistic stance toward growing rice elsewhere did not prevent rice cultivation from being part of the subsistence strategies of planters. The Society strongly advised but did not force the plantation owners to invest in growing food crops such as rice and cassava. And according to Van der Veen, those who owned fertile grounds for the cultivation of food crops already produced sufficiently for themselves and their enslaved workforce. Later sources corroborate that homegrown food, which included rice, continued to play an important role in feeding the colony. In his description of Suriname, J.D. Herlein writes of how in December and January, sugarcane is planted “of which the colony gets her main profit,” and he identifies rice, peas, and maize as “the main food for the Negroes and also used by Europeans” (J.D. Herlein 1718:24). The well-known maps of Suriname by Alexander de Lavaux show that in the mid-eighteenth century, the plantation of the Society was located behind Fort Zeelandia and that a plantation for subsistence crops was being created behind Fort Amsterdam, a newly built fortress situated at the confluence of the Suriname and Commewijne rivers (Figure 3). Furthermore, in his early historiography of colonial Suriname, Julien Wolbers states that rice was part of the diet of enslaved Africans living on the plantations during the government of Jan Jacob Mauricius (1742–51) (Wolbers 1970:190). Although we did not find archival evidence of planters who realized the skills of enslaved Africans in rice cultivation and processing, rice produced on the provision grounds of plantations eventually became incorporated into the long-term subsistence strategy of the colony of Suriname.

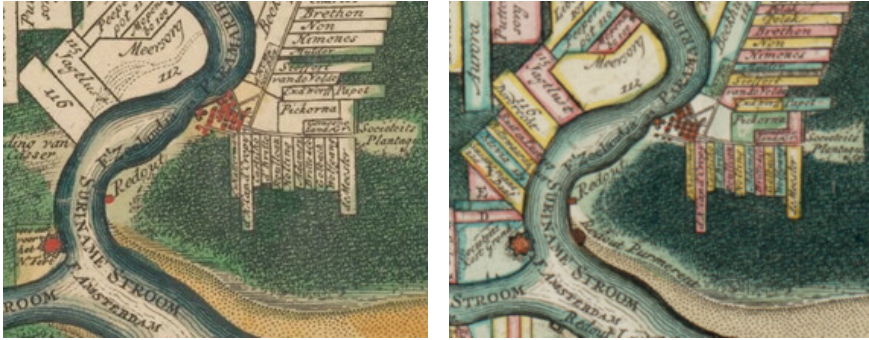


FIGURE 3 Maps by de Lavaux

Note: Left: General map of Suriname by de Lavaux (after 1737), showing the plantation of the Society ("Societeits Plantagie") and a clearance around Fort Amsterdam where later a plantation for subsistence crops would be created ("1400 ack. Voor het N. Fort"). Right: map by de Lavaux (after 1758), quite similar to the general map, showing, besides the plantation of the Society, a plantation for subsistence crops around Fort Amsterdam ("Societeits Kost Grond").

2 Conclusions

Research on subsistence in the early years of the colony of Suriname provides new angles to look at early colonization efforts and the actors involved in these efforts. It fits into a broader trend in current colonial historiography to examine the struggles of the early colonizers and the tenacious resistance they encountered from Indigenous peoples, enslaved Africans, and other non-Europeans (Veevers 2023). The archives of the Staten van Zeeland and the Sociëteit van Suriname illustrate the precarious conditions in Suriname in the first decades under Dutch rule. Life in the colony was a struggle for survival with challenges posed by disgruntled soldiers, Indigenous peoples, enslaved Africans resisting bondage, and the inability of Dutch governors and planters to cope with food shortages. The difficulties faced by the Dutch to carve out a profitable enterprise from their colonial exploits in Suriname are remarkably similar to the fate of the early English colonizers in the Caribbean, who also encountered fierce resistance from the Indigenous population and Maroons, and suffered severe food shortages (Veevers 2023).

The archival records presented in this article provide conclusive evidence for the presence of rice in early colonial Suriname. Evidence of rice cultivation was found in Suriname from the very beginning of the Dutch governance in the colony in 1668 and it was immediately recognized as an important source of food. So during the time that Van Aerssen was governor, both African (*O. glaberrima*) and Asian (*O. sativa*) rice had already reached Suriname. Exper-

iments that the governor initiated proved that rice grew well on sandy soils and poorly in swamps, indicating the presence of upland rice varieties. While home-grown rice was important to feed the colony in the late seventeenth century, the crop was not part of official subsistence policies when it threatened to compromise the profits from sugarcane cultivation. Overall, the Dutch archives indicate that rice cultivation in Suriname emerged as a partial solution to the ongoing difficulties faced by the colony to ensure sufficient foodstuffs for the planters, soldiers, and enslaved workforce.

Although the letters between the governors of Suriname and the directors of the Society consider enslaved Africans primarily as part of an undifferentiated workforce, a closer look reveals that they are significant actors in the above narrative. The letters by Van Aerssen state that enslaved Africans worked the fields of the Society's plantation for subsistence crops from the time of its creation in 1684. As Carney showed, Africans knowledgeable about rice-growing techniques could have reached the colony by then either via Brazil or directly from West Africa (Carney 2005). Moreover, records of illegal slave ships arriving in Suriname that depended on rice for provisions during their transatlantic voyage indicate the presence of Africans knowledgeable about rice-growing techniques in the colony from as early as 1688. However, Van Aerssen's one-sided interest in Western agricultural methods and ignorance of Indigenous farming practices make it seem unlikely that enslaved Africans were appreciated for their rice-growing knowledge. But as efforts to mechanize the milling of rice grains were unsuccessful, Van Aerssen and succeeding governors kept depending on African labor for cultivation and for processing the rice, tasks for which African skills were highly useful.

When food was most scarce, enslaved Africans on the plantations were as enterprising as their owners. By fleeing into the forests of Suriname, they took charge of their situation in the most drastic way. According to Eltis, Morgan, and Richardson, Africans with rice-growing skills likely did not arrive in Suriname until after 1730, when Dutch slave traders gained access to Sierra Leone, Liberia, and Ivory Coast. In their opinion, this corresponded with the first written evidence (dated 1751 and 1775) of the Maroon dependence on rice as a subsistence crop (Eltis, Morgan & Richardson 2007:1345). Our archival research, however, shows that enslaved Africans could have run away with rice under the governorship of Van Aerssen around 1688, well before the plantation owners David Cohen Nassy and Jacob Cardoso encountered the first Maroon fields with large quantities of rice during their military raid in 1712 (Van Andel, Maat & Pinas 2023:4–5; Dragtenstein 2002:74). Although we did not find evidence for entire African agricultural systems that were “transplanted” to Suriname, as Carney argues for South Carolina (Carney 2001), the Maroon rice fields in the

early eighteenth century provide solid evidence for the agency of self-liberated Africans in the successful cultivation of rice as a subsistence crop.

Van der Veen's characterization of rice as a weed suggests that running away with rice became easier over time because rice may have undergone a process of naturalization in Suriname, which would concur with Maroon oral histories that tell how their first ancestors found rice growing wild on savannas or clearings in the forest. One explanation for why rice appeared to grow as weeds is that enslaved Africans could have acted to mitigate threats to their subsistence by planting rice in between the cash crops. Examination of the more sporadic references in the Dutch colonial archives to the lives of enslaved Africans shows how they contributed to instituting rice as a reliable Surinamese-grown crop and how the desperate struggles for food necessitated an assertive attitude on the part of the enslaved Africans in order to survive.

Recent digitization efforts and developments in AI-assisted transcription provided an exciting methodology for this article and the utility of technological tools should be further explored. Furthermore, the interdisciplinary nature of the question of African agency in agricultural development in the Americas requires interdisciplinary methodologies. Drawing connections between different relevant scientific fields—geography, anthropology, botany, history as well as oral history, and archaeology—provides not only input to the Black Rice Debate but can also create greater awareness of scientific biases. In this respect, comparative analyses of misrepresented histories of enslaved Africans may prompt historians to view their traditional archival sources in a different light.

Subsequent research could turn to English archives to look for the earliest references to rice cultivation in Suriname. Or the scope of research could be extended by looking through the Dutch colonial archives for records of rice cultivation in neighboring Guyana or in West Africa. The struggle for food security, the establishment of gardens for the supply of provisions, the origins of the planted crops and the knowledge of how to process them deserve more attention in the historiography of early colonization. It was during these attempts to create a colonial enterprise that Europeans depended a great deal on the agricultural knowledge of Indigenous and enslaved African people. Peter Wood suggests that the growing number of enslaved Africans after 1695 and the continuous shipment of new rice varieties from Africa are of great significance in explaining why it took “more than a generation” before rice became a profitable crop in South Carolina (Wood 1974:35 and 36). Although in Suriname, the number of enslaved Africans (just below 5000 from 1693 to 1697) outnumbered the European population (around 750 in that period) much earlier (Fatah-Black 2019:48), it also took a few decades before rice was adopted as a suitable food crop by plantation owners. The colonial authorities, however, did not consider

the skills of enslaved Africans and Indigenous people important enough to document or it could be that those in authority dismissed Indigenous knowledge of cultivating and processing food crops.

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References

- Andel, Tinde van, Harro Maat & Nicholaas Pinas, 2023. Maroon Women in Suriname and French Guiana: Rice, Slavery, Memory. *Slavery & Abolition* 45(2):187–211. <https://doi.org/10.1080/0144039X.2023.2228771>.
- Bhattacharya, Kshirod R., 2011. *Rice Quality: A Guide to Rice Properties and Analysis*. Cambridge: Woodhead Publishing. [Woodhead Publishing Series in Food Science, Technology and Nutrition No. 219.]
- Bieleman, Jan, 2010. *Five Centuries of Farming: A Short History of Dutch Agriculture 1500–2000*. Wageningen, the Netherlands: Wageningen Academic Publishers. [Mansholt Publication Series Vol. 8.]
- Bijlsma, R. & Cornelis van Aerssen van Sommelsdijck, 1923/1924. De brieven van gouverneur van Aerssen van Sommelsdijck aan directeurs der Sociëteit van Suriname uit het jaar 1684 I. *De West-Indische Gids* 5:424–37. <http://www.jstor.org/stable/41845853>.
- Bijlsma, R. & Cornelis van Aerssen van Sommelsdijck, 1925/1926. De brieven van gouverneur van Aerssen van Sommelsdijck aan directeurs der Sociëteit van Suriname uit het jaar 1684 IV. *De West-Indische Gids* 7:176–88. <http://www.jstor.org/stable/41845967>.
- Bray, Francesca, 2015. Introduction: Global Networks and New Histories of Rice. In Francesca Bray, Peter A. Coclanis, Edda L. Fields-Black & Dagmar Schäfer (eds.), *Rice: Global Networks and New Histories*. New York: Cambridge University Press, pp. 1–36.
- Carney, Judith A., 2001. *Black Rice: The African Origins of Rice Cultivation in the Americas*. Cambridge MA: Harvard University Press.
- Carney, Judith A., 2005. Rice and Memory in the Age of Enslavement: Atlantic Passages to Suriname. *Slavery and Abolition* 26(3):325–48.
- Clement, Charles R., 1999. 1492 and the Loss of Amazonian Crop Genetic Resources.

1. The Relation between Domestication and Human Population Decline. *Economic Botany* 53:188–202. <https://doi.org/10.1007/BF02866498>.
- Dapper, Olfert, 1668. *Naukeurige beschrijvinge der Afrikaensche gewesten van Egypten, Barbaryen, Libyen, Biledulgerid, Negroslant, Guinea, Ethiopiën, Abyssinie ...: Getrokken uit verscheyde hedendaegse lantbeschrijvers en geschriften van bereisde onderzoekers dier landen*. Amsterdam: Jacob van Meurs.
- De Lavaux, Alexander, 1737. Algemeene kaart van de colonie of provincie van Suriname: Met de rivieren, districten, ontdekkingen door militaire togten en de grootte der gemeeten plantagien. Amsterdam: H. de Leth. <http://hdl.handle.net/10934/RM0001.COLLECT.262962>.
- De Lavaux, Alexander, 1758. Algemeene kaart van de colonie of provincie van Suriname: Met de rivieren, districten, ontdekkingen door militaire togten en de grootte der gemeeten plantagien. Amsterdam: Covens en Mortier. <https://hdl.handle.net/11245/3.38619>.
- Dragtenstein, Frank, 2002. “De ondraaglijke stoutheid der wegloopers”: Marronage en koloniaal beleid in Suriname, 1667–1768. Ph.D. dissertation, Utrecht University, Utrecht, the Netherlands.
- Eltis, David, Philip Morgan & David Richardson, 2007. Agency and Diaspora in Atlantic History: Reassessing the African Contribution to Rice Cultivation in the Americas. *American Historical Review* 112(5):1329–58. <https://www.jstor.org/stable/40007098>.
- Eltis, David, Philip Morgan & David Richardson, 2010. Black, Brown, or White? Color-Coding American Commercial Rice Cultivation with Slave Labor. *American Historical Review* 115(1):164–71.
- Fatah-Black, Karwan, 2019. *Sociëteit van Suriname 1683–1795: Het bestuur van de kolonie in de achttiende eeuw*. Zutphen, the Netherlands: Walburg Press.
- Fields-Black, Edda L., 2008. *Deep Roots: Rice Farmers in West Africa and the African Diaspora*. Bloomington: Indiana University Press.
- Geertz, Clifford, 1966. *Agricultural Involution: The Processes of Ecological Change in Indonesia*. Berkeley: University of California Press.
- Gilbert, Erik, 2015. Asian Rice in Africa: Plant Genetics and Crop History. In Francesca Bray, Peter A. Coclanis, Edda L. Fields-Black & Dagmar Schäfer (eds.), *Rice: Global Networks and New Histories*. Cambridge: Cambridge University Press, pp. 212–28. <https://doi.org/10.1017/CBO9781107360266.014>.
- Gragg, Larry, 2003. *Englishmen Transplanted: The English Colonization of Barbados, 1627–1660*. Oxford: Oxford University Press.
- Green, Toby, 2011. *The Rise of the Trans-Atlantic Slave Trade in Western Africa, 1300–1589*. Cambridge: Cambridge University Press.
- Groten, Miel, 2019. Een coloniale cultuur langs de Zaan: Rijstpellerijen en de verbeelding van een imperiale ruimte, ca. 1870–1914. *Tijdschrift voor Geschiedenis* 132(3):375–97.

- Hall, Gwendolyn Midlo, 2010. Africa and Africans in the African Diaspora: The Uses of Relational Databases. *American Historical Review* 115(1):136–50. <https://www.jstor.org/stable/23302766>.
- Herlein, J.D. 1718. *Beschryvinge van de volk-plantinge Suriname*. Leeuwarden, the Netherlands: Meindert Injema.
- Johnston, Katherine, 2020. Endangered Plantations: Environmental Change and Slavery in the British Caribbean, 1631–1807. *Early American Studies* 18(3): 259–86. <https://doi.org/10.1353/eam.2020.0011>.
- Keijser, Liesbeth, 2020. 6000 Ground Truth of VOC and Notarial Deeds 3,000,000 HTR of VOC, WIC and Notarial Deeds (5.0) [Dataset]. Zenodo. <https://zenodo.org/doi/10.5281/zenodo.3517776>, accessed March 31, 2024.
- Lier, R.A.J. van, 1977. *Samenleving in een grensgebied: Een sociaal-historische studie van Suriname*. Amsterdam: S. Emmering. [Orig. 1949.]
- Maat, Harro & Tinde van Andel, 2018. The History of the Rice Gene Pool in Suriname: Circulations of Rice and People from the Eighteenth Century until Late Twentieth Century. *Historia Agraria* 75:69–91. <https://doi.org/10.26882/histagrar.075e04m>.
- Paesie, Ruud, 2008. *Lorrendrayen op Africa: De illegale goederen- en slavenhandel op West-Afrika tijdens het achttiende-eeuwse handelsmonopolie van de West-Indische Compagnie, 1700–1734*. Amsterdam: De Bataafsche Leeuw.
- Pombo Geertsma, Isabela, C.F.H van der Linden, Roy Vickery & T.R van Andel, 2024. Why Are Plants Named after Witches and Devils in North-Western Europe? *Journal of Ethnopharmacology* 325:117804. <https://doi.org/10.1016/j.jep.2024.117804>.
- Price, Richard, 1983. *First-time: The Historical Vision of an Afro-American People*. Baltimore MD: Johns Hopkins University Press.
- Seddon, David, 1968. The Origins and Development of Agriculture in East and Southern Africa. *Current Anthropology* 9(5):489–509. <https://www.jstor.org/stable/2740495>.
- Sweeney, Megan & Susan McCouch, 2007. The Complex History of the Domestication of Rice. *Annals of Botany* 100(5):951–57. <https://doi.org/10.1093/aob/mcm128>.
- Sweeney, Megan T., Michael J. Thomson, Bernard E. Pfeil & Susan McCouch, 2006. Caught Red-Handed: Rc Encodes a Basic Helix-Loop-Helix Protein Conditioning Red Pericarp in Rice. *Plant Cell* 18(2):283–94. <https://doi.org/10.1105/tpc.105.038430>.
- Veevers, David, 2023. *The Great Defiance: How the World Took on the British Empire*. London: Ebury Press.
- Walgraven, Maurits, 1715. Kaart van de Suriname-, Commewijne- en Cottica-rivieren met aanliggende plantages. NL-HaNA_4.VELH_590. https://www.nationaalarchief.nl/onderzoeken/archief/4.VELH/invnr/590/file/NL-HaNA_4.VELH_590, accessed April 1, 2024.
- Watkins, Case & Judith A. Carney, 2022. Amplifying the Archive: Methodological Plurality and Geographies of the Black Atlantic. *Antipode* 54(4):1297–319. <https://doi.org/10.1111/anti.12838>.

- Weeda, Eddy J., R. Westra, C. Westra & T. Westra, 2003. *Nederlandse oecologische flora: Wilde planten en hun relaties volume 1*. Utrecht, the Netherlands: KNNV.
- Wolbers, Julien. 1970. *Geschiedenis van Suriname*. Amsterdam: S. Emmering. [Orig. 1861.]
- Wood, Peter H. 1974. *Black Majority: Negroes in Colonial South Carolina from 1670 Through the Stono Rebellion*. New York: W.W. Norton.