

**Cycles of Crisis and Adaptation: A Multispecies Political Ecology of Late-Colonial
Jamaica, 1870-1960**

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This dissertation explores the transformation of Jamaica's political ecology in the late-colonial period. I analyze how multispecies assemblages of people, plants, and microbes affected and were affected by these changes. I focus on the lives of Afro-Jamaican small-scale farmers, colonial officials attempting to implement a vision in line with a technocratic ethos of "high imperialism," plants such as bananas and sugar, and pathogens that infected these plants and threatened the livelihoods of those involved in their cultivation. It is a story of rural agriculture, of commodity extraction, the impacts of disease, and Imperialism all within the specific historical context of local, circum-Caribbean, and global events and processes.

Overall, I argue that it was the constant, daily interactions between Jamaican growers, officials, plants, and microbes that resulted in a near-continuous reshaping of late-colonial Jamaica's political ecology. I particularly highlight the important role that Afro-Jamaican smallholders played in this process. These growers' attempts to navigate ecological crisis, their interactions with colonial officials, and their experiences with plants and plant pathogens drove many of the transformations that took place over this period. I reveal the importance of the banana plant killing fungus known as Panama Disease to this period of the island's history. The fungus' spread, and the response of farmers and officials to its spread, drove many of the changes to the island's political ecology. Finally, I reveal how the line between "vernacular" and "modern"

agricultural practices is often blurred, especially in times of ecological crisis and in the absence of understanding the causes of the crisis.

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1.0 Introduction

Miss Lonie was a dressmaker and a farmer. Born in the Jamaican parish of Clarendon in 1898, she grew up on a small farm where her father grew bananas, sugarcane, and yams. Her father was able to afford a cart and three mules and carried his bananas to a wharf at St. Ann's Bay, where he would sell them to be shipped off to the United States or Great Britain. While still a child, Miss Lonie traveled to Kingston with her mother, where they set up a small shop to sell the crops her father cultivated. As Miss Lonie described the experience, "What she can eat she eat, and what she can sell she sell." She eventually married a farmer and moved back to rural Clarendon, as "in those days people never much for education. Everybody got their little piece of land, build them little house to start farming, and that was the living of everybody."¹

Miss Lonie spent the early days of her marriage sewing, but soon decided she wanted to be a farmer too. She bought an acre for herself and "wouldn't 'low no-body to work it. I work it meself. I feel independent." She grew several crops, including bananas and sugarcane. Her husband mainly grew bananas. Looking back on this time, Miss Lonie fondly described how "it was so beautiful to see the banana." But then, disease struck the land. "We have a disease name Panama Disease which come in the area for some period. And it kill out all the bananas." In response, she and her husband "turn it into cane fields." What was once rows of bananas now became rows of sugarcane. After switching to sugarcane, her husband was able to enter into a

¹ "Miss Lonie: A Woman Come Down in the World," in *Life in Jamaica in the Early Twentieth Century: A Presentation of Ninety Oral Accounts*, ed. Erna Brodber (Mona: Sir Arthur Lewis Institute of Social and Economic Studies, 1980), 16.

contract with a sugar factory manager who purchased his sugar. Miss Lonie tried to do the same, but she “couldn’t get on the roll.” She did not grow enough sugar on her own to qualify for one of the contracts. She instead supplied her husband with the sugar she grew but was disappointed to have to do so.²

By 1973, the year Miss Lonie recounted her life experiences, she had expanded her land to over two acres. At 75 years old she continued to work the land herself, growing ground provisions like yams and cassava. Her current dilemma was securing more access to water. She described having to “beg people for water” because a commission that she was counting on to supply her wouldn’t grant her the water. Miss Lonie summed up her life by saying “I never give up, I always try.”³ The life of Miss Lonie and her family is one of countless instances of struggle and adaptation among Afro-Jamaican smallholders in late-colonial Jamaica. Miss Lonie navigated the structures of local and global markets, the ravages of crop disease, an agricultural infrastructure that often left out the smallest farmers on the island, and a constantly changing political ecology. But through this all, Miss Lonie maintained what she viewed as critical to her sense of self: the ability to work her own land.

This dissertation explores many of the events and processes that shaped the lives of Jamaicans like Miss Lonie. At its heart, it is a story of a constantly changing political ecology in late-nineteenth and twentieth century colonial Jamaica and how inhabitants of the colony, along with other-than-human species such as plants and microbes, affected and were affected by these transformations. It is a story of smallholder and plantation agriculture, the transformations of each, and how these two systems of cultivation operated in relation to one another. It is a story of Afro-

² Ibid., 20.

³ Ibid., 1.

Jamaican smallholders navigating ecological crisis and racialized paternalism by a white planter class and colonial officials as well as of the efforts of these planters and officials to implement a vision of Jamaica's agricultural development in accordance with a vision of "modern" agriculture. The history of late-colonial Jamaica's political ecology is a history of rural agriculture post-emancipation, mobility and migration, commodity extraction, and Imperialism, all within a circum-Caribbean context.

In this dissertation, I argue that the constant interactions between multispecies assemblages of people, plants, and microbes resulted in a near-continuous reshaping of late-colonial Jamaica's political ecology. On the ground, Afro-Jamaican smallholders spent their days in contact with a variety of crops including banana and sugar plants, and eventually microbes that threatened these plants and the livelihoods of the smallholders themselves. How smallholders managed the trade-offs that came with greater or less attention paid to microbes shaped their agricultural practices. Colonial officials, hoping to create a Jamaican political ecology based around a top-down vision of high modernism, found this process continuously pushed back against by smallholders who did not wish to adapt their practices to this vision as well as interrupted by plants and microbes that the officials attempting to implement these policies had an incomplete understanding of. None of these interactions or processes took place in a vacuum but combined to shape this period of Jamaica's history.

I also argue that a key driver of the ecological transformations in late-colonial Jamaica was the banana plant disease known as Panama Disease, a fungus that infected and killed any Gros Michel variety of banana plant it infected. The disease spread throughout Jamaica in the early and mid-twentieth century. Over a roughly forty-year period (1910 to 1950) Panama Disease was an integral part of Jamaica's transformation from the world's leading banana exporter to an

afterthought in the global banana trade. Jamaican smallholders were at the forefront of this crisis, as they cultivated a sizeable portion of the bananas exported and relied on the banana trade for much of their income.⁴ Jamaica's smallholders grappled with the disease for decades, trying different strategies and engaging with local and circum-Caribbean politics before eventually many turned their lands over to sugar cultivation and launched a brief smallholder-led sugar renaissance on the island.

Finally, I argue that to properly understand the late-colonial era in Jamaica, smallholder and plantation-based agrarian structures must be analyzed in relation to one another rather than separately. Scholars have generally treated smallholdings and plantations as opposite alternatives—each one at times championed as the ecologically more sustainable model. Many on the ground in Jamaica, particularly agricultural and colonial officials, also treated smallholdings and plantations as fundamentally separate structures and based many of their policies of ecological crisis management around this perceived separation. However, it was points of intersection between both structures that most shaped Jamaica's agricultural woes—and successes.

⁴ "Smallholders" refers to growers cultivating less than 5 acres of land. In 1938, of the 157,092 landholdings in Jamaica, 118,143 were under 5 acres, with the average acreage 2.2 acres. When I refer to "middle farmers," I reference growers who owned between 5 and 50 acres of land. In 1938, this constituted 35,812 landholdings., Ken Post, *Arise ye starvelings: the Jamaican labour rebellion of 1938 and its aftermath* (Boston: Nijhoff, 1978), 115.

1.1 A Caribbean Agricultural Story

To understand the history of Caribbean political ecology, and Jamaica's place within it, it is necessary to account for the crucial role commodities have played in the economics, politics, and livelihoods of those living in the region. The sugar industry has received the bulk of the attention, with scholars such as Sidney Mintz exploring how the sugar industry shaped the economy of the Caribbean colonies and the lives of those within them dating back to the eighteenth century.⁵ Scholars have shown how through intensive cultivation of sugar across the Caribbean, sugar transformed from a luxury to a mass-produced good. At the heart of this system was the forced exploitation of enslaved and eventually wage-labor, with their work powering the sugar industrial complex. As the demand for sugar rose, so too did the importance of the Caribbean to the colonizing empires, with market demands often dictating imperial policy.⁶ From the eighteenth into the nineteenth century, the value of sugar, along with that coffee and indigo, made the Caribbean colonies prized imperial possessions.

However, following emancipation, the trajectory of the Caribbean and the colonies' importance within their respective empires changed drastically.⁷ The development of the Jamaican

⁵ Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Penguin, 1985); Sidney Mintz, *Worker in the Cane: A Puerto Rican Life History* (New Haven: Yale University Press, 1960); Gillian McGillivray, *Blazing Cane: Sugar Communities, Class, & State Formation in Cuba, 1868-1959* (Durham: Duke University Press, 2009); *Tropical Babels: Sugar and the Making of the Atlantic World, 1450-1680*, ed. Stuart B. Schwartz (Chapel Hill: University of North Carolina Press, 2011); Molly A. Warsh, *American Baroque: Pearls and the Nature of Empire, 1492-1700* (Williamsburg: The Omohundro Institute of Early American History and Culture, 2018).

⁶ Mintz, *Sweetness and Power*, 162.

⁷ The date of emancipation varied on a case-by case basis. For the purposes of this study, focused on a British colony, the 1834 emancipation of slaves within the British Empire is the most important.

banana industry, the rise of smallholder agriculture, and the transformation of the plantation complex must be understood within the specific political and ecological context of post-emancipation life in the Caribbean. Scholars have studied the trajectory of Caribbean islands post-emancipation, especially focusing on the efforts of freedpeople to establish themselves and gain access to land.⁸ In the Jamaican case, scholars have shown that for the first several decades after emancipation, the trajectory of the island's freepeople more closely resembled Haiti, with the sugar complex disintegrating and being replaced by smallholdings. However, by the turn of the twentieth century, the plantation complex again rose to prominence, this time with bananas at its center.⁹

The mobility of working-class Afro-Caribbeans, both within and beyond the region, is another crucial element of the region's post-emancipation history, and for the story of Panama

⁸ The period following the Haitian Revolution at the turn of the nineteenth century and the efforts of freedpeople there to establish a new society has received particular attention. In Haiti, freedpeople developed what Jean Casimir and Laurent Dubois describe as a "counter-plantation society," based around smallholdings and communities of freedpeople. The nineteenth century then saw continuous contestation over this period, with elites attempting to restore a more plantation-based society and marginalize the freedpeople. Scholars have also focused on post-emancipation Cuba, highlighting the constant negotiation that took place among freedpeople and elites in the years following emancipation. They have shown that unlike in Haiti, where the plantation complex largely collapsed, the sugar plantation industry in Cuba continued to grow, with wage-laborers now making up the majority of plantation workers. Jean Casimir, *La cultura oprimida* (Mexico: Nueva Imagen, 1980); Laurent Dubois, *Haiti: The Aftershocks of History* (New York: Henry and Holt Company, 2012). See also Michel Rolph Trouillot, *Peasants and Capital: Dominica in the World Economy* (Baltimore: Johns Hopkins University Press, 1988); Rebecca Scott, *Degrees of Freedom: Louisiana and Cuba After Slavery* (Cambridge: Harvard University Press, 2005); Ada Ferrer, *Freedom's Mirror: Cuba and Haiti in the Age of Revolution* (Cambridge: Cambridge University Press, 2014).

⁹ Thomas C. Holt, *The Problem of Freedom: Race, Labor, and Politics in Jamaica and Britain, 1832-1938* (Baltimore: Johns Hopkins University Press, 1992); A.J.G. Knox, "Opportunities and Opposition: The Rise of Jamaica's Black Peasantry and the Nature of the Planter Resistance," *Canadian Review of Sociology and Anthropology* 77, no. 14 (1977): 381-395; Veront Satchell, *From Plots to Plantations: Land Transactions in Jamaica, 1866-1900* (Mona: University of the West Indies, 1990); Ken Post, *Arise ye starvelings: the Jamaican labour rebellion of 1938 and its aftermath* (Boston: Nijhoff, 1978).

Disease. Emancipation launched a period of continuous movement and migration throughout the circum-Caribbean, in which many Jamaicans eagerly participated. For many Afro-Caribbeans in the late-nineteenth and twentieth centuries, travel around the circum-Caribbean was essential to their livelihoods. The 1834 emancipation of the enslaved within the British Empire opened the door for many Afro-Caribbeans, especially in the West Indies, to leave their home islands and seek opportunity elsewhere.¹⁰ Finding institutional structures in place at home that minimized upward mobility and restricted pay, freedmen and women hoped for better chances elsewhere. These migrations built on one another, as those migrants who established themselves in other countries acted as both proof of the possibility of successful emigration and as assistance for those looking to travel. All told, from 1850-1910 roughly 200,000 British West Indians left their home islands for the Caribbean coast of Central America, creating a series of networks, both economic and familial, across the region.¹¹ This context of network building and constant movement is crucial for understanding how a pathogen such as Panama Disease could spread across the region.

Along with ushering in a period of mobility, emancipation also resulted in a shift in the British Empire's attitude towards its Caribbean territories. By the time of the Jamaican banana industry's beginnings in the 1870s, Jamaica, along with Britain's other colonies in the Caribbean, were no longer highly valued territories within the British Empire. Rather than the gems of the empire, the post-emancipation British West Indies were viewed as an imperial burden.¹² Without

¹⁰ Bonham C. Richardson, "Caribbean Migrations, 1838-1985," in *The Modern Caribbean*, ed. Colin Palmer and Franklin Knight (Chapel Hill: University of North Carolina Press, 1989), 203.

¹¹ Lara Putnam, *The Company They Kept: Migrants and the Politics of Gender in Caribbean Costa Rica, 1870-1960* (Chapel Hill: University of North Carolina Press, 2002), 35.

¹² Anne Eller, *We Dream Together: Dominican Independence, Haiti, and the Fight for Caribbean Freedom* (Durham: Duke University Press, 2016), 8

the enslaved labor that propelled the sugar industry in the centuries prior, the British Empire began looking elsewhere for sugar. They began importing more from places such as the East Indies and Brazil, with the Caribbean making up a much lower proportion of Britain's sugar in the decades following emancipation. Looking specifically at Jamaica, by the 1850s, with a decline in sugar and no clear prospects of any other industry taking its place, the island became viewed as an imperial backwater. This lack of interest in colonial development throughout much of the nineteenth century opened the door for an influx of United States capital. This then set the stage for the Boston Fruit Company, which in 1899 would become the United Fruit Company, to establish its own plantations within Jamaica and form contracts with other planters on the island to supply them with bananas. The result of this by the early-twentieth century was a banana industry heavily influenced by U.S. company capital.¹³

Running concurrently with the diminished status of Caribbean colonies in the British Empire was what scholars describe as the age of "high imperialism," which included a push for the "modernization" of agriculture and an increased role for government advisors and scientific experts.¹⁴ Imperial powers attempted to spread a uniform attitude towards nature throughout their colonies, creating new ecosystems based on imperial networks and the transfer of organisms and

¹³ John Soluri, "Bananas Before Plantations. Smallholders, Shippers, and Colonial Policy in Jamaica, 1870-1910," *Iberoamerica* 23 (2006): 143-159.

¹⁴ This era of "high imperialism" began in the late-nineteenth century and continued through the early and mid twentieth century. What defined this era, and is especially relevant for this dissertation, is what Corey Ross describes as a "decidedly technocratic ethos" that shaped the governance of European empires. Within this ethos was the fundamental belief that through scientific knowledge and new technology, nature could be mastered. See Corey Ross, *Ecology and Power in the Age of Empire: Europe and the Transformation of the Tropical World* (Oxford: Oxford University Press, 2017).

resources through them.¹⁵ This is not to say that any of these beliefs or attempts were entirely new. European empires long believed in their ability to triumph over nature and in their own knowledge systems. But the high imperial era marked an acceleration in acting upon these beliefs and resulted in a transformation of the environment in most, if not all, European colonies.¹⁶

However, during the high imperial era, government bureaucrats within each colony, more so than policymakers in the metropole, were the ones with the most influence over environmental policy.¹⁷ As a result, the officials were the ones tasked with institutionalizing the colonial nature regime on a colony-by-colony basis.¹⁸ Their individual experiences within each colony often led each to develop their own views on the proper nature regime that should be put into place. The policies and projects they proposed often brought them into conflict with local production and knowledge systems. The contestation of preferred knowledge systems along with each colony having its own specific environmental features and quirks led to an inability of imperial officials to impose a consistent nature regime across empires. Instead, the proposed regime combined with pre-existing regimes to create hybrid structures exclusive to each individual colony.¹⁹

In terms of agriculture, most of the effort of these scientific advisors and officials were directed towards “modernizing” agriculture. In the high imperial years, this push was more towards increasing agricultural commodity production than for locally consumed foodstuffs. Imperial

¹⁵ Ibid., 16.

¹⁶ Richard Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000), 229.

¹⁷ Joseph Morgan Hodge, *Triumph of the Expert: Agrarian Doctrines of Development and the Legacies of British Colonialism* (Athens: Ohio University Press, 2007), 5.

¹⁸ For more on the concept of nature regimes, see Arturo Escobar, “After Nature: Steps to an Antiessentialist Political Ecology,” *Current Anthropology* 40, no. 1 (1999): 1-16.

¹⁹ Ibid., 16.

officials often blamed smallholders' cultivation techniques on a lack of agricultural development. They attempted to impose new, more intensive cultivation techniques and often introduced new mechanized agricultural technology and artificial fertilizer to increase productivity.²⁰ In addition to restructuring the cultivation system, these efforts often included genetically altering the plants themselves. In doing so, scientists hoped to increase yields and standardize crops based on market demands.²¹ As with other attempted impositions of imperial knowledge systems, agricultural reforms often ran up against environment-specific challenges that often led to reduced production and/or disease caused by a lack of understanding of particular ecosystems and/or of other-than-human species. By the end of the imperial era post World War II, many agricultural officials had begun incorporating more locally grounded projects based on specific agroecosystems rather than imposing a top-down, one size fits all system.²²

My focus on Jamaica's political ecology in the "era of high imperialism" adds to the research on agricultural "modernization" efforts and the role of scientific experts during this period, highlighting the challenges officials faced in implementing this vision in the face of a constantly changing Jamaican political ecology.²³ In the first thirty years of the banana industry,

²⁰ Ross, *Ecology and Power*, 309.

²¹ For examples, see James McCann, *Maize and Grace: Africa's Encounter with a New World Crop 1500-2000* (Cambridge: Harvard University Press, 2007); John Soluri, *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States* (Austin: University of Texas Press, 2005).

²² Ross, *Ecology and Power*, 341.

²³ This is not the first work to examine the agricultural underpinnings of Panama Disease. John Soluri's *Banana Cultures* shows how these processes played out in the banana industry of Honduras. He describes one of the primary aims of his book as placing "agriculture back into banana plantation history in order to pay critical attention to both scientific ideas about tropical landscapes and the everyday cultivation practices that absorbed so much of working people's time and energy." Through an agroecological perspective and commodity chain analysis, he shows how social and environmental processes impacted the development of the banana industry. While Soluri's work shifts

growers, merchants, and shippers transformed the industry from a smallholder driven trade to one dominated by plantation agriculture and American capital, led by what would become the United Fruit Company. In doing so, this new structure based around monoculture created easy pathways for disease spread. In the 1910s and 1920s, agricultural officials' lack of knowledge about the fungus behind Panama Disease, and about the specifics of Jamaica's agroecosystem, hamstrung their ability to fully implement their vision for the island's agricultural system. Agricultural decisions were instead made in response to a constantly moving and spreading disease, as well as in response to how growers both large and small saw fit to respond to it. By the 1930s and 1940s, officials had to respond to new disease threats, shifting global markets, and geopolitical crises. These events shaped official policy more than any underlying ethos.

1.2 A Multispecies Political Ecology of Panama Disease in Jamaica

To this point, I have primarily discussed the human elements of Jamaica's political ecology. However, to properly analyze this period of Jamaica's history, it is essential to examine not only the human elements of this story, but the other-than-human as well. In this dissertation, I utilize the emerging framework of multispecies political ecology to analyze the human-plant-microbe assemblages that shaped the trajectory of the Jamaica's political ecology.²⁴ I explore how

between Honduras and the United States to show the multiple stages of the commodity chain, my project remains centered in Jamaica in order to highlight the multispecies assembly that played out in a series of localities on the island. Whereas Soluri's work focuses on the banana itself, my work prioritizes Panama Disease, showing how the disease shaped the banana and life in Jamaica as opposed to how the banana was impacted by disease.

²⁴ For the first use of the term "multispecies political ecology," see Laura A Ogden, Billy Hall, and Kimiko Tanita, "Animals, Plants, People, and Things: A Review of Multispecies Ethnography," *Environment and Society: Advances*

pathogens and plants helped shape the politics and environment of colonial Jamaica. For example, the presence of the fungus behind Panama Disease helped determine what crops could be grown where, led to the passage of laws governing how growers were to manage their land, shaped the contestation of local versus colonial agricultural knowledge, and eventually led to the collapse of the Gros Michel production system. The physiology of banana and sugar plants further governed the viability of certain crop systems and helped set the boundaries of possible responses to Panama Disease. The Jamaican people and government then acted in ways shaped by the microbes and plants, resulting in a continuous transformation of the island's political ecology.

Taking a multispecies political ecology approach does not subordinate the human. On the contrary, it expands the spectrum of human actions that warrant analysis. Humans remain the key cog in events, along with their social hierarchies and power relations. A multispecies political ecology approach helps to highlight the other cogs that make up the machine. When viewing humans and other-than-humans as “interspecies relationships,” as multispecies scholars do, the

in Research 4 (2013): 5-24. This approach combines the frameworks of multispecies ethnography and political ecology and my work places it within the broader context of environmental history. Up to this point, there are few works that articulate a multispecies political ecology approach, and those that do focus almost exclusively on animals. Within a multispecies political ecology, other-than-humans are turned from “objects” into “things,” a shift W.J.T Mitchell describes as the moment “when the sardine can looks back, when the mute idol speaks, when the subject experiences the object as uncanny...” These “things” have a power of their own, able to exist independently from human action and thought. They interact with both humans and other “things,” changing the world in the process. In this world transformation, they enter the realm of politics, shaping the decisions that humans make such as about where they live, what crops they grow, and how they manage environmental resources. See Jared D. Margulies and Krithi K. Karanth, “The production of human-wildlife conflict: A political animal geography of encounter,” *Geoforum* 95 (2018): 153-164; Seven Marie Mattes, “Animals Left Behind: Multispecies Vulnerability in Post-3-11 Japan,” PhD diss., (Michigan State University, 2018), W.J.Thomas Mitchell, *What Do Pictures Want? The Lives and Loves of Images* (Chicago: University of Chicago Press, 2005), 156, Anne Bennett, “Thing-Power,” in *Political Matter: Technoscience, Democracy, and Public Life*, ed. Bruce Braun and Sarah J. Whatmore (Minneapolis: University of Minnesota Press, 2010), 37.

range of human actions incorporates their interactions with other animals, plants, and microbes.²⁵ These other species become “things” that humans act in relation with, rather than objects that humans act upon. Human beings are still critical in these constructions, but multispecies political ecology helps to provide a full perspective of the interactions and relations that go into them.

Environmental historians have been working with the themes and concepts of multispecies political ecology in the Americas for decades, but recently more have begun explicitly describing the role of all the human and other-than-human actors in their narratives and how they interact with one another. They have shown how diseases such as yellow fever shaped the course of the American and Haitian Revolutions.²⁶ They have revealed the role of hurricanes in shaping social relations in the circum-Caribbean and shown the connections between sugar cultivation and deforestation on Caribbean islands.²⁷ Recent scholars have further highlighted the role of aquatic creatures in shaping the aqueous boundaries of Caribbean territories and shown how African slaves interacted with their garden plots in ways that shaped the development of foodways still used today.²⁸ My work builds on this firm foundation, and makes clear the multispecies assemblages that shaped Jamaica’s political ecology.

²⁵ Anna Lowenhaupt Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton: Princeton University Press, 2015), 138.

²⁶ John McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean* (Cambridge: Cambridge University Press, 2010).

²⁷ Stuart B. Schwartz, *Sea of Storms: A History of Hurricanes in the Greater Caribbean from Columbus to Katrina* (Princeton: Princeton University Press, 2015); Reinaldo Funes Monzote, *From Rainforest to Cane Field in Cuba: An Environmental History Since 1492* (Chapel Hill: UNC Press, 2009); Bonham C. Richardson, *Igniting the Caribbean’s Past: Fire in British West Indian History* (Chapel Hill: UNC Press, 2004).

²⁸ Sharika D. Crawford, *The Last Turtlemen of the Caribbean: Waterscapes of Labor, Conservation, and Boundary Making* (Chapel Hill: UNC Press, 2020); Judith Carney and Richard Nicholas Rosomoff, *In the Shadow of Slavery: Africa’s Botanical Legacy in the Atlantic World* (Berkeley: University of California Press, 2011).

At the heart of the political ecology aspect of the multispecies political ecology framework is the belief in the interconnectedness of human beings (and their politics) and the environment.²⁹ Through the entanglement of nature and society, both take on new forms as a result of their relation to the other.³⁰ Contemporary political ecologists approach this entanglement through a multiscale lens.³¹ They show how local debates and struggles over environmental issues such as land

²⁹ The field of political ecology is broadly defined as an examination of the relationship between nature and society and the political forces that shape this relationship. See Simon Batterbury, "Doing political ecology inside and outside the academy," in *The International Handbook of Political Ecology*, ed. Raymond L. Bryant (Cheltenham: Edward Elgar Publishing, 2015), 27. It analyzes the struggles over resources and the larger environment, particularly within the developing world, showing how unequal power relations impact the outcomes of these struggles. See Raymond Bryant, "Power, knowledge and political ecology in the third world: a review," *Progress in Physical Geography* 22, no. 1 (1998): 79.

³⁰ Paul Robbins, *Political Ecology: Second Edition* (Hoboken: Wiley-Blackwell, 2012), 94. In particular, political ecologists aim to show how the inequalities embedded within nature-society entanglements create and reinforce social and environmental marginalization. The reinforcing aspect of this has its roots in Foucault's concept of "governmentality," in which the beliefs of those with power become institutionalized and accepted by those with less power. *The Foucault Effect: Studies in Governmentality*, ed. Graham Burchell, Colin Gordon, and Peter Miller (Chicago: University of Chicago Press, 1991).

³¹ This is considered the "second wave" of political ecology, which began in the late 1980s. See *Land Degradation and Society*, ed. Piers Blaikie and Harold Brookfield (London: Routledge, 1987). The first wave is traditionally dated back to 1972, with anthropologist Eric Wolf using the term to describe the analysis of the role of power relations in the relationship between humans and the environment. Wolf and other scholars in this first wave of political ecology pulled the field together from three separate lines of analysis: ecological anthropology, ecosystems-cybernetics, and natural hazards-disaster research. Undergirding the combination of these three throughlines was a neo-Marxist approach based within world systems theory, which linked local social and environmental injustices to global political structures and flows of capital. With world systems as an intellectual backdrop, early works in political ecology were structural analyses in nature, leading critics to claim that these studies were over-deterministic and marginalized the role of local actors and local politics in shaping the environment and humans' interactions with it. See Eric Wolf, "Ownership and Political Ecology," *Anthropology Quarterly* 45, no. 3 (1972): 201-205, Susan Paulson, Lisa L. Gezon, and Michael Watts, "Locating the Political in Political Ecology: An Introduction," *Human Organization* 62, no. 3 (2003): 205-217; Bryant, "Power, knowledge and political ecology," 81. For an overview of

ownership and resource control are connected to global events and processes, but that the impact of this connection runs in both directions, not just from the global to the local. This multiscale approach highlights the significance of place and how it is formed by the interaction between the local and the global.³² By focusing more attention on the local, recent political ecologists, as well as geographers, have been able to more effectively incorporate other forms of analysis, such as race, gender, and ethnicity into their works.³³ In doing so, they can highlight a variety of range of inequalities that shape interactions with the environment and each other.

Rather than viewing nature and culture as a binary, political ecologists and the environmental historians who use this framework analyze the constant interchanges between nature and culture.³⁴ By rejecting the nature-culture dualism, today's political ecology places human beings and their actions firmly within nature, showing more concretely the ways both nature and culture co-produce and construct one another, rather than each being its own independent sphere.³⁵

world systems theory, see Immanuel Wallerstein, *World Systems Analysis: An introduction* (Durham: Duke University Press, 2004).

³² Aletta Biersack, "Introduction: Reimagining Political Ecology: Culture/Power/History/Nature," in *Reimagining Political Ecology*, ed. Aletta Biersack and James B. Greenberg (Durham: Duke University Press, 2006), 16.

³³ For examples of feminist political ecology, see Dianne Rocheleau, *Gender and the Environment: A Feminist Political Ecology* (New York: Routledge, 1996); *A Political Ecology of Women, Water and Global Environmental Change*, eds. Stephanie Buechler and Anne-Marie S. Hanson (London: Routledge, 2016); *Eco-Sufficiency and Global Justice*, ed. Ariel Salleh (London: Pluto Press, 2009); for political ecology based around race and ethnicity see Alec Brownlow, *A Political Ecology of Neglect: Race, Gender, and Environmental Change in Philadelphia* (Dusseldorf: VDM Verlag, 2008), Hsain Ilahiane, *Ethnicities, Community Making, and Agrarian Change: The Political Ecology of a Moroccan Oasis* (Lanham: UPA, 2004); Sandra Sufian, *Healing the Land and the Nation: Malaria and the Zionist Project in Palestine, 1920-1947* (Chicago: University of Chicago Press, 2007).

³⁴ Biersack, "Introduction," 15.

³⁵ Arturo Escobar, "After Nature," 2. Escobar highlights the interrelatedness of nature and culture through the concept of "second nature," which is a nature that is artificially constructed. For examples of works that highlight

The second component of my framework, multispecies ethnography, further pushes against the notion of the nature-society divide.³⁶ Multispecies ethnographers reveal how other-than-human species can shape the political, economic, and cultural forces of the world, with particular attention paid to plants, animals, and microbes.³⁷ They view the world through the lens of assemblages, in which a multitude of organisms participate in dynamic processes that reshape the world around them.³⁸ Multispecies ethnographers believe that the members of these assemblages, both human

the intertwining of humans and nature see Jennifer L. Anderson, *Mahogany: The Costs of Luxury in Early America* (Cambridge: Harvard University Press, 2015); David Biggs, *Quagmire: Nation-Building and Nature in the Mekong Delta* (Seattle: University of Washington Press, 2012), Blaikie and Brookfield, *Land Degradation and Society*; Alan Mikhail, *Nature and Empire in Ottoman Egypt: An Environmental History* (Cambridge: Cambridge University Press, 2011); David Montgomery, *Dirt: The Erosion of Civilization* (Berkeley: University of California Press, 2007).

³⁶ The field emerged at the start of the twenty-first century with the “species turn,” which increased attention given to the lives of animals. Soon after this turn, the research expanded to include plants and microbes. See John Hartigan Jr., “Plants as Ethnographic Subjects,” *Anthropology Today* 35, no. 2 (2019): 1.

³⁷ Although the multispecies turn has emphasized microbes, up to this point, discussion of plant and human disease-based microbes has been kept separate. I argue that this is largely due to what Heather Paxson has termed microbiopolitics, which places microscopic organisms into fixed categories which determine how they should be interacted with and analyzed. However, microbes blur the boundaries between humans, plants, and animals and complicate simple taxonomies. See Heather Paxson and Stefan Helmreich, “The Perils and Promises of Microbial Abundance: Novel natures and model ecosystems, from artisanal cheese to alien seas,” *Social Studies of Science* 44, no.2 (2014): 166.

³⁸ One of the key building blocks for the emergence of multispecies ethnography was actor-network theory, developed by sociologists Bruno Latour, Michael Callon, and John Law in the 1980s. Actor-network theorists view the intertwining of humans and the environment as a series of actor-networks, in which a range of organisms and objects, both human and non-human, contribute to actions. A critical tenet of this theory is that objects themselves have agency. Rather than viewing an actor as something that can intentionally, meaningfully, do something, actor-network theorists expand the definition of an actor to include “any thing that does modify a state of affairs by making a difference.” By recognizing the various forces that contribute to actions, actor-network theorists attempt to show that nature and society are part of the same whole. See John Law and Peter Lodge, *Science for Social Science* (London: Palgrave Macmillan, 1984), Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2007), 71, Bruno Latour, *We Have Never Been Modern* (Cambridge: Harvard University Press, 1993), 87.

and other-than-human, act as a collective of agents, together having larger impacts than any one individual member of the assemblage could.³⁹

For the purposes of my study, the multispecies assemblages I examine are those of microbes, plants, and humans. Together, the fungal pathogen behind Panama Disease, banana plants and other crops such as sugar, and humans shaped the era of Panama Disease in Jamaica. Instead of focusing solely on the response of Jamaican growers and government officials to the disease, taking a multispecies approach means highlighting the role the pathogen and plants played. It was the fungus' ability to survive on boots, cutlasses, and remains of plants and move across the island with these items as well as its ability to easily infect and spread to Gros Michel banana plants that set the parameters within which Jamaicans could respond. For the plants, it was the susceptibility of banana plants, the ease at which they could blow over from wind, and their asexual reproduction that further facilitated disease spread and made the job of containment much more difficult. In contrast, it was sugar plants' sturdiness and ability to be grown successfully in Panama Disease infested soil, along with an increase in its market value stemming from World War I, that made it a viable crop alternative for growers, particularly smallholders.⁴⁰ And finally, it was the ways in which diverse Jamaicans viewed and responded to these conditions that charted the trajectory of twentieth century Jamaica. Within this assemblage approach, understanding the history of late-colonial Jamaica's political ecology means viewing these three components, microbes, plants, and humans, as a group of actors.

³⁹ Ogden, Hall, and Tanita, "Animals, Plants, People, and Things," 16.

⁴⁰ This shift highlights the situatedness of agriculture, as there is nothing inherent about any particular crop that makes it valuable. It is how it interacts with growers, consumers, labor demands, and markets that give it its usefulness to cultivators.

In incorporating political ecology into multispecies ethnography (or vice versa), it is necessary to have a more expansive definition of what constitutes the “political.” One of the traditional critiques of political ecology has been a lack of specificity about what exactly the political refers to.⁴¹ Too often, works of political ecology refer to the impacts of external structures without clearly articulating them and the ways in which they impact events on the ground. In cases where the political is defined, it is almost exclusively in reference to human actors and institutions and the effect they have on society and the environment. However, in a multispecies political ecology, the political must expand to incorporate the other-than-human. Some scholars have recently outlined a path forward with such an approach, focusing on how the material constitutes the political.⁴² In this materialist approach, the other-than-human is placed firmly inside the political realm, rather than being the object of it. These actors in the multispecies assemblage then shape political structures by giving meaning to the institutions and structures that then form. With this approach, the political, and therefore the human, becomes more grounded in the surrounding environment and the “world of things.”⁴³

⁴¹ Paulson, “Locating the Political,” 208.

⁴² Bruce Braun and Sarah J. Whatmore, “The Stuff of Politics: An Introduction,” in *Political Matter: Technoscience, Democracy, and Public Life*, ed. Bruce Braun and Sarah J. Whatmore (Minneapolis: University of Minnesota Press, 2010); John Bellamy Foster, *Marx’s Ecology: Materialism and Nature* (New York: Monthly Review Press, 2000).

⁴³ Braun and Whatmore, “The Stuff of Politics,” xiii.

1.3 Notes on Methodology

While I am attempting to analyze the transformation of Jamaica's political ecology through the interactions between multispecies assemblages, the source base that I have been able to work with privileges a top-down version of the history of this transformation. In most of the colonial sources and sources written by Jamaican elites, the authors present a version of the political ecology of this period as a model of the era of high imperialism, with colonial officials and agricultural "experts" developing Jamaica's agroecosystems in accordance with a vision of "modern" agricultural development. In this narrative, smallholders are often acted upon by both middle and large farmers and officials to push them towards becoming a part of their vision for the island's future. There is little room for smallholder agency within this presented political ecology.

The very structure of the archives in Jamaica and England themselves reinforce this top-down structure. During my archival research, I spent roughly equal time in Jamaica and England. However, there is a stark inequality in state financing to the British National Archives and the Jamaican National Archives, which impacts the volume of research that can be conducted in a given period.⁴⁴ In my experience, I was able to obtain more than twice the number of documents in a given day at the British Archives as opposed to that in Jamaica. As a result of this, the overall body of my archival material skews towards British colonial documents.

⁴⁴ The British National Archives had an annual operating budget of over £40 million in 2021 with over 500 employees. While I was not able to obtain this information for the Jamaican National Archives, the amount of funding and employees is a fraction of that of the British Archives. *Annual Report and Accounts of The National Archives 2020-21* (London: APS Group, 2021), 27.

To obtain more Jamaican voices, I turned to the primary Jamaican newspaper, *The Daily Gleaner*, although many of these voices are from the wealthiest classes on the island. The *Gleaner* became a the publicly traded company in 1897, with the first chairman being Charles DeMercado, a co-partner of Jamaican trading company Lascelles, DeMercado & Co.⁴⁵ The other members of the board of directors throughout the period being studied were of the white elite class and the paper's primary readership likewise came from the upper and middle classes.⁴⁶ Literacy rates in Jamaica in the early nineteenth century hovered around 60%, with the majority of this 60% living in urban areas. Rural populations, especially smallholders, had lower literacy rates as many rural children either did not have access to schools or worked to supplement their families' incomes instead of attending.⁴⁷ The majority of the paper's readers were white or Afro-Jamaican urban elites or members of the middle to upper-middle class. As a result, few smallholders likely accessed the *Gleaner* with any degree of regularity and those that did rarely found any material that amplified the voices of the smallholding class. However, despite the top-down narrative of the *Gleaner*, it remains an invaluable source for hearing voices outside of government officials who so dominate colonial documentation and provide a perspective from a Jamaican middle and upper class that is separate from the British Colonial Office. It also provides a day-to-day look at happenings on the island that is often absent from archival materials.

This is not to say that voices of smallholders and middle-sized farmers are completely absent from my source base. One of the most valuable sources of the smallholder's voice in Jamaica comes from Jamaican writer, historian, and sociologist Erna Brodber's *Life in Jamaica in*

⁴⁵ "Calendar," *The Daily Gleaner*, December 29, 1890, 2.

⁴⁶ "Company History," The Gleaner, <https://jamaica-gleaner.com/about>.

⁴⁷ Post, *Arise Ye Starvelings*, 91-2.

the Early Twentieth Century oral interviews. Brodber interviewed ninety Afro-Jamaicans, forty-five men and forty-five women, in the 1970s about their life experiences throughout the 1900s. Over half of those interviewed were smallholders or grew up in a smallholding family. Included in these interviews are descriptions of day-to-day life on smallholdings, how smallholders obtained land, and their experiences with crops that play a key role in this dissertation, namely bananas and sugar. Where possible, I amplify these sources throughout the dissertation while also working to ensure that I do not use this relatively small sample to apply their experiences to the entirety of the smallholding class.

In addition to these oral interviews, British documents occasionally include petitions and testimonies from Jamaicans outside of the planter class, often in appendices to commission reports. The best example of this within the context of this dissertation is memoranda and interviews gathered as part of the 1939 Moyne Commission. The Commission was sent by the Colonial Office to the British West Indies to investigate causes of unrest following a string of rebellions across British territories, including Jamaica's 1938 Labor Rebellion. Included in these materials were interviews with middle and small farmers as well as representatives on their behalf. While the majority of those talked to were wealthy Jamaicans, there is a greater diversity of voices found here than in nearly any other colonial source and I rely on these to help paint a fuller picture of life in Jamaica in my later chapters.

These sources, while extremely valuable, are only able to make up a small fraction of the source base used in this dissertation. I therefore turn to alternative methods and sources, including multispecies political ecology, literature, and GIS mapping to help me complicate the top-down narrative presented in the sources. In terms of multispecies political ecology, I present plants and microbes as active participants in shaping the island's political ecology in a way that does not fit

within the ethos of high imperialism presented through colonial documents. This lack of recognition by colonial officials and planters of the role that other-than-human organisms played in shaping the trajectory of the island is a key reason why they did not always succeed in imposing their model of agricultural development and created opportunities for smallholders to attempt to assert their vision for the island's agroecosystem. I use literary sources, such as the writings of Jamaican novelist Claude McKay, who depicts smallholding communities in his novels, to highlight attitudes smallholders may have had towards agricultural officials and of their vision for how to best use their land. Regarding GIS mapping, I am able to highlight transformations in Jamaica's environment, such as where Panama Disease spread and how smallholder sugar overtook plantation sugar for a brief period in the 1910s, that are not clear or are absent altogether from written sources.

Taken together, this combination of sources and methods allows me to analyze a constantly evolving political ecology in late-colonial Jamaica. Much of the conversation around agricultural development and ecological transformations came from colonial officials and the planter class. They were the ones who created and attempted to implement the policies designed to reshape Jamaica into a model agricultural society for the era of high imperialism. However, these policies and designs were continuously undermined, contested, and upended by a multispecies assemblage of smallholders, plants, and microbes. And while smallholders were only able for brief moments to reshape the island's agroecosystem into a system based around their cultivations, their constant efforts to maintain a place within agricultural export industries, along with plants and microbes that did not adhere to the goals of agricultural officials meant that officials and planters were never fully able to implement their vision for Jamaica's agroecosystem.

1.4 Significance

This study helps shed new light on local and circum-Caribbean agricultural and political practices. Smallholders in particular played a key, if little-understood, role in shaping the responses of colonial officials and planters to the changes in Jamaica's political ecology. Both government officials and planter-led societies saw it as their responsibility to educate the island's smallholders about methods of prevention and containment of disease as well as about "proper" cultivation methods. Their efforts were reinforced by the work of scientists and agricultural officials who worked to implement "modern" agricultural system. Smallholders managed to push back against official policies and attempts at education, relying on their vernacular knowledge of cultivation and finding their own ways to adapt to the changing landscape on the island. This was especially apparent in the crops they chose to grow, as many switched to sugar cultivation as Panama Disease spread throughout their lands. For a brief period in the late 1910s and early 1920s, smallholders became the primary sugar producers on the island, a stark shift from the plantation-dominated sugar industry of the previous centuries. These smallholder-led adaptations resulted in a reshaping of the island's agricultural landscape, transforming it from almost exclusively banana exports in the early-twentieth century to a sugar-centric export sector by the middle of the century.

I also show through my analysis of the continuous, often overlapping cycles of crisis and adaptation that in some cases, especially in disease control, that there is often not a "right" answer between "vernacular" and "modern" practices. In the face of uncertainty over best practices for managing ecological crisis, and with incomplete knowledge about pathogens, the line between "vernacular" and "modern" is often blurred. In the case of Panama Disease, the systems that sustained both smallholdings and plantations helped to facilitate the spread of the fungus across the island. In the case of smallholdings, co-cropping practices led to the fungus being attached to

other harvested items and materials that traveled outside of the holdings. Additionally, ecologically sustainable and cost-friendly practices such as the use of discarded banana plants for fertilizer and packing was a key driver of the fungus's spread, as it latched onto these materials. In terms of plantation agriculture, the monoculture structure that plantation owners used to maximize their profits created easy pathways for the fungus to move from plant to plant across the plantation. And the disease management strategies that agricultural officials and scientists developed were based off of an incomplete picture of the main causal mechanism of the disease and how it spread.

Thirdly, I reveal the importance of Jamaica's status as a colony within the British Empire to shaping the island's political ecology. British officials in the mid-nineteenth century adopted an indifferent attitude towards the empire's Caribbean colonies, as emancipation and the implementation of free-trade policies lessened the islands' contributions to British capital.⁴⁸ This "neglect" opened the door for the banana industry to be developed in closer alignment to the United States, led by the United Fruit Company, which shifted the primary means of cultivating bananas away from smallholders and towards plantations. During World War I, smallholders used the opportunity created by the disruption of Britain's European sugar supply to begin producing sugar for export instead of local supply, and became the island's leading sugar producers, albeit for brief period, by the end of the war. During the 1930s, global sugar quotas and Britain's partitioning of its quota across its colonies meant a sharp decline in Jamaican sugar production, with those most impacted being small and middle growers who had been supplying their cane to central sugar factories. In World War II, Britain and the United States' requisitioning of ships that had been used

⁴⁸ Christopher Taylor refers to this shift as the inauguration of a policy of "neglect towards the British West Indies. Christopher Taylor, *Empire of Neglect: The West Indies in the Wake of British Liberalism* (Durham: Duke University Press, 2018).

for the banana trade meant that growers had no opportunities to export bananas. Instead, colonial officials inaugurated a system where all bananas grown on the island would be consumed locally. This marked the beginning of a shift for agricultural production, particularly among smallholders, to be focused on domestic consumption.

Finally, I demonstrate through this study the importance of the other-than-human to understanding Jamaica's history. I highlight the role microbes played in shaping the island's political ecology, particularly those behind plant diseases such as Panama Disease, Leaf Spot Disease, and Mosaic Disease of sugar. These pathogens were key drivers of the constant reshaping of Jamaica's environment in the late-colonial period. I also show how it was the physiologies of banana and sugar plants that made them more or less susceptible to disease, weather events, and local environmental conditions across Jamaica. Additionally, by amplifying the other-than-human, I provide context for how humans interacted with these other species and the Jamaican environment as a whole. By analyzing the constant interactions between humans, plants, and microbes in late-colonial Jamaica, I detail a more holistic account of this complex period in the island's history.

1.5 Chapter Outline

Chapter Two traces the decades following emancipation in 1834 and the transformation of Jamaica's political ecology at the end of the nineteenth century towards banana cultivation. It analyzes how emancipation changed the social and environmental landscape of the island, creating the conditions that freedpeople took advantage of to launch a smallholder-driven banana industry. The rise of this industry corresponded with a decline in the sugar industry, creating a hole in the

island's plantation complex that would be filled in the last decades of the nineteenth century with American capital and bananas. This led to a transformation from a smallholder-driven industry to one dominated by a plantation monoculture, leading to further distrust of government officials and elites by smallholders. These developments also created many of the conditions that allowed for Panama Disease to take hold on the island and conditioned the responses to it.

Chapter Three explores the first two decades of Jamaicans' fight against Panama Disease, from 1911 to 1929, and the changes in political ecology that resulted from it. I analyze the way growers and officials handled the first discovered case on the island and how the way the first case was dealt with acted as a harbinger for the decades to come. I then examine the ways in which the disease spread. I explore the role the movement of people and microbes played in disease spread and the importance of environmental and built structures such as rivers and railways in facilitating this movement. I then examine the methods used to attempt to manage the disease and how an unwillingness among both growers and officials to accept many of the tradeoffs that came with greater disease mitigation efforts led to many of the mitigation policies being either ignored or not enforced. By the end of this period, Panama Disease went from a few isolated cases to an island wide crisis.

Chapter Four focuses on the political ecology of sugar in Jamaica and its connection to transformations in the island's banana industry. Covering the same period as Chapter Three, it explores how many smallholders, faced with a lack of land available for banana cultivation because of Panama Disease, along with a several other local and global factors, switched their main agricultural focus to sugar. This shift, combined with the impacts of World War I on the sugar market, resulted in a revitalization of the island's sugar industry, but this time in the form of smallholdings rather than plantations. However, within a decade, the market for sugar plummeted,

forcing many smallholders out of sugar cultivation for export. Once markets settled in the mid-1920s, plantation owners filled the void left by smallholders and created a new sugar agroecosystem on the island based around central factories and a cane farmer subsector. A number of small and middle growers joined this cane-farmer subsector and entered into contracts with plantations and factories to sell their sugar to them. By 1930 sugar production and export was once more almost exclusively in the hands of large plantation owners

Chapter Five explores how an evolving political ecology in 1930s Jamaica decreased opportunities for smallholder participation in export industries and was part of a larger unrest that culminated in the 1938 Labor Rebellion. I analyze how the interconnectedness of a multispecies assemblage of people, plants, and microbes during this period shaped the island's political ecology and how smallholders affected and were affected by these changes. I explore how two banana plant diseases, Panama Disease and Leaf Spot Disease, made it increasingly difficult for smallholders to cultivate disease-free bananas and how agricultural officials' treatment policies disadvantaged smallholders. Additionally, co-operative organizations such as the Jamaica Banana Producers Association (JBPA) that were formed with a stated goal of supporting smallholders fell short of these goals due to pressure from competing companies such as United Fruit. With the sugar industry, the continued expansion of the central factory system ran up against global sugar quotas, and the first victims of this forced export production was the cane-farmer subsector that consisted of a number of smallholders. The very model of the central factory model, Frome Sugar Estate, then became the site of the outbreak of the Labor Rebellion.

Chapter Six analyzes the role state-led development policies in the 1940s and 1950s, created in responses to a series of local and global flashpoints, played in the emergence of a new political ecology where many smallholders chose to switch to local food production rather than

cultivating for export. It explores how the onset of World War II in 1939, the discovery of bauxite in 1942, and Hurricane Charlie in 1951 each resulted in state-led pushes for greater production of food for local consumption. Each flashpoint created opportunities for tradeoffs where smallholders, by switching to local food production, received theoretically greater land security and more stable markets in return for giving up the chances at profits through export agriculture that by this point were growing harder and harder to obtain. The result of thousands of individual Afro-Jamaican smallholders making the decision to cultivate food for domestic consumption, as well as the rise in the importance of bauxite to the island's economy, was a Jamaican political ecology on the eve of independence where the majority of Jamaicans no longer looked to export agriculture as the best pathway to economic success and security. Because of the interactions between people, plants, and microbes over the course of the late-colonial period, this new political ecology bore little resemblance to that of decades prior.

2.0 Creating a Post-Emancipation Agroecology: Smallholders, Bananas, and a New Plantation Complex

In this chapter, I explore the transformation of Jamaica's political ecology post-emancipation in 1834 through to the beginning of the twentieth century. I argue that the political ecology that developed on the island came about through the contestation and negotiation of competing visions for the island's future between Afro-Jamaican small and middle farmers seeking to exist and profit outside of the plantation sector and a white planter class looking for ways to maintain and restore a plantation infrastructure. The Gros Michel banana became the major focus of this contestation, as small and middle farmers used the crop, in conjunction with Jamaican merchants and American shippers, to establish a counter-plantation society in the 1870s and 1880s based around banana cultivation and export. Plantation owners originally ignored the rise of banana cultivation, instead hoping to revitalize a lagging sugar industry. But by the late 1880s and accelerating in the 1890s, more and more planters looked to banana cultivation as a path to profit and worked in coordination with the American merchants, led by Lorenzo Dow Baker's Boston Fruit Company, to turn the Gros Michel into a plantation crop and minimize the place of smallholders within the banana industry. By the end of the nineteenth century, Jamaica's agroecosystem became increasingly based around bananas more so than the declining sugar industry. And while smallholders were the original cultivators of the Gros Michel for export, they increasingly struggled to make gains in the now plantation-heavy banana industry.

I additionally argue that the relationships and hostility between the white planter class and Afro-Caribbean smallholders that played such a key role in shaping the agricultural trajectory of the island in the twentieth century had their roots in this earlier period. Racist and paternalist

attitudes towards the smallholding class and efforts to diminish their status within the island's burgeoning banana industry led to resentment among the Afro-Jamaican growers towards planters and colonial officials and to a contestation over vernacular versus "modern" approaches to agriculture. Finally, I contend that the Jamaica-connected global power structures and institutions that interacted with these local agents and agricultural systems also took shape during this period. The global banana and sugar trades' infrastructures and an increasingly interconnected British Empire developed in the second half of the nineteenth century and set the stage for the twentieth century to be a period of constant negotiation between local and global forces.

I first explore the decline of the sugar plantation complex in Jamaica following emancipation in 1834 and the rise of a formerly enslaved smallholding class in the subsequent decades that developed into a counter-plantation society. I then show how this counter-plantation society further developed with the rise of the banana industry beginning in the 1870s. Through agreements with the Boston Fruit Company, smallholders established themselves as the leaders in the burgeoning trade. This expansion of the smallholding class was short lived however, as by the 1880s the white planter class began to make inroads into the trade, with the Boston Fruit Company increasingly turning to the plantations rather than the smallholding complex for its bananas. The final blow for the counter-plantation society came with the formation of the United Fruit Company in 1899 and the near monopoly they quickly established over the trade. While the Colonial Office in London attempted to launch a Britain-based branch of the banana trade at the turn of the twentieth century, UFCo quickly forced the enterprise under their growing wing, further cementing the U.S. based influence over the trade. This created an environment, both literally, and metaphorically, where Jamaica's agricultural infrastructure served the needs of an expanding U.S. economic influence, with little thought for the environmental consequences in Jamaica itself.

Following this analysis, I show how with the rise in the banana trade and Jamaica once more becoming essential to global export markets, the Jamaican government moved to develop the island's infrastructure around a banana plantation complex at the expense of most smallholders. New roads, bridges, and a rail system were all constructed to aid in the cultivation and transport of plantation-grown bananas rather than from smallholdings and smallholder villages. Additionally, colonial officials created two new institutions, the Jamaica Agricultural Society (JAS) and the Department of Agriculture to further promote "modern" agricultural methods on the island. While these institutions, especially, the JAS, claimed to represent the smallholder, in reality they served only to benefit predominantly white planters and both white and Afro-Jamaican middle farmers, most of whom owned between 20 and 100 acres of land. The JAS clashed with smallholders over proper cultivation methods and reinforced a view of a Black smallholding class as unworthy of being major players in the island's export trade.

2.1 The Rise of Smallholdings, Decline of Plantations

Almost immediately from the arrival of Europeans onto the island's soil in 1494, Europeans exploited Jamaican land and labor for the production of agricultural commodities. Prior to the arrival of the Spanish, an estimated 60,000 indigenous Taino lived on the island, cultivating corn and cassava and relying heavily on fishing.⁴⁹ The Spanish first introduced sugarcane to the

⁴⁹ David V. Burley, et al., "Jamaican Taino Settlement Configuration at the time of Christopher Columbus," *Latin American Antiquity* 28, no. 3 (2017): 337-352.

island around 1506.⁵⁰ In addition to forcing Taino to cultivate sugarcane, the Spanish brought enslaved Africans from the West African areas controlled by the Portuguese to further bolster the amount of available labor.⁵¹ Upon taking over the island from Spain in 1655, the British worked to rapidly expand the island's enslaved population, with over 600,000 enslaved individuals shipped from Africa during the eighteenth century.⁵² In 1771 alone, 196 ships engaged in the slave trade business traveled to Jamaica.⁵³ As the population of enslaved Africans increased on the island, the plantation economy, particularly the sugarcane based economy, grew alongside. Almost immediately after annexing the island, the British began investing capital into the sugar industry. Between 1686 and 1689 and including costs of enslaved laborers, Britain invested an estimated £540,330 into the industry.⁵⁴ By the 1770s, Jamaica exported more sugar than the rest of the island possessions of the United Kingdom combined.⁵⁵ It was largely due to slavery and its role in growing the sugar industry that Jamaica reached this level of significance within the British Empire.

As the British planters controlled the island's sugar industry, groups of formerly enslaved attempted to establish their own societies, a precursor to the smallholding communities that freedpeople created following emancipation. During the 1660s, bands of Black Jamaicans,

⁵⁰ Edward Long, *History of Jamaica, Volume III: Reflections on its Situation, Settlements, Inhabitants, Climate, Products, Commerce, Laws and Government* (Montreal: McGill-Queen's University Press, 2003), 960.

⁵¹ *Ibid.*, 961.

⁵² For more on the British takeover of Jamaica, see Carla Gardina Pestana, *The English Conquest of Jamaica: Oliver Cromwell's Bid for Empire* (Cambridge: The Belknap Press of Harvard University Press, 2017).

⁵³ *Ibid.*, 15.

⁵⁴ Value based on 17th century currency, Nuala Zahedieh, "Trade, Plunder, and Economic Development in Early English Jamaica, 1655-89," *The Economic History Review* 39, no. 2 (1986): 209.

⁵⁵ *Ibid.*, 206.

formerly enslaved under the Spanish, launched a guerilla war against the British, with these fighters becoming known as “Maroons.”⁵⁶ Without the force to fight the British head-on, the Maroons retreated to mountainous locations to prevent capture.⁵⁷ Over the following decades and centuries, the Maroons established communities in which they hunted wild hogs and farmed available land in order to exist free from the plantation sector.⁵⁸

Among the enslaved population, a small plot-based society of their own also took shape. When they were not working the plantations, many enslaved worked on provision grounds, growing food for themselves and to sell at local markets.⁵⁹ For many, the provision areas were “the only places in Jamaica where Africans were free to make their own decisions, reap their own crops and enter into the money economy by selling the livestock and vegetables they produced.”⁶⁰ These grounds provided the model upon which the counter-plantation society would eventually develop. They also foreshadowed the competing landscapes that would develop post-emancipation between planters and freedpeople. What changed after emancipation was that this competition expanded from individual plantations to the entire island.

Although the activities of the enslaved population were essential to the formation of a counter-plantation society in Jamaica, this process of formation accelerated following emancipation. The British abolished the slave trade in 1807 and in August 1833, British Parliament passed the Slavery Abolition Act. The act went into effect on August 1, 1834, with the new law

⁵⁶ Orlando Patterson, “Slavery and Slave Revolts: A Socio-Historical Analysis of the First Maroon War Jamaica, 1655-1740,” *Social and Economic Studies* 19, no. 3 (1970): 297.

⁵⁷ *Ibid.*, 299.

⁵⁸ Philip Sherlock and Hazel Bennett, *The Story of the Jamaican People* (Kingston: Ian Randle Publishers, 1998), 145.

⁵⁹ *Ibid.*, 164.

⁶⁰ *Ibid.*, 170.

stating that “From and after the 1st of August, 1834, all the slaves in the colonial possessions of Great Britain should be forever free, but subject to an intermediate state of six years’ apprenticeship for praedials [slaves who worked the land] and four years for domestics.”⁶¹ This “apprenticeship” period was a gradual, rather than immediate shift to freedom, as the apprentices were required to work for their former enslavers for 40 ½ hours per week. Following four years of apprenticeship, apprentices and abolitionists grew frustrated that the system maintained many coercive elements and did not offer full freedom while planters feared that a continuation of the system opened them to further intervention by the Colonial Office into the workings of their plantations. In response to these complaints and seeing that emancipation laws were being passed across the Caribbean, the Jamaica Assembly passed an Act in the summer of 1838 abolishing the system.⁶²

Emancipation was transformative in not only Jamaica’s political and ecological structures, but the entire British West Indies and Caribbean writ large. Without the forced labor of the enslaved, the economic value of the West Indies territories to the British Empire rapidly declined, and with that, the importance of these islands in the eyes of London officials. During the mid-nineteenth century, the focus of British colonial officials shifted away from the Caribbean and towards territories such as India.⁶³ And as freedpeople attempted to establish their own communities and economic structures, the planter class saw both these imperial and local developments as a threat to their power base. The case of Haiti and a Black-led rebellion loomed

⁶¹ Edgar Mayhew Bacon and Eugene Murray-Aaron, *The New Jamaica* (New York: Walbridge & Co., 1890), 17.

⁶² Holt, *The Problem of Freedom*, 103; D.G Hall, “The Apprenticeship Period in Jamaica, 1834-1838,” *Caribbean Quarterly* 3, no. 3 (1953), 165-6.

⁶³ Taylor, *Empire of Neglect*, 3.

large in the minds of planters across the region. As a result, one of, if not *the* primary political goal of the planter class in Jamaica and the wider Caribbean post-emancipation became retaining their power base and ensuring the Black population remained in a subordinate position.⁶⁴

In Jamaica specifically, one of the most significant effects of emancipation both for Jamaica's environment and society was the efforts of freedpeople to obtain land, whether through struggle, purchase, or negotiation. This transformation in land ownership would fundamentally shift the form of agricultural production on the island. Instead of a few large farms dominating the agricultural landscape, freedmen with holdings of only several acres sprung up across Jamaica. In 1832, the 138 plantations in Jamaica were worked by 41,820 laborers, nearly all of the workers enslaved. By 1847, only thirteen years after emancipation, the labor on these estates had fallen to 13,973, a roughly 70% decrease.⁶⁵ As early as 1836, planters noted that some of the formerly enslaved, now serving as apprentices, were "purchasing their Apprenticeship and buying 5, 10, 15, 50, and even 100 acres."⁶⁶

Along with purchasing or renting land directly from the planters themselves, freedpeople also had the aid of Baptist missionary groups. Led by Minister William Knibb, the missionaries purchased large areas of land ranging anywhere from twenty-five acres to several hundred, divided them into small freeholds, and sold them to the formerly enslaved. Through this land redistribution method, Knibb, along with the new freeholders, created new communities throughout Jamaica. Knibb spoke of one of these communities in 1841, saying that "My new place, called Kettering,

⁶⁴ Eller, *We Dream Together*, 8.

⁶⁵ George Brizan, "The Colonial Land and Emigration Commission and Immigration to Jamaica 1840-1860," *Caribbean Quarterly* 20, no. 3/4 (1974): 43.

⁶⁶ Douglas Hall, *Free Jamaica 1838-1865* (New Haven: Yale University Press, 1959), 21.

bids fair to be a flourishing village. Nearly four hundred lots are sold, and about one hundred cottages are now erecting.”⁶⁷ Knibb on his own purchased and redistributed £70,000 worth of estate land within a two-year period.⁶⁸

Dismayed with the surge in freeholding purchases, white planters sought to use public funds to subsidize other Europeans to immigrate and purchase available land, thereby making the land unavailable to the Black population or the Baptists. In the short term, this practice was successful. In 1838, the number of holdings under forty acres was less than two thousand.⁶⁹ However, the strategy was unsustainable. Many of the Europeans who arrived did not remain on the island due to a lack of accommodations, such as proper housing and supplies, being prepared for them. By 1842, the planters all but abandoned their plan, with the Jamaican Assembly passing the Immigration Act that prohibited the subsidization of European immigration at public expense.⁷⁰

⁶⁷ John Howard Hinton, *Memoir of William Knibb, Missionary in Jamaica* (London: Houlston and Stoneman, 1847), 405.

⁶⁸ S. Copland, *Black and White or The Jamaica Question* (London: William Freeman, 1866), 40.

⁶⁹ Knox, “Opportunities and Opposition,” 383.

⁷⁰ Hall, *Free Jamaica*, 22.

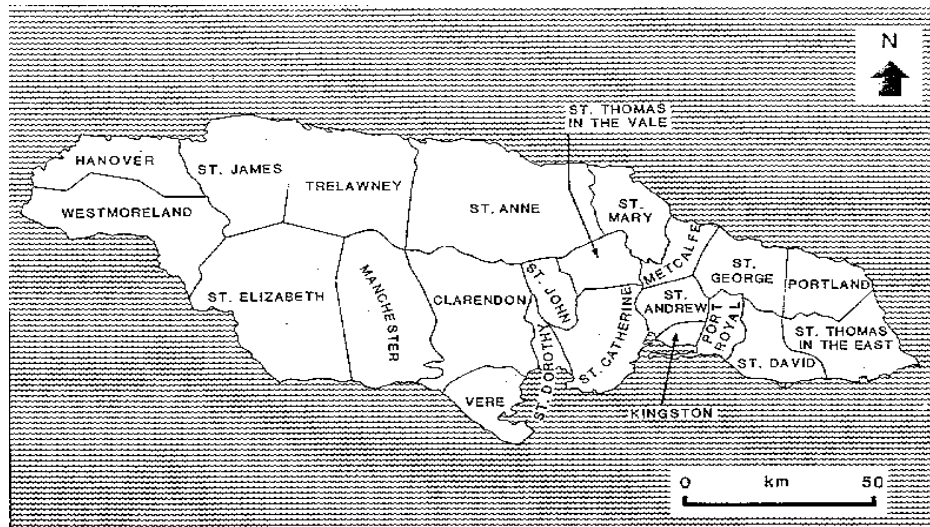


Figure 1: Jamaica's Parishes in 1844⁷¹

As the Jamaican government failed in its promotion of European immigration, the freedmen continued to establish freeholds. In the parish of St. Ann, by 1840 a combination of Afro-Caribbean freepeople and Baptists purchased over three thousand acres of land, and in the case of the Baptists, resold it to freepeople for anywhere between £4 and £20 an acre.⁷² In the same year, a colonial report noted that in the parish of Clarendon, “Perhaps few parishes have made such rapid progress in the establishment of small settlements and townships since freedom as Clarendon.” It further described the transformation of Jamaica’s landscape, noting that “All along the great leeward road from Kingston, which runs all through Clarendon about 20 miles, new settlements may be perceived rearing into existence every two or three miles.”⁷³ Similar situations existed throughout the island. Travelers from Great Britain and the United States remarked upon an

⁷¹ “Parishes in 1884,” from RootsWeb, accessed April 20, 2015, <http://www.rootsweb.ancestry.com/~jamwgw/map3.htm>.

⁷² Hall, *Free Jamaica*, 24.

⁷³ *Ibid.*, 24.

abundance of new settlements springing up in St. Thomas parish. In others, such as St. Dorothy, smaller villages grew into small towns. By 1845, smallholders owned 19,397 holdings of land less than ten acres on the island, while by 1866, this number totaled over 60,000.⁷⁴

Within these smallholdings, freedpeople grew predominantly ground provisions but also cultivated coffee and sugar on a small scale. By the 1860s, Jamaican governor Edward Eyre reported that smallholders were responsible for all of Jamaica's minor agricultural exports, including ginger, arrowroot, honey, beeswax, and coffee.⁷⁵ In terms of sugar, some settlers set up their own sugar boilers, allowing them to produce anywhere from five to twenty barrels per year. In Clarendon alone, small settlers in the 1850s produced an estimated 20,000 pounds worth of coffee and sugar per year.⁷⁶ Through these cultivations, smallholders were able to make initial inroads into Jamaica's export economy.

Along with producing crops for export, smallholders also sold their provisions locally, establishing a series of market economies across the island. One such market was in Mandeville, the capital of Manchester, which drew smallholders from as far as twenty-five miles away. Mother Brown, part of a smallholding family in Manchester, described how at her family's smallholding in the late-nineteenth and early-twentieth century they would grow yams, peas, cocoa, and plantains. On Friday night they would set out for the Mandeville market to make it in time for its opening on Saturday. After selling their provisions, they would make their way home with meat, fish, and vegetables.⁷⁷ Aunt Dinah spoke of a similar situation, where her and her family would

⁷⁴ Gisela Eisner, *Jamaica 1830-1930: A Study in Economic Growth* (Manchester: University of Manchester Press, 1961), 210.

⁷⁵ Holt, *The Problem of Freedom*, 159.

⁷⁶ *Ibid.*, 160.

⁷⁷ Mother Brown, in *Life in Jamaica in the Early Twentieth Century*, 5.

walk twelve miles to Mandeville, with cassava, peas, and corn loaded onto their donkey and carried on their heads.⁷⁸ Through these market transactions, smallholders established a life outside of the island's plantation economy and began the formation of a political ecology based around a smallholder class.

Concurrently with the rise in smallholdings was a decline in the island's plantation sector, further hindering the planter class' ability to prevent the development of a smallholding production system.⁷⁹ Without enslaved labor, emancipation left the planters with fewer resources, overworked estates, and scarce labor. Between 1832 and 1850, the value of exports fell by roughly sixty percent.⁸⁰ The primary reason for the decline in exports was the shift in agricultural production. Like the Maroons before them, rather than producing agriculture solely for export, many of the freedpeople began growing ground provisions, such as potatoes and edible roots, as a means of subsistence and in place of working on plantations. Many of these freedpeople felt that working on plantations did not result in adequate wages, while the plantation owners insisted that they did not have necessary means to pay enough to convince workers to stay.⁸¹ The exodus of workers from the plantations crippled the plantation economy. In 1832, the plantation output value totaled £2,160,900.⁸² By 1850, this was more than halved, dropping to £975,800.⁸³ The downward trend continued through the 1850s and 1860s.

⁷⁸ Aunt Dinah, in *Life in Jamaica in the Early Twentieth Century*, 4.

⁷⁹ Post, *Arise Ye Starvelings*, 32.

⁸⁰ Eisner, *Jamaica 1830-1930*, vi.

⁸¹ *Ibid.*, 179.

⁸² *Ibid.*, 28.

⁸³ *Ibid.*, 43.

The sugar industry in particular bore the brunt of this decline, helping to create the conditions for banana cultivation to usurp its place as the island's primary export industry. Along with the end of slavery and planters' inability to adjust to a free workforce, Britain withdrew tariff protection in 1846, which Jamaican planters claimed hindered their ability to compete with produce grown in areas where slavery continued. Jamaica's sugar exports peaked in 1805, when planters exported 120,000 tons of sugar to England alone. By 1840, this number had dropped to 26,000 tons and dropped as low as 14,000 tons by the end of the century.⁸⁴ With this precipitous drop in production, Jamaica, once considered the "best Jewel in the British Diadem" in the eighteenth century due to its sugar production, now produced only a small fraction of British sugar.⁸⁵ On the ground in Jamaica, abandoned plantations littered throughout the island and overrun with grasses and weeds became living monuments to the fall of sugar. The number of sugar plantations on the island dropped from 670 in 1830 to 300 by 1865 and 140 by 1900.⁸⁶ The former plantations were either subdivided and sold as separate plots or left lying in ruin. Later, this abandoned infrastructure would be adopted and repurposed for the banana industry both by smallholders in the newly subdivided plots on often hilly land in the northern parishes or by planters using flat, valley land in the eastern and southern parishes for banana cultivation.⁸⁷

⁸⁴ *Statistics of the Sugar Industry in Jamaica* (Kingston: Government Printing Office, 1929), 1.

⁸⁵ "Letter from Admiral Rodney to Stephen Fuller," 1784, in *The Fuller Letters 1728-1755: Guns, Slaves, and Finance*, eds. David Crossley and Richard Saville (Lewes: Sussex Record Society, 1991), as quoted in Matthew Parker, *The Sugar Barons: Family, Corruption, Empire, and War in the West Indies* (New York: Walker & Company, 2011).

⁸⁶ Knox, "Opportunities and Opposition," 386.

⁸⁷ Holt, *The Problem of Freedom*, 145.

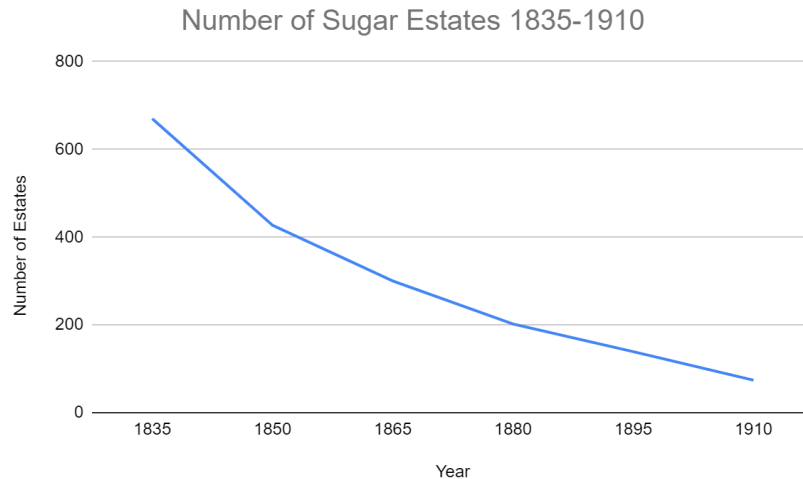


Figure 2: Decline of Sugar Estates 1835-1910⁸⁸

By the second half of the nineteenth century, the decline of the sugar industry was apparent to any observers. In 1866, Thomas Harvey and William Brewin, two British Quakers, traveled to Jamaica and wrote about their experience. Commenting on the status of the sugar industry, they noted that in the parish of Portland, only one out of the twenty-three sugar estates still cultivated cane, that shipping was heavily diminished, and that the days of sugar as the staple of Jamaica's economy were numbered.⁸⁹ This decline in sugar production helped to set the stage for a new political ecology to emerge on the island, with bananas soon emerging as an alternative crop.

⁸⁸ Data taken from Eisner, *Jamaica 1830-1930*, 203.

⁸⁹ Thomas Harvey and William Brewin, *Jamaica in 1866: A Narrative of a Tour Through the Island, with Remarks on its Social, Educational and Industrial Condition* (London: A.W. Bennett, 1867), 16.

2.2 The Morant Bay Rebellion and a New Colonial Government

In the decades following emancipation, the white planter class, and through them the Jamaican government, attempted to marginalize Afro-Jamaican smallholders. Along with the promotion of white immigration, the plantocracy passed a series of legislation between 1838 and 1865 targeted at Afro-Jamaicans.⁹⁰ One of the new laws adjusted export duties to benefit the planters. Duties on export items produced by estates saw only marginal increases while those on products grown on small plots of land, such as honey and arrowroot, were dramatically increased or introduced in cases where the product was previously exempt. Import duties likewise benefited the planter class. The duties on items used on estates decreased while those used or consumed by the freedmen, such as wheat, rice, and cotton, increased between 300% and 600%.⁹¹ Among other legislation passed were taxes on non-estate animals such as donkeys as well as a law that allowed for planters to eject tenants, the majority of whom were Black, from their land at a week's notice.⁹²

By 1865, a combination of political, economic, and ecological factors pushed many of the freedmen and peasants in Jamaica to a breaking point. At the island wide level, racist legislation, a poor crop year caused by a combination of drought and floods, and a lack of food provisions from the United States in the midst of the Civil War resulted in overall discontent among many Afro-Jamaicans with the conditions they faced on the island.⁹³ On October 11, 1865, a group of roughly three hundred Black men and women, led by Paul Bogle, a Jamaican Baptist deacon, entered the town of Morant Bay to protest a series of trials taking place, including the arrest of a

⁹⁰ Eisner, *Jamaica 1830-1930*, 381.

⁹¹ *Ibid.*, 390.

⁹² Bacon and Aaron, *The New Jamaica*, 20.

⁹³ *Ibid.*, 22.

Black man for trespassing on an abandoned sugar plantation. A pro-government volunteer force met the group, leading to a confrontation resulting in several deaths on both sides. Over the course of the next few days, the rebellion spread to St. Thomas Parish.⁹⁴ In response to the rebellion, Governor John Eyre dispatched the military to put down the conflict, leading to the deaths of roughly five hundred Black Jamaicans, the wounding of several hundred more, and the imprisonment of another few hundred.⁹⁵ Once more, the specter of Haiti loomed large in the eyes of colonial officials and planters, as Governor Eyre used the example of Haiti to justify this harsh response.⁹⁶ Within a few weeks, the rebellion was all but over.

One of the major effects of the Morant Bay Rebellion was to bring a change in governmental structure to Jamaica. In 1866, the Jamaican Assembly voted to abolish the Old Representative system, replacing it with a Crown Colony system of governance. Rather than risk having reform minded advocates elected to the Assembly, Assembly members instead chose to remove any democratic processes from the legislative body in favor of direct colonial rule.⁹⁷ While the British restored some aspects of representative government in 1884 by allowing nine elected legislators, expanded to fourteen in 1895, these members had no administrative power. Additionally, due to property and literacy requirements to vote, most Afro-Jamaicans could not participate in these elections.⁹⁸ The only direct benefit towards the Afro-Jamaicans was an end to the legislation directly targeting their most used goods. But by and large, the new system

⁹⁴ Gad Heuman, *'The Killing Time: The Morant Bay Rebellion in Jamaica'* (Knoxville: University of Tennessee Press, 1994), 6.

⁹⁵ Ibid., xiii.

⁹⁶ Holt, *The Problem of Freedom*, 305.

⁹⁷ A.J.G Knox made this point in "Opportunities and Opposition," 383.

⁹⁸ Clinton Vane de Brosse Black, *History of Jamaica* (London: Collins Clear-Type Press, 1975), 92.

effectively eliminated the potential for nearly all Afro-Jamaicans to participate in the political process.⁹⁹

This change in governmental structure would play a significant role in shaping the trajectory of agriculture on the island for years to come. With the members of the Assembly being almost exclusively white planters, the agricultural focus of the government centered around plantations. Additionally, with the Crown Colony system, decisions about the island's agriculture development would often be made by appointed British officials as opposed to Jamaicans with years of knowledge of the intricacies of best agricultural practices in the specific Jamaican context. However, despite the absence of state support, Afro-Jamaicans, particularly Afro-Jamaican smallholders, would play a pivotal role in reshaping the political ecology of Jamaica in the late nineteenth century through the development of the banana export trade.

2.3 Origins of the Jamaican Banana Industry

In 1866, Boston schooner captain George Busch transported five hundred banana stems from Oracabessa, Jamaica to Port Antonio and from there to Boston. Little is known about Busch's activities prior to his 1866 voyage, but by then he apparently believed that there was potential in the trade; he soon returned to Jamaica and urged smallholders to begin planting bananas. Three years later, after continuing to conduct trade between Jamaica and the U.S, Busch moved to Port Antonio, establishing himself as an agent for U.S. fruit houses. In 1870, Busch merged with other interested parties from New York City and Boston, forming the business of "Modie, Southerland,

⁹⁹ Holt, *The Problem of Freedom*, 337.

and Busch.”¹⁰⁰ Although the group quickly ran into economic troubles, they showed that a possibility existed for the banana trade between the United States and Jamaica to become a profitable enterprise.

That same year, Boston merchant Lorenzo Dow Baker stopped in Port Morant, Jamaica on his way back to Boston after delivering mining equipment to Venezuela.¹⁰¹ Before leaving Jamaica, Baker loaded his ship with cargo, including several bunches of bananas. Upon returning to Boston, Baker was able to successfully sell the unspoiled bananas. As with Captain Busch, Baker saw in bananas a potential profit. He returned to Jamaica a year later to obtain a shipment of 400 bunches of bananas and 25,220 coconuts.¹⁰² Baker made an estimated profit of \$2.30 per bunch, incentivizing further exploration into the potential of the trade.¹⁰³

Although it took until the 1860s for bananas to be exported from Jamaica, their history on the island, and within the wider Caribbean extended back centuries. The first recorded transport of a banana to the Americas dates to 1516, when Spanish explorers carried banana rhizomes from the Canary Islands to Santo Domingo.¹⁰⁴ At some point during the sixteenth century rhizomes were carried to Jamaica. Over the following several centuries, enslaved and smallholders would grow bananas on their small plots either for home use or to sell locally. By the time the export trade

¹⁰⁰ D.W. Rodriguez, *Bananas: An Outline of the Economic History of Production and Trade with Special Reference to Jamaica* (Kingston: The Government Printer, 1955), 25.

¹⁰¹ Randolph Bartlett, “Lorenzo Dow Baker: Yankee Entrepreneur in the Caribbean Fruit Trade,” *The Log of Mystic Seaport* 39 (1987): 5.

¹⁰² *Ibid.*, 3.

¹⁰³ Randolph Bartlett, “Lorenzo Dow Baker and the Development of the Banana Trade Between Jamaica and the United States, 1881-1890,” PhD diss. (American University, 1977), 28.

¹⁰⁴ Rodriguez, *Bananas*, 11.

began in the 1860s with Busch and then Baker, Jamaicans had generations of accumulated knowledge about banana cultivation to draw from as the trade expanded.¹⁰⁵

Although there are nearly one thousand different varieties of bananas, merchants used only the Gros Michel in the eventual banana trade. Named for the large size of its fingers, bunches, and trunk, the Gros Michel was first brought to Martinique from Southeast Asia by French naturalist Nicolas Baudin in the early nineteenth century. From Martinique, botanist Jean Francois Pouyat carried the Gros Michel rhizome to Jamaica in 1835 and began cultivating it.¹⁰⁶ The Gros Michel's physical characteristics made it optimal for use in the eventual trade. Compared to other banana varieties, the Gros Michel was much hardier, being more bruise resistant and capable of withstanding the often long travel from harvest to market. In addition, its longer ripening period helped to reduce the number of bananas that arrived overripe, giving growers and shippers greater value per shipment.¹⁰⁷

The topography and soil of Jamaica was highly suited to the cultivation of the Gros Michel. In the early years of Gros Michel cultivation on the island, the cultivar was primarily grown along flat river valleys with rich, alluvial soil in the northern and eastern parishes (as seen in Figure 3). By the turn of the twentieth century, the geography expanded into the central parishes, as growers found through experimentation and new cultivation efforts that the “black soil” that took up much of these central districts could also produce high yielding banana plants.¹⁰⁸ This soil was found on

¹⁰⁵ Carney and Rosomoff, *In the Shadow of Slavery*, 135.

¹⁰⁶ Christopher Cumo, *Encyclopedia of Cultivated Plants: From Acacia to Zinnia* (Santa Barbara: ABC-CLIO, 2013), 74.

¹⁰⁷ John Soluri, “Accounting for Taste: Export Bananas, Mass Markets, and Panama Disease,” *Environmental History* 7, no. 3 (2002): 389.

¹⁰⁸ “Cultivation of Bananas Chapter II: Soils,” *Journal of the Jamaica Agricultural Society* 28, no. 2 (1914): 76.

both flat and hilly land, meaning that growers with plots of land in higher elevations also began cultivating the Gros Michel. In a 1903 survey of soil drawn from thirty plots of land across the primary banana growing lands on the island, Department of Agriculture chemists concluded nearly all of the land currently under Gros Michel cultivation was highly fertile for banana cultivation and that the island would maintain high yields for years to come without the need for fertilizer imports.¹⁰⁹

Gros Michel Acreage by Parish 1890-1891

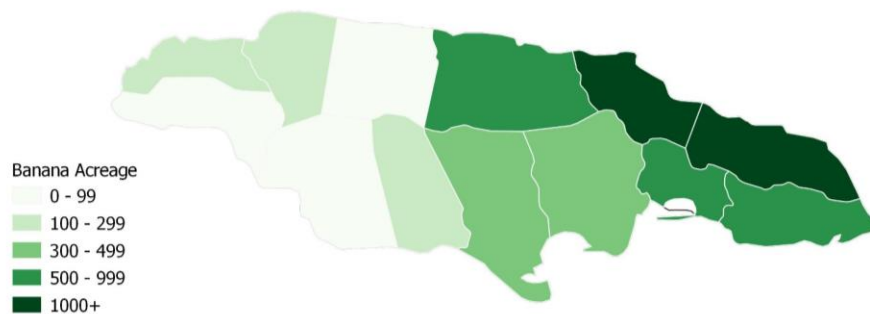


Figure 3: Gros Michel Acreage by Parish 1890-91¹¹⁰

From 1870 on, the geography of Jamaica's political economy, with smallholders and bananas at the fore, shifted towards the American imperial sphere. Banana exports from Jamaica skyrocketed. In the first decade after exports began, Jamaica's banana output rose from 2,000 to

¹⁰⁹ H.H. Cousins, "The Banana Soils of Jamaica – II," *Bulletin of the Department of Agriculture* 1, no. 1 (1903): 30.

¹¹⁰ Maps created using QGIS. Shapefiles imported from DIVA-GIS. Data set compiled from annual reports in the *Handbook of Jamaica The Handbook of Jamaica for 1892 Comprising Historical, Statistical and General Information Concerning the Island, Compiled from Official and Other Reliable Records* (Kingston: Government Printing Office, 1892).

85,000 stems.¹¹¹ In Port Antonio, the value of the banana trade increased by twenty-six times between 1870 and 1880.¹¹² Altogether, the banana grew from .06% of Jamaica's total agricultural output in 1870 to 1.95% in 1880.¹¹³ As both a cause and effect of the increased banana production, merchants' interest in the trade also rose during the 1870s. Lorenzo Baker steadily increased the number of trips he made to Jamaica, purchased faster schooners with greater cargo space, and expanded his trade to New York, Baltimore, and Philadelphia.¹¹⁴

Between 1878 and 1890, Jamaican banana exports rose from 313,000 stems to 4,848,000 stems annually.¹¹⁵ This increase brought bananas from a less than one percent share of the island's total exports in 1870 to over 19% by 1890, giving bananas the largest share of any product. This was a boon to American merchants who facilitated the trade, to the banana growers on the island, and to merchants and other middlemen who facilitated the transactions.¹¹⁶ Jamaicans, travelers, and writers took note of this expansion. The Jamaican Director of Public Gardens stated in 1886 that "the development of the banana industry has brought into cultivation large tracts of lands formerly lying useless or in ruinate, and it has also been the means of circulating nearly 200,000 pounds per annum in ready money amongst all classes of the community."¹¹⁷ As travelers Eugene Murray-Aaron and Edgar Bacon wrote in 1890, "We have seen how king cane was dethroned: now we are present at the coronation of king banana."¹¹⁸

¹¹¹ Satchell, *From Plots to Plantations*, 41.

¹¹² Holt, *The Problem of Freedom*, 349.

¹¹³ Satchell, *From Plots to Plantations*, 41.

¹¹⁴ Bartlett, "Lorenzo Dow Baker," 6.

¹¹⁵ Eisner, *Jamaica 1830-1930*, 242.

¹¹⁶ *Ibid.*, 238.

¹¹⁷ *The Handbook of Jamaica for 1886*, 430.

¹¹⁸ Bacon and Aaron, *The New Jamaica*, 147.

In this initial stage of the banana industry, smallholders drove banana cultivation on the island. Prior to the 1870s, they used the banana primarily for subsistence or for sale at local markets. This changed with the influx of merchants interested in developing the banana industry. To gain supplies, the fruit merchants cultivated relationships with smallholders. Lorenzo Baker did this by working with Sylvester Cotter, a Jamaican storekeeper, and William Grant, a Jamaican smallholder.¹¹⁹ Both of these middlemen had connections with other smallholders on the island, making the partnership with the two lucrative for Baker. In 1883, over 90% of land holdings in Portland, the largest banana producing parish in Jamaica, were less than ten acres in size.¹²⁰ Rather than work to suppress smallholders in the banana trade, as would become the hallmark of the industry by 1900, this initial period of growth in the 1870s and early 1880s was marked by cooperation between smallholders, merchants, and shippers.

The decision of smallholders to cooperate with American merchants led to economic growth among the smallholding class. Due to the amount of banana traders in the 1870s and 1880s, no one entity could develop a monopoly over the trade, resulting in a seller's market.¹²¹ Land and bank transactions help explain the impact the banana trade had on a small settler and vice versa. In the 1870s and 1880s, most land transactions were from plantation owners selling small acreages from their estates to small settlers.¹²² Between 1880 and 1890, the number of holdings under five acres rose from 36,756 to 95,942.¹²³ Regarding bank transactions, records from the Government's Savings Bank of Jamaica showed that between 1870 and 1900, the total number of depositors rose

¹¹⁹ Douglas Hall, *Ideas and Illustrations in Economic History* (New York: Holt, Reinhart, and Winston, 1964), 66.

¹²⁰ Soluri, "Bananas Before Plantations," 146.

¹²¹ Holt, *The Problem of Freedom*, 354.

¹²² Satchell, *From Plots to Plantations*, 149.

¹²³ Eisner, *Jamaica, 1830-1930*, 220.

from 2,359 to 32,860. Out of those depositors, 65% of them belonged to the under-five pound group, meaning that they were likely from the smallholding class.¹²⁴ Having more land and income benefited both the trade and the smallholders themselves, as smallholders could use the land and money to cultivate more bananas, boosting export numbers.

Along with the value derived from its trade, part of what made the banana such a compelling cultivation option for smallholders was the agroecology of the plant itself. Compared to other agricultural products grown during the nineteenth century, such as sugar, the banana plant required less labor to cultivate. This lower labor requirements benefitted the smallholders. The most difficult aspect of the process was clearing the land being used of all small timber and brush, leaving only large trees.¹²⁵ Cultivators often did this through burning the brush during the dry months from January to April. In May, cultivators planted the banana using “pointed sticks of hardwood.”¹²⁶ The only labor required between planting and cultivation was to ensure the area remained clear of small brush. After around two months, the plant usually doubled in size, and continued to grow and develop over the following months so that the fruit could be gathered within a year of planting.¹²⁷ At its largest point, an individual stalk grew to be anywhere between fifteen and thirty-five feet in height. Before it reached its full maturity, however, offshoots grew from the roots of the original plant, known as the “parent” stalk, which could then become parent stalks themselves. As a result of this propagation method, banana plots often yielded a continuous harvest

¹²⁴ Satchell, *From Plots to Plantations*, 55.

¹²⁵ Franklin Adams, “The Banana and its Relatives,” *Bulletin of the Pan American Union* 32 (1911): 849.

¹²⁶ Soluri, *Banana Cultures*, 20.

¹²⁷ Adams, “The Banana and its Relatives,” 849.

for years without needing to be replanted.¹²⁸ This meant that growers were able to grow bananas in addition to other crops, as they did not require constant attention.

Colonial officials began taking notice of the smallholder's success in the 1880s. Visiting the island as part of a West India Commission in 1892, Sydney Olivier, then Acting Secretary of British Honduras, wrote to his wife that "for the negro and coolie to develop at all they must come out of the plantation system and become smallholders and cultivators for themselves."¹²⁹ Olivier's published report backed the sugar industry, as it advocated further state support for the struggling industry and planters involved."¹³⁰ However, Olivier supported the sugar industry primarily in order to keep the sugar interests content rather than out of a belief that this was the right course of action for Jamaica. Olivier passed on his thoughts on smallholders to the Colonial Office. In response, Colonial Officer Joseph Chamberlain sent a letter to all West Indies governors asking them to support smallholders by allowing them to purchase private land near roads and ports. However, like Olivier, Chamberlain was careful to not anger the sugar industry, adding to the letter that smallholder gains should have been "pursued with due regard to the maintenance of the sugar industry."¹³¹

Although the colonial government recognized the importance of the smallholder to the fruit trade, little was done to assist them, with an elite class still focused on the sugar industry. While colonial officials such as Sidney Olivier and Joseph Chamberlain recognized the centrality of Afro-

¹²⁸ Ibid., 851.

¹²⁹ Sydney Haldane, Olivier, *Letters and Selected Writings*, ed. Margaret Olivier (London: George Allen & Unwin, 1948), 99 as quoted in Holt, *The Problem of Freedom*, 334.

¹³⁰ Ibid., 335.

¹³¹ Joseph Chamberlain, "Circulation Letters to Governors," July 26, 1898, CO 884/5 as quoted by Holt. *The Problem of Freedom*, 335.

Jamaican smallholders to the Jamaican economy, government officials remained unwilling to push state-led smallholder development policies.¹³² Instead, the government continued to promote policies geared toward white planters, such as prioritizing the sale of land only in large, hundreds of acre blocks affordable by only the wealthiest on the island.¹³³ By the 1890s, it was clear that the rhetoric of assisting the smallholders was little more than empty words, leaving the smallholders to fend for themselves.

2.4 The Rise of the Banana Plantation

While smallholders dominated the banana trade in the 1870s and the first half of the 1880s, using profits from the trade to buy more land and develop a banana agroecosystem based around smallholdings, by the end of the 1880s the plantation sector began to resuscitate, centered around bananas and driven by an influx of U.S. capital. This shift to a banana monoculture and the large crop density that came with it later meant easier pathways for Panama Disease to spread. The key driver of the creation of banana plantations was the consolidation of the shipping portion of the trade into one company. Lorenzo Baker, as the merchant facilitating much of the early trade, was able in 1885 to turn this success into a deal to form the Boston Fruit Company.¹³⁴ The company quickly established itself, shipping forty-two percent of the island's bananas by 1886, making it the largest banana exporter in Jamaica.¹³⁵ Through manipulation of the price of fruit, paying more

¹³² Holt, *The Problem of Freedom*, 338.

¹³³ Satchell, *From Plots to Plantations*, 92.

¹³⁴ Bartlett, "Lorenzo Dow Baker: Yankee Entrepreneur," 11.

¹³⁵ Holt, *The Problem of Freedom*, 350.

for bananas so that other merchants could not match the deals it gave growers, the Boston Fruit Company established a virtual monopoly over Jamaican bananas shipped to the United States.¹³⁶

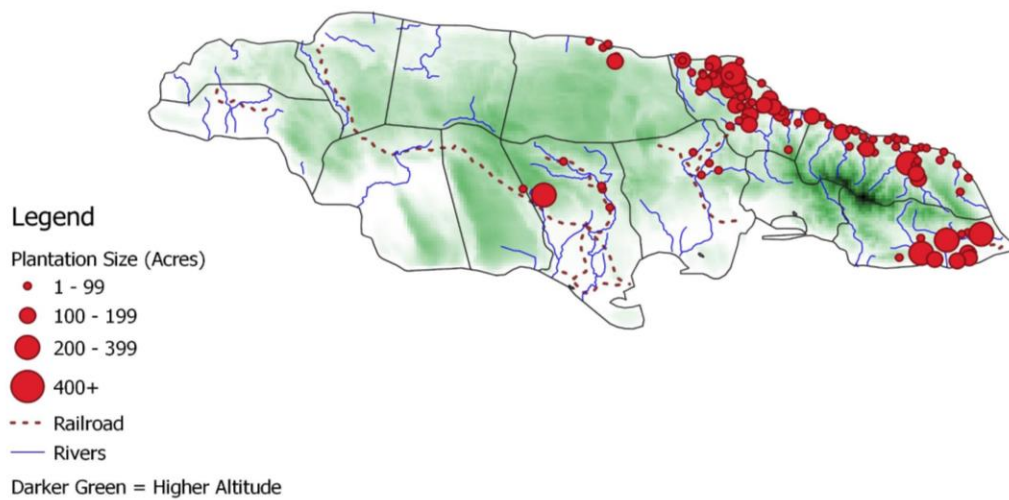
With control over the shipping aspect of the commodity chain secured by the late 1880s, Baker and the Boston Fruit Company shifted their attention to production. For Baker, this meant increasing overall production by transforming the banana into a plantation crop. At the time the Boston Fruit Company formed, only one estate in Jamaica identified itself as a banana plantation.¹³⁷ While other estates might have been growing bananas, it was likely not the predominant crop. However, by 1887, the company owned 13,000 acres of Jamaican land, some of which they cultivated and some of which they leased to farmers. By 1893, 133 plantations owners described their land as banana estates, with as Figure 4 shows, the majority of estates being located on the northern and eastern shores. By 1900, the number reached 218, making up 74% of the total land on the island devoted to banana cultivation.¹³⁸

¹³⁶ Ibid., 354.

¹³⁷ Soluri, "Bananas Before Plantations," 148.

¹³⁸ Eisner, *Jamaica 1830-1930*, 205.

Banana Plantations 1893-1894



Banana Plantations 1900-1901

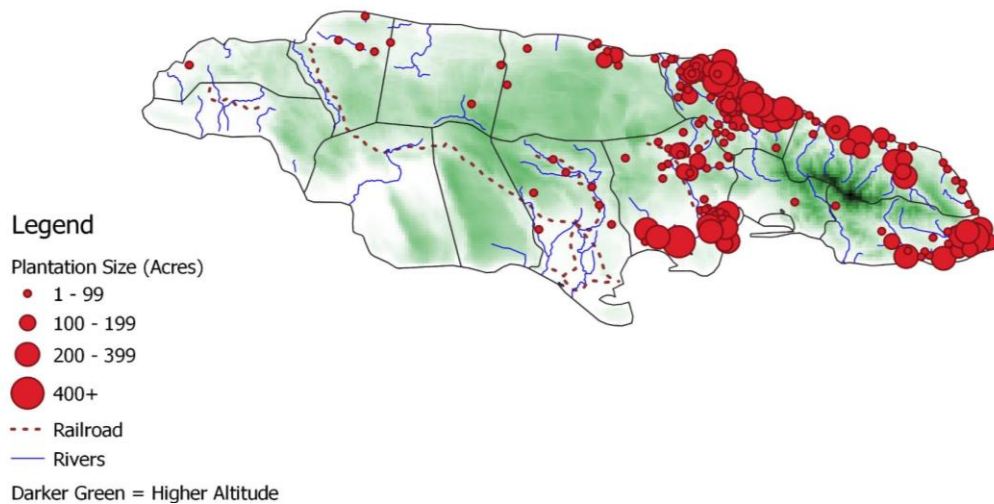


Figure 4: Banana Plantations and Acreage 1893-94 and 1900-01¹³⁹

¹³⁹ Maps created using QGIS. Shapefiles imported from DIVA-GIS. Data set compiled from annual reports in the *Handbook of Jamaica*.

Rather than constructing new plantations to accommodate the banana industry, planters simply repurposed former sugar estates. In 1885, E.E.C. Hosack, a Jamaican planter, purchased a 1500 acre abandoned sugar plantation in order to cultivate bananas, coconuts, cocoa, kola, and nutmeg.¹⁴⁰ By 1888, planters transformed enough sugar estates that William Drysdale commented as part of his report that “The land used [for banana cultivation] is likely to be either an unused sugar estate or what is known in Jamaica as a ‘ruinate;’ that is, land that has stood idle so long that it has become overgrown with tall bushes and small trees.”¹⁴¹

Planters’ efforts to develop banana plantations severely hampered smallholders’ role within the industry. One of the largest problems for the smallholder became an inability to sell their fruit. Smallholders from around the island wrote letters to the colonial government complaining about this issue. In one 1897 letter, a group of smallholders from Port Antonio wrote to ask for assistance in purchasing Crown lands. According to Richard Francis, the author of the letter, “The banana trade, which is now in existence, the whole island is monopolized by one company, and for this reason we gets no pay for this produce.” Francis went on to describe a family that carried bananas three or four miles only to have the fruit rejected, leaving the laborer with “not even a penny to buy bread for his children.”¹⁴² Another group of smallholders made a similar statement, saying that “We are ruined by banana cultivation. How can we sell to Boston Fruit Company when they have all of their own?” They also wrote about the lack of available land,

¹⁴⁰ “Interview with Mr. E.E.C. Hosack,” in *Report of the West India Royal Commission: Appendix X., Vol. III*, 294.

¹⁴¹ William Drysdale, “A Day in Port Antonio and a Look at the Banana-Raising Business,” *The New York Times*, September 2, 1888.

¹⁴² Richard B. Francis and others to The Royal Commissioners, April, 1897, in *Report of the West India Royal Commission: Appendix X., Vol. III* (London: Eyre and Spottiswoode, 1897), 416.

complaining that landowners by the late 1890s held all of their land in reserve rather than making it available for purchase, as they had done in the previous decades.¹⁴³

Without the ability to sell their fruit, many smallholders struggled to profit from the banana industry. Although as previously noted, while small depositors made up over two thirds of total depositors from 1870-1900, the numbers declined considerably in the 1890s. From 1897-1901 alone, 5,947 bank accounts closed in the Government's Savings Bank.¹⁴⁴ Between 1890 and 1900, the number of smallholdings fell from 95,942 to 60,671.¹⁴⁵ Regarding land transactions, rather than selling small parcels of plantation land as was the case in the 1860s and 1870s, by the 1880s and increasing until 1900, entire plantations were sold more often than individual parts.¹⁴⁶ This change in land transactions meant that acreages were no longer being sold from plantation owner to smallholder but from plantation owner to plantation owner, leaving the smallholders out of the equation.¹⁴⁷

Boston Fruit Company's work to turn the banana into a plantation crop accelerated under the United Fruit Company and ushered in an era of imperial rivalry between American and British economic interests within Jamaica. On March 30, 1899, the United Fruit Company was incorporated in New Jersey with twenty million dollars capital. Combining the enterprises of Minor Keith in Central America and Colombia with the Jamaica-oriented Boston Fruit Company,

¹⁴³ Chas A.W. King and others to The Royal Commissioners, April, 1897, in *Report of the West India Royal Commission: Appendix X., Vol. III*, 417.

¹⁴⁴ Satchell, *From Plots to Plantations*, 55.

¹⁴⁵ Eisner, *Jamaica 1830-1930*, 220.

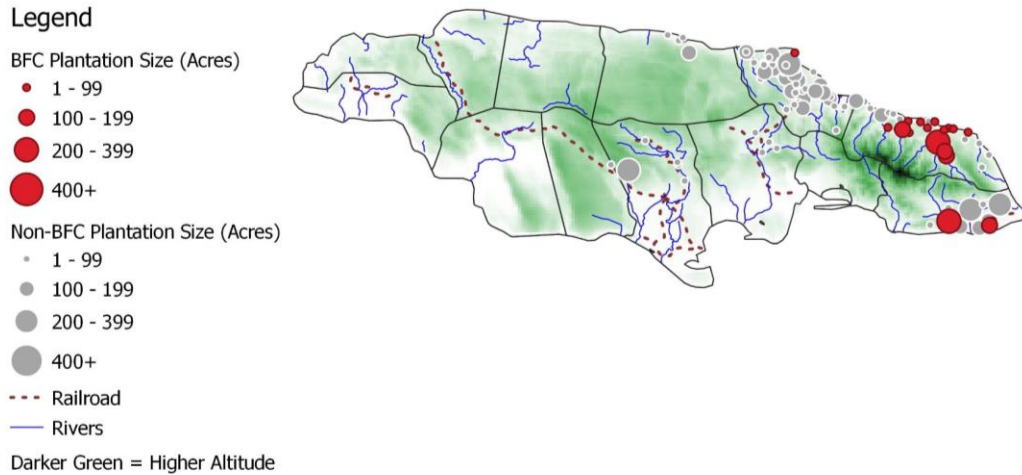
¹⁴⁶ *Ibid.*, 149.

¹⁴⁷ Scholars have taken different perspectives as to exactly when the smallholder class began to decline. According to Veront Satchell, the decline began in the early 1880s, while John Soluri and Thomas Holt argue that it was not until the late 1880s and 1890s that this decline began in full.

United Fruit became the largest fruit trader in the world, controlling 112 miles of railroad and 212,394 acres of land across its holdings in the Caribbean and Central America.¹⁴⁸ United Fruit continued the formation of a monopoly within the Jamaican banana trade, to the detriment of the smallholding class and British investments, minimal as they were to this point, in the banana trade.

¹⁴⁸ Charles R. Geisst, *Encyclopedia of American Business History* (New York: Facts on File, 2006), 448.

Boston Fruit Company Plantations 1893-1894



United Fruit Company Plantations 1905-1906

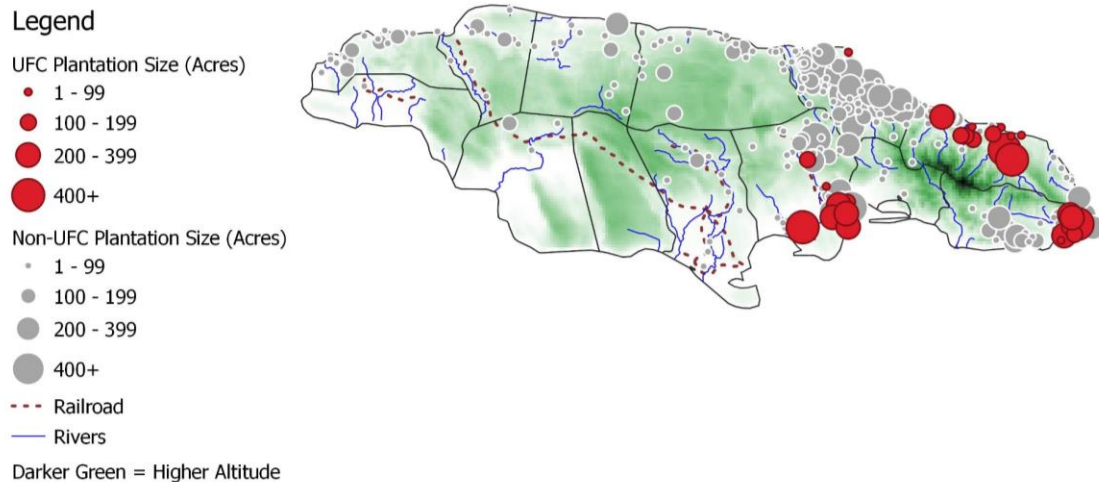


Figure 5: BFCo and UFCo Owned Plantations 1893-94 and 1905-06¹⁴⁹

¹⁴⁹ Maps created using QGIS. Shapefiles imported from DIVA-GIS. Data set compiled from annual reports in the *Handbook of Jamaica*.

In response to the emergence of a UFCo dominated political ecology of banana production and recognizing the profits that were to be had from bananas, the British government began making plans to subsidize a British company to enter the banana trade and break the American monopoly. In 1898 Secretary of State for the Colonies Joseph Chamberlain asked the British trading company Elder and Dempster's (which soon became Elder & Fyffes) Alfred Jones, the man responsible for the development of the Canary Islands banana industry, to investigate the potential of a shipping line between Jamaica and Great Britain.¹⁵⁰ Chamberlain was once of the British government's strongest advocates for the smallholders of Jamaica, believing that raising their standard of living was part of Britain's mission.¹⁵¹ With United Fruit's monopoly over the industry leading to smallholders struggling to make profits, Chamberlain saw the British trade as a potential way to break UFCo's monopoly. Chamberlain and Jones negotiated a deal in 1899 where Britain agreed to pay £40,000 a year subsidy for ten years in return for Jones overseeing the direct line between Kingston and Bristol.¹⁵² The first ship of the newly established line left Bristol in February 1901 and arrived in Kingston on March 1st.¹⁵³

British officials and the Jamaican press saw the new line as a means to curb the growing American imperial encroachment into Jamaica and assert British control over the banana industry.¹⁵⁴ An article in the *Daily Gleaner* stated that the company would likely match the success of United Fruit Company by taking advantage of the opportunities Jamaica presented.¹⁵⁵ By

¹⁵⁰ Peter N. Davies, *Fyffes and the Banana: Musa Sapientum A Centenary History 1888-1988* (London: The Athlone Press, 1990), 82.

¹⁵¹ Holt, *The Problem of Freedom*, 317.

¹⁵² Davies, *Fyffes and the Banana*, 85-86.

¹⁵³ *Ibid.*, 88.

¹⁵⁴ *Ibid.*, 105.

¹⁵⁵ "The Inauguration of the Direct Line," *The Daily Gleaner*, March 2, 1901, 6.

framing the success of the Elder & Fyffes line immediately in comparison to UFCo, the *Gleaner's* editors were likely sending a message to Jamaicans that the colonial government was looking to protect their interests from American domination. Instead of Lorenzo Dow Baker, the *Gleaner* championed who they described as “our new banana king:” Alfred Jones.¹⁵⁶

However, despite the hopes of asserting British imperial control over the banana trade, prospects of competing with the United Fruit Company quickly diminished. The direct line struggled from the start to procure enough bananas to fulfill the government contract of 20,000 stems per fortnight. The control UFCo had over the Jamaica growers meant that Elder & Fyffes could never be certain they could fill the ships and be able to sell the product at a profitable price.¹⁵⁷ As a result, Elder & Fyffes' capital quickly fell and led the company to negotiate a deal with UFCo to remain afloat. Negotiations began in May 1902 and in August, Elders & Fyffes and the United Fruit Company signed the “American Agreement,” which gave UFCo 45% control of Elders & Fyffes in return for supplying E&F's ships with the necessary number of bananas.¹⁵⁸ Within little more than a year, the direct line transformed from a means to compete with UFCo to virtually under the American company's control.

For the Jamaican smallholder, the failure of the Elder & Fyffes line to break UFCo's monopoly further reinforced their reduced importance to the overall trade. One of the trends that accelerated under UFCo's near monopoly was the rejection of bananas grown by those unaffiliated with the company. A Portland banana grower wrote to the *Daily Gleaner* in 1902 complaining that “we have seen cart-loads on cart-loads of fruit lying on the wharf here rejected. If the bananas

¹⁵⁶ “Our New Banana King: A Sketch of Mr. Jones,” *The Daily Gleaner*, March 2, 1901, 9.

¹⁵⁷ Davies, *Fyffes and the Banana*, 100.

¹⁵⁸ *Ibid.*, 103.

happen to be a little too full, or too thin, they are refused,” resulting in “great loss to the people.”¹⁵⁹ The blame for this, according to this specific grower, was United Fruit Company agents’ lack of communication with growers, as “agents ought to specify how many bunches they require at a time” and whether full or thin bananas are wanted at specific times.¹⁶⁰ Making these details explicit, the grower stated, would prevent the all too common fruit rejections. Writing into the paper a week later, another planter agreed with the Portland grower, saying that it was “obvious that the small planter gets next to nothing for his fruit during eight months of the year.”¹⁶¹ On at least one occasion, anger at banana rejections resulted in conflict between growers and traders, with police having to be called in following growers destroying bananas with machetes after traders refused to accept bananas except at a lower price than normal.¹⁶²

For many smallholders, the reduced prospects for economic success in Jamaica led them to emigrate from the colony, often to banana growing countries in Latin America. One prominent example was in Costa Rica, where twenty thousand Jamaicans immigrated between 1900 and 1913.¹⁶³ With the number of Jamaicans in Costa Rica, these migrants were able to establish their own communities within the banana regions and plantation overseers relied on their knowledge of banana cultivation to shape the industry there.¹⁶⁴ In Limón, a port city and the second largest city

¹⁵⁹ “The Fruit Trade,” *The Daily Gleaner*, September 24, 1902, 7.

¹⁶⁰ *Ibid.*, 7.

¹⁶¹ Fruit Grower, “The Fruit Trade: Some Timely Remarks,” *The Daily Gleaner*, October 1, 1902, 3.

¹⁶² “Disorder in Jamaica: Force Used to Prevent Fruit Growers Selling at Reduced Prices,” *The New York Times*, August 29, 1901.

¹⁶³ Avi Chomsky, “Afro-Jamaican Traditions and Labor Organizing on United Fruit Company Plantations in Costa Rica, 1910,” *Journal of Social History* 28, no. 4 (1995): 837.

¹⁶⁴ Steve Marquardt, “‘Green Havoc’: Panama Disease, Environmental Change, and Labor Processes in the Central American Banana Industry,” *The American Historical Review* 106, no. 1 (2001): 56.

in Costa Rica, by 1910 the Jamaicans had created their own communities, complete with churches, newspapers, and places to gather outside of the purview of the United Fruit Company.”¹⁶⁵ For those who wished to escape the banana industry altogether, the construction of the Panama Canal happening at the same time allowed another avenue for employment outside of the island. But in traveling to and working on these new projects, Afro-Jamaicans were substituting one imperial project based around the manipulation of nature for another.

2.5 “Modernizing” Jamaica’s Agricultural Infrastructure

As the banana industry on the island grew, so too did the infrastructure around both it and the island’s agriculture writ large, creating a political ecology in Jamaica based more around bananas than sugar. Over the course of the late nineteenth and early-twentieth century, the Jamaican government launched a series of efforts to bolster the trade’s infrastructure that explicitly benefited the large planter rather than the smallholder. At the banana trade’s inception in the 1870s, neither Jamaica nor the United States had an infrastructure in place to immediately launch it on a large scale. However, within the first three decades of the trade’s birth, a banana-centric infrastructure formed within Jamaica and technological advances in Europe and the United States made the growth of the trade possible. Two areas of this development stood out within Jamaica itself: the expansion of land transportation with roads and railroads, and irrigation projects that created more cultivable land. In the short term, these transformations in the island’s agroecosystem helped to turn Jamaica into the world’s largest banana exporter. In the long term, these very

¹⁶⁵ Chomsky, “Afro-Jamaican Traditions,” 839.

transformations that accelerated the growth of the industry would help facilitate the spread of the fungus that would help bring about its collapse.

In terms of roads, a shift towards bananas included both a repurposing of sugar roads and bridges and the construction of new ones based on key locations for the banana industry. Prior to the 1870s, what well-managed roads did exist were left over from the days of the sugar industry's success. This meant that they were often in places that had no value to the banana industry. However, by the 1880s and 1890s, the Jamaican government made a conscious decision to switch from maintaining roads used for the sugar industry to constructing new roads for the growing banana industry. In 1882, 764 miles of main roads and 3,000 parochial roads existed, yet during the 1890s alone, the government constructed 1,000 miles of new roads and 22.5 miles of new bridges throughout the colony.¹⁶⁶ The location of many of these new roads shows their association with the banana industry. In 1884, a road was constructed between Annotto Bay and Port Maria, two of the main banana trading port cities in Jamaica.¹⁶⁷ Between 1889 and 1899, new roads were built coming from Annotto Bay, Port Maria, Montego Bay, and Port Antonio, all four ports essential to the banana trade.¹⁶⁸

Along with roads and more important for the eventual spread of Panama Disease, the Jamaican government also worked to expand the colony's railways in the mid and late nineteenth century. In 1843, a group of British and Jamaican capitalists incorporated the Jamaica Railway Company, with a fourteen-mile track constructed between Kingston and Spanish Town being the only railway in the colony. The goal of the railway at this time was to improve overall

¹⁶⁶ Eisner, *Jamaica 1830-1930*, 178.

¹⁶⁷ *The Handbook of Jamaica for 1886*, 143.

¹⁶⁸ *The Handbook of Jamaica for 1899*, 112.

transportation on the island in the hopes of restoring the plantation sector.¹⁶⁹ However, over the next thirty-five years, next to no rails were built, with the exception of a small extension to Old Harbour.¹⁷⁰ Transferred to government ownership in 1879, the government ordered construction of roughly ninety new miles of track, coinciding with the expansion of the banana trade.¹⁷¹ Due to the possibility of increased travel speed and a decrease in banana bruising, railways were an appealing option for transportation.¹⁷² Both planters and smallholders supported the extensions, with planters believing it would help revitalize the sugar industry by pushing into the interior parishes and help facilitate the construction of central factories and smallholders hoping that it would make it easier to ship their fruit to market. However, the railway struggled to maintain high traffic, resulting in a lack of funds to further expand. Nevertheless, by the turn of the twentieth century, rail lines stretched from Kingston in the south to Port Antonio in the northeast and to Montego Bay in the northwest.¹⁷³

Another area that the Jamaican government invested in was an irrigation project known as the Rio Cobre Irrigation Canal. Started in 1870 during the governorship of JP Grant, the thirty-mile canal located in southern Jamaica was completed in 1876.¹⁷⁴ Altogether, the canal covered 50,000 acres of land, 30,000 of which was cultivable. By 1881, 2,000 acres were irrigated, 500 of which was used for banana cultivation. The use of the irrigation system for banana growing was

¹⁶⁹ Veront M. Satchell and Cezley Sampson, "The Rise and Fall of Railways in Jamaica 1845-1975," *The Journal of Transport History* 24, no. 1 (2003): 1.

¹⁷⁰ Eisner, *Jamaica 1830-1930*, 179.

¹⁷¹ *The Handbook of Jamaica for 1886*, 512.

¹⁷² Eisner, *Jamaica 1830-1930*, 179.

¹⁷³ Satchell and Sampson, "The Rise and Fall of Railways," 8.

¹⁷⁴ *The Handbook of Jamaica for 1881*, 315.

the first time such a system was implemented for bananas in the Western Hemisphere.¹⁷⁵ The growth of the canal was slow, with only 3,500 acres irrigated in 1890.¹⁷⁶ However, when used, irrigation proved an effective tool to expand banana cultivation to inland areas. St. Catherine Parish especially benefited, as many former sugar planters switched to banana cultivation and used the Rio Cobre system to expand banana cultivation beyond their previous limits for sugar.¹⁷⁷ One cultivator of many who benefitted from the irrigation system was Septimus Feurtado, cultivator of one hundred acres of bananas in St. Catherine. According to Feurtado, who spoke about the canal's benefits in 1789, "Without irrigation banana cultivation would be impossible on such an arid plain."¹⁷⁸ While he acknowledged the difficulty of cultivation in the area, he stated that "with the command of water for irrigation and under careful and intelligent management... any industrious man, with sufficient capital to establish 10 acres in a proper manner, may be considered fairly started in life."¹⁷⁹ Feurtado and his cultivations would become, in the government's eyes, the model for the benefits that projects like the Rio Cobre Canal could bring to growers. The Governor of Jamaica at the time, Anthony Musgrave, visited his land and remarked upon his "perseverance, energy, and intelligent skill" in using the canal to his benefit.¹⁸⁰

Along with the changes to the island's physical infrastructure, by the end of the nineteenth century the colonial government itself changed to further promote and develop the island's banana industry and its agricultural system more broadly. The colonial government created two

¹⁷⁵ Rodriguez, *Bananas*, 18.

¹⁷⁶ *The Handbook of Jamaica for 1890-1891*, 304.

¹⁷⁷ Rodriguez, *Bananas*, 18.

¹⁷⁸ *The Handbook of Jamaica for 1881*, 181.

¹⁷⁹ *Ibid.*, 181.

¹⁸⁰ *The Daily Gleaner*, May 13, 1878, 2.

institutions, the Jamaica Agricultural Society and the Department of Agriculture, to bolster the island's agricultural production. The formation of both organizations was part of an empire-wide focus on technocratic development beginning in the late nineteenth century, a period later dubbed the "age of high imperialism."¹⁸¹ In this high imperialist age, colonial governments accelerated their application of scientific knowledge and technology to the territories they governed. On the ground, the individuals most responsible for the application of these ideals were scientists and agricultural experts. These individuals in each colony worked with local inhabitants and pre-existing structures to shape the trajectory of the colonies and "modernize" the colonial landscape.¹⁸² But rather than imposing one homogenous technocratic vision from on high, it was through interactions at the local level that each colony's developmental framework took shape. And in the case of Jamaica, as the following chapters will show, due to a multispecies assemblage of people, plants, and microbes, the agricultural systems that emerged often looked very different from those agricultural officials hoped to create.

The first of these institutions to take shape was the Jamaica Agricultural Society (JAS). Conversations about the society began in 1893 with petitions to the Legislative Council calling for the formation of some sort of agricultural body and the first meeting took place on May 29, 1895. The Governor at the time, Henry Blake, served as the society's first president.¹⁸³ With Blake as President, and several members of the Legislative Council as Board members, the society immediately had the backing of the Jamaican government. With this backing, the JAS received an initial grant from the government upon its formation, which the society then handed out to its

¹⁸¹ Ross, *Ecology and Power*, 9.

¹⁸² Hodge, *Triumph of the Expert*, 6.

¹⁸³ Clyde Hoyte. *History of the Jamaica Agricultural Society: 1895-1960* (Kingston: n.p., 1961), 8.

members. The society aimed to model itself as a citizens' organization, developing what one of its members later described as a sense of "agricultural citizenship" throughout the island.¹⁸⁴ The board appointed an instructor to hold agricultural lectures around the island and visit individual farms to assist growers with their cultivations.

To expand its reach throughout the island, particularly to rural areas, the JAS established a series of branch societies. These branch societies allowed middle growers to assume leadership roles in their communities and assist with the society's goal of promoting agricultural education. The society launched six branch societies totaling 300 members within two years of its inception. By 1910, the number of branches had grown to sixty-three, with 3,500 members. By 1935, the number ballooned to 298 branches with 6,841 members. These branches reached nearly every corner of the island, including some of the most rural areas. Rather than having only one location out of which all agricultural conversation spread, these hundreds of branches meant for the JAS thousands of people across the island discussing and implementing new agricultural techniques. Along with this expansion across the island, the JAS began recruiting more instructors drawn from the Black rural middle class that would work with individual growers to teach JAS approved cultivation techniques and improve their holdings.¹⁸⁵ The number of JAS instructors jumped from eleven instructors in 1910 to twenty-one by 1935.¹⁸⁶ Although a sizable increase, this still only meant less than two instructors per parish. The society's leaders increasingly came to see the instructors as the most important contributors to the development of their agricultural ethos. For

¹⁸⁴ Ibid., 28.

¹⁸⁵ José Andrés Fernández Montes de Oca, "Jamaica in the Age of Development: Petitions, Small Farming, and Agricultural Planning, 1895-1972, PhD Dissertation (University of Pittsburgh, 2020), 55.

¹⁸⁶ Hoyte, *History of the JAS*, 16.

proponents of the society, its expansion and development was an unbridled success. Writing in 1960, one of its members, Charles Hoyte wrote that the JAS “pioneered a cooperative spirit among the small growers” and that no other organization in Jamaica “wielded such a powerful influence amongst adults all over Jamaica.”¹⁸⁷

But despite the society’s claim to act as a voice of the small grower, in reality the organization focused most of its attention on a class of Afro-Jamaican middle farmers, along with white planters. Much of this had to do with representation in the society. From its inception, board members were predominantly members of the white planter class, with many often also serving in the Legislative Council. In the branch societies, middle farmers dominated both leadership positions and membership overall. Even once the society had expanded to the 298 branches of 1935, the average number of members per branch was only around twenty-three, consisting almost solely of middle farmers and planters. For the smallholders that did join, they had virtually no role in the day-to-day operations of the organization.

Racialized paternalism undergirded much of the JAS board members’ discussions of and directives towards the Afro-Jamaican smallholders. While never explicitly connected to race, the majority of the criticisms levied towards smallholders played off of the racist stereotypes of the Black population as lazy, unintelligent, and unable to help themselves. A constant thread throughout JAS meetings was the inadequacy of smallholder cultivation and a laziness of smallholders to put in the effort to improve their holdings. In a 1906 meeting, one of the board members complained that smallholders always blamed others for their problems, never looking inward to see what they could improve themselves.¹⁸⁸ Members frequently complained that

¹⁸⁷ Ibid., 19, 30.

¹⁸⁸ “Board of Management,” *The Journal of the Jamaica Agricultural Society* 10, no. 1 (1906): 23.

smallholders were not adopting the improved methods proposed by the society, but never acknowledged that with many of the new technologies and techniques, most smallholders were unable to afford them.¹⁸⁹

The smallholders themselves distrusted that the JAS had any of their interests at heart. After years of political and economic suppression by the planter class and colonial officials, most smallholders did not believe that any policies or programs instituted by the Jamaican government would actually benefit them. Apart from the lack of focus of the JAS on the small growers, at the core of the disconnect between the growers and the JAS was a fundamentally different view of how to get the most out of their land. For the JAS instructors, “modern” agriculture with terracing, forking, chemical fertilizers, and new technologies promised the best returns on cultivations. But for many of the smallholders, the methods the instructors advocated for were superimposed onto the land without any thought for the local conditions.

The divide between the “vernacular” and “modern” approaches to agriculture made its way to Jamaican literature from the time. In Jamaican writer Claude McKay’s 1933 *Banana Bottom*, a coming-of-age story of a young Jamaican woman, he writes of an encounter between a JAS instructor who traveled to the woman’s village. The instructor visited during bush burning season, when farmers burned cut bush, warning the farmers that the burning ruined the land. In McKay’s novel, the farmer who had burned the most land out of any in the village ended up having the highest quality crops in the neighborhood. His neighbors, who followed the “academic advice” of the instructor, saw their crops destroyed by pests and insects. Undeterred, the same instructor came back and scolded a farmer for transplanting cocoa plants without care. As it turned out, the farmer’s

¹⁸⁹ H.C Thomas, “Hints to Small Settlers,” *The Journal of the Jamaica Agricultural Society* 15, no. 4 (1911): 160.

plants thrived after replanting. The lesson, according to McKay, was that “sometimes even trained instructors had to learn from the ignorant instinctive land. For the culture of the soil was so like the culture of humanity, varying according to country and climate.”¹⁹⁰ While a work of fiction, interactions between smallholders and JAS officials such as the ones in *Banana Bottom* would play out throughout the island in the twentieth century, maintaining the gulf between smallholders and the Agricultural Society.

Thirteen years after the formation of the JAS, Governor Sydney Olivier formed in 1908 a Department of Agriculture, merging previously existing institutions, the Agricultural Board, which had been formed in 1899, and a series of experimental facilities and plots that dated back to 1874.¹⁹¹ To head the newly formed department, Olivier selected H.H. Cousins. Cousins, born and educated in England, had served as Jamaica’s chemist since 1900 and was also a member of the Legislative Council.¹⁹² Even more so than the JAS, the Department of Agriculture focused most of its attention on larger holdings, leading to a contentious relationship between the institution and the smallholding class. Unlike the JAS, which was adjacent to the colonial government, the Department of Agriculture was a direct governmental wing and focused much of its attention on improving the total volume of agricultural exports from the island.¹⁹³ With the colonial government’s overall emphasis on re-establishing plantation agriculture rather than encouraging a counter-plantation society, Cousins and the Department of Agriculture writ large likewise

¹⁹⁰ Claude McKay, *Banana Bottom* (New York: Harper & Brothers, 1933), 274-5.

¹⁹¹ Walter Jekyll, *Guide to Hope Gardens* (Kingston: Aston W. Gardner & Co., 1903), 19. The experiment stations served as both test cultivation sites and training for children from industrial schools.

¹⁹² E. John Russell, “Obituaries: Mr. H.H. Cousins,” *Nature* 165 (1950): 97-98.

¹⁹³ Despite Cousins attending all JAS Board meetings, a contentious relationship developed between the JAS and Department of Agriculture almost immediately, with the Board and Cousins constantly disagreeing on the best path forward to develop the island’s crops.

emphasized expanding the plantation economy. In his annual reports, Cousins rarely mentioned smallholdings, instead connecting his work to supporting the island's planters. The only times smallholders were mentioned was when the department's appointed inspectors found that smallholders were not following regulations created by the department. As the following chapters will show, the relationship between Cousins' Department of Agriculture and most growers on the island, especially smallholders, would continue to shape the island's political ecology into the 1930s.

With the formation of the Jamaica Agricultural Society and the Department of Agriculture in the early twentieth century, the Jamaican government became one of many colonial authorities that attempted to implement the technocratic ethos of high imperialism. Through both of these institutions Jamaican agriculture entered a new phase, with the implementation of "modern" agricultural methods a high priority. For the Jamaican smallholder, this implementation often meant a deprioritizing of their agricultural system. These developments, combined with the takeover of the banana trade by the United Fruit Company and an infrastructural push to resuscitate the plantation sector, effectively ended the short-lived era of the counter-plantation society as the main driver of the island's agricultural exports. How smallholders then negotiated this new agricultural system would be a key factor in the island's agricultural trajectory in the coming decades.

2.6 Conclusion

By 1911, Jamaica, with its banana trade dominated by the United Fruit Company, was the largest exporter of bananas in the world. Over the course of the late nineteenth century, the island's

agroecosystem had been turned from decaying sugar plantations to a thriving banana complex. Jamaica's political economy and ecology, like much of the Caribbean at the turn of the twentieth century, came increasingly under the influence of U.S.-based multinational companies. The Jamaican smallholder, who had been first responsible for moving the island away from sugar and towards bananas, had steadily been pushed out of the trade by the United Fruit Company and the island's white planter class who wanted to maximize their own profits while minimizing smallholder influence on the island. With little assistance from the Jamaican government, the smallholding class had to struggle largely on its own to maintain a place within the trade. Divides also opened among the planter class, with some turning away from Britain and towards U.S. companies to increase their profits, others working together with the colonial government and technocrats to improve the island's agricultural fortunes, and a third group longing for the days when sugar, not banana, was king. But this restructuring of Jamaica's political ecology in the late nineteenth and early twentieth century would soon be disrupted by a fungus that would be part of a new reshaping of Jamaica's economy and ecology: Panama Disease.

3.0 Threats from the Human and Non-Human World: Jamaican Growers Confront

Panama Disease

When looking back on his early life in turn of the twentieth century Jamaica, Mr. Mac, a tobacco grower in Westmoreland, spoke of helping build the Panama Canal to earn enough money to buy land in Jamaica..¹⁹⁴ An unnamed woman from Kingston similarly recalled spending eleven years in Panama with her husband so that they could earn enough to buy land upon returning to Jamaica.¹⁹⁵ Mr. F from Clarendon told a similar story in regards to Cuba, where he had worked in the cane fields before returning and purchasing fourteen acres of his own.¹⁹⁶ Reverend John B. of St. Thomas did the same, working in Cuba during the cane boom of the early twentieth century before returning to Jamaica in 1923.¹⁹⁷ These are four examples of the hundreds of thousands of Jamaicans migrating from, and in many cases back to, the island over the late-nineteenth and early-twentieth century. The circum-Caribbean during this period was a hotbed of constant mobility, as Caribbean residents, predominantly Afro-descended, searched for the best opportunities to establish a firm economic foundation for their families. Agricultural work was most common, whether on sugar plantations in Cuba or banana plantations in Central America. But unbeknownst to these migrants, particularly those working the banana farms of Costa Rica and Panama, by the early twentieth century any one of these workers could have been carrying a fungal pathogen on

¹⁹⁴ Mr. Mac: The Clock Tower Man, in *Life in Jamaica in the Early Twentieth Century*, 5.

¹⁹⁵ With a Hidden Father, in *Life in Jamaica in the Early Twentieth Century*, 4.

¹⁹⁶ Mr. F: Man Boy, in *Life in Jamaica in the Early Twentieth Century*, 29.

¹⁹⁷ Rev. John B, in *Life in Jamaica in the Early Twentieth Century*, 7.

their boots, clothes, or cutlasses that would devastate Jamaica's, and the entire Caribbean's, banana industry.

In this chapter, I explore how Panama Disease upended the political ecology of Jamaica established in the decades prior and analyze how smallholders, planters, and colonial officials confronted the disease and were affected by it. I argue that a key factor in Panama Disease's spread across Jamaica was a lack of knowledge and recognition among growers, scientists, and officials of the inherent ties between cultivators and their surrounding environment, including other-than-human species. In particular, uncertainty and confusion as to the primary methods of microbial spread of this soil-borne fungus—methods that included a mobile population, environmental and transportation, infrastructure, and weather events—meant that most mitigation efforts did not actually stop the spread of the fungus. A second factor in the disease's spread across the island was the unwillingness of both growers and officials to accept many of the tradeoffs that came with greater attention to the disease. Both growers and officials attempted to minimize, or in some cases ignored, disease mitigation efforts out of fears of the economic pain that mitigation would bring or, especially in the case of smallholders, because following mitigation guidelines would mean abandoning many of their agricultural practices. Finally, colonially imposed, British Empire-wide “solutions” to the disease outbreak were incommensurate with local developments and were imposed without an understanding of the microbe itself. For example, British officials recommended quarantining (isolating) diseased plants by destroying surrounding plants without accounting for local dynamics within Jamaica itself or recognizing that plant-to-plant spread was not one of the most critical methods of fungal movement. As a result of these three factors combined, by 1930 Panama Disease threatened the very existence of the island's banana industry.

In the first section, I provide an overview of the history of Panama Disease and its management as well as how officials and growers had a limited scientific knowledge of the disease at the time of its 1911 discovery in Jamaica. Establishing this baseline helps to understand the decisions officials and growers made in the years following. In the second section, I analyze the first encounter Afro-Jamaican growers and colonial officials had with the disease in 1911 and 1912, showing how the management of this first case set the stage for how the disease would be treated during the 1910s and 1920s. Uncertainty was a hallmark of this encounter, as there was little agreement as to the cause, threat level, and best way to manage the disease's potential spread. In the next section, I look at the primary ways in which the fungus behind Panama Disease spread across the island. A mobile population both within and to and from Jamaica, rivers, railways, and weather events were all crucial facilitators of the fungus' movement to new banana lands. For all of these factors, uncertainty among scientists and officials as to the role each actually played delayed officially recognizing them as a cause of the spread. I then move to a discussion of the disease's management, analyzing how a lack of knowledge about the disease shaped the treatment of it along with the scapegoating of Afro-Jamaican smallholders. Continuing a pattern established generations prior, officials and planters used racist stereotypes to paint Black smallholders as inadequate cultivators who did not possess the will or knowledge to combat Panama Disease. Additionally, by focusing almost solely on infected plants, rather than on the microbe, they were always chasing the spread from behind and never caught up. Following this, I discuss the tradeoffs that came with disease management and how officials and growers were often unwilling to accept these trades. In particular, Colonial and local officials attempted to isolate Jamaica from regional efforts to learn more about the disease out of a belief that this knowledge would actually harm Jamaica's economic position within the banana industry. Finally, I examine how the spike in

diseased plants in the 1920s resulted in a reshuffling of the banana industry's geography and of the island's agroecosystem as a whole.

3.1 Overview of Panama Disease

To understand the spread and impact of Panama Disease in Jamaica, it is necessary to first understand the nature and history of the disease itself. Panama Disease, coming from the fungus *Fusarium oxysporum* f. sp. *cubense*, is a wilting disease caused by a soil-borne fungal pathogen.¹⁹⁸ The fungus first enters a banana plant through its roots and makes its way up to the stem and eventually leaf bases. Once infected, a plant's leaves become discolored before wilting and collapsing downward. Within one to two months of the first signs of infection, all the visible parts of the plant are killed. Even after the plant is killed, the pathogen remains in the nearby soil, able to infect any new banana suckers planted, even decades later. Once a plant becomes infected with Panama Disease, there is no known cure.

Although the exact origins of Panama Disease are unknown, the first record of concern over banana wilting dates back to Australia in 1876.¹⁹⁹ By the 1890s, wilting diseases were reported along the Atlantic coast of Panama, where the disease received its name. Within twenty years of its discovery in Panama, the blight gained traction in Costa Rica, Honduras, Surinam, Cuba, Trinidad, and Puerto Rico. Growers in these areas noticed the leaves on their banana plants

¹⁹⁸ Randy C. Ploetz, "Fusarium Wilt of Banana," *Phytopathology* 105, no. 12 (2015): 1515.

¹⁹⁹ Nadia Ordonez, Michael Seidl, et al. "Worse Comes to Worst: Bananas and Panama Disease - When Plant and Pathogen Clones Meet," *PLoS Pathogens* 11 (2015): 1.

yellowing and withering, and upon dissection of the plants' stems, found purple-brown tissue that produced a strong smell. Plants with these symptoms either produced poor quality fruit or none at all. Upon discovery of infected plants, growers soon noticed entire acres of bananas infected with the disease. Within two to three years of first discovery on a plantation, it was likely that the entire banana crop would succumb to the disease. It was not until 1919 that scientists isolated the fungal pathogen, but by this point the disease had already become a global threat.²⁰⁰

Once it encountered the infrastructure of the capitalist, colonial banana cultivation system, the nature of the fungus and the susceptibility of the Gros Michel cultivar resulted in a rapid growth of cases. The fungal pathogen is a facultative parasite, not needing banana plants to live and spread.²⁰¹ They remain in soil particles even after being removed from the ground, meaning that anything that can carry soil particles can carry the disease. Items such as boots, clothes, cutting and harvesting equipment, and animal hooves have all acted as disease carriers.²⁰² Thus tracing the path the disease took as it laid waste to Jamaican livelihoods and landscapes is a tale of individuals, communities, local practices, and market imperatives.

The climate and topography of the banana producing regions of Latin America and the Caribbean additionally expedited fungal movement and disease spread. In particular, regular hurricanes meant consistent opportunities for the fungus to travel to new areas. Severe weather acted as a catalyst for disease movement, as high wind and rains loosened the soil and downed plants, whose remains still carried the fungus. Often, these destroyed plants would make their way

²⁰⁰ Soluri, *Banana Cultures*, 52-53.

²⁰¹ Facultative, as opposed to obligate parasites, which require the host to survive and reproduce.

²⁰² Soluri, *Banana Cultures*, 54.

into waterways, further spreading the pathogen.²⁰³ These storms would also damage the roots of banana plants, making them easier for the fungus to enter.

Furthermore, the structure and practices of the banana industry itself facilitated the disease's spread. By 1900, planters only grew one variety of banana, the Gros Michel, for commercial banana cultivation. Gros Michel bananas are sterile, meaning that new Gros Michel plants could only be obtained from the offshoots of existing plants. This resulted in a lack of any genetic diversity among the Gros Michel crop. Without this diversity, Panama Disease affecting one Gros Michel plant meant that all plants were susceptible to the disease. This, combined with high plant density monoculture plantations, meant that one plant becoming infected on a plantation was effectively a death sentence for the rest.

The incubation period of Panama Disease made charting the disease's spread through these multiple pathways difficult. Depending on the volume of fungus infecting the banana plant's roots, it can take between two and six months for that plant to show any symptoms of disease. Additionally, the fungus could be present in the soil for up to five years before any plants become infected, as the fungus needs to reach a critical volume to infect a plant.²⁰⁴ With this sometimes years-long gap between the arrival of the fungus and a plant showing symptoms, it was exceedingly difficult to ascertain when or how the fungus reached a certain area of land.

Prior to the 1911 discovery in Jamaica, scientific knowledge of Panama Disease among agricultural officials, companies, and growers was limited. The United Fruit Company claimed to

²⁰³ J. Rishbeth, "Fusarium Wilt of Bananas in Jamaica Part I: Some Observations on the Epidemiology of the Disease," *Annals of Botany New Series* 19, no. 75 (1955): 318.

²⁰⁴ Kenneth G. Pegg, et. al., "The Epidemiology of Fusarium Wilt of Banana," *Frontiers in Plant Science* 10 (2019): 2.

have begun research into Panama Disease upon their discovery of the disease on company land in 1903. However, they did not launch major research programs into the disease, its cause, and methods of spread until the 1910s. While by 1911 plantation workers and overseers in Central America could identify the disease, they knew little about its cause or methods of spread. It was not until 1915 that researchers connected the *Fusarium* fungus as the cause of the disease.²⁰⁵

In Jamaica, agricultural officials and JAS members had been aware of Panama Disease prior to its discovery on the island, but it is unclear how much of this knowledge reached the general growing public. The first mention of the threat of a banana disease came at a meeting of the Board of Management of the JAS, when a memo from Director of Agriculture H.H. Cousins was read to the board. Cousins described a “relentless spread” of a banana disease in Central America but argued that its spread outside of Jamaica was “one of the greatest safeguards for the future stability of Jamaica’s banana trade” due to the comparative hardiness of Jamaica’s banana sucker.²⁰⁶ This discussion was published in *The Daily Gleaner*, but there was no further mention of the disease until 1911. By early 1911, there was concern among several JAS members about the potential threat of the disease to Jamaica, with one describing a sense of “dread” about the disease.²⁰⁷ However, these conversations seemed to have been isolated to a few board members, as there are no indications that JAS branch societies discussed the disease prior to its arrival. Between this lack of branch discussion and a scarcity of news about the disease from the *Daily Gleaner*, the chances are low that small and middle growers, particularly in rural areas, were aware of the disease.

²⁰⁵ Marquart, “Green Havoc,” 60.

²⁰⁶ “Fruit Disease,” *The Daily Gleaner*, May 21, 1910, 22.

²⁰⁷ “Comments” *Journal of the Jamaica Agricultural Society* 15, no. 11 (1911): 522.

The initial treatment method for Panama Disease adopted in Jamaica focused on quarantine and disinfecting. The Department of Agriculture established a procedure in 1912 whereby four-square chains (88 square yards) of banana plants surrounding the diseased plant would be dug up.²⁰⁸ This averaged roughly 100 banana plants destroyed per infected plant. The impacted area was then fenced off, with only departmental officials allowed in. From there, officials cut up and/or burned the diseased plant and poured four gallons of lime into the holes left by removing the plant.²⁰⁹ Upon treating the infected area, replanting of any crops was banned until the grower received written permission from the Director of Agriculture.²¹⁰ Additionally, any tools used or clothing worn on infected land was required to be disinfected either through fire or a solution made of Jeyes Fluid and water.²¹¹ This process was developed seven years prior to the 1919 isolation of the fungal pathogen, but as will be discussed in the chapter, remained in place until the mid-1920s.

3.2 Initial Encounter with Panama Disease

Jamaican planters and officials' initial encounter with Panama Disease in 1911 and 1912 acted as a preview of what was to come in the following two decades: a response to the disease plagued by uncertainty and disagreement. While these issues were isolated to one location during

²⁰⁸ C.G. Hansford and J.B. Sutherland, "Report from Microbiologist C.G. Hansford and Supervising Inspector of Plant Diseases J.B. Sutherland to Director of Agriculture, 1926, 1B/5/77/312, The Jamaica Archives.

²⁰⁹ "The Panama Disease of Bananas or the Banana Blight," *Jamaica Gazette*, February 8, 1912, CO 141/75, British National Archives.

²¹⁰ "The Protection From Disease (Plants) Law, 1915," in *The Laws of Jamaica, 1915* (Kingston: Government Printing Office, 1915), 1.

²¹¹ "The Panama Disease of Bananas or the Banana Blight," *Jamaica Gazette*, February 8, 1912.

this initial discovery, they would eventually expand to be island-wide by the early 1920s. The encounter also highlights the interconnectedness of Jamaica's experience with Panama Disease with the rest of the circum-Caribbean. Migration, banana plantations in Costa Rica, and United Fruit scientists from Central America all played a role in this first incident, and these factors would continue to play a major role in the decades to come.

In September 1911, H.H. Cousins received information about a potential banana disease in the Balcarres district of Portland, within the Buff Bay River Valley. D.A. MacFarlane, a smallholder in the area, reported to an agricultural instructor that his bananas were dying for an unknown reason. Several days later, the instructor visited MacFarlane's land and after inspecting the bananas, reported to Director Cousins that he believed the plants to have died from Panama Disease.²¹² On October 26th, Cousins created a committee to investigate the claims. The committee included the United Fruit Company's Superintendent of Agriculture and S.Q. Levy, an agricultural inspector from St. Mary who spent time among infected fields in Costa Rica. The committee visited various farms around the area including the holdings of planter and Jamaica Agricultural Society member S.S. Stedman, who had heard of MacFarlane's concerns and shared them about his own holdings. After dissecting the stems and suckers of plants gathered from the area, Cousins reported there to be no evidence of Panama Disease, although he stated that the plants gave the appearance of the disease "to a man ignorant of banana cultivation in Jamaica but familiar with diseased bananas in Costa Rica." However, due to what Cousins described as an "accident," he did not visit the MacFarlane's farm. Despite not visiting McFarlane's land, Cousins

²¹² "Banana Plants in Portland," *The Daily Gleaner*, January 6, 1912, 6.

remained confident that Panama Disease was not present, describing it as a “baseless and irresponsible rumor.”²¹³

Despite his apparent attempts to quell the matter of Panama Disease, Cousins’ report created more confusion and skepticism than relief. The editorial board of *The Daily Gleaner* wrote about the report and its lack of clarity. Although they touted Cousins’ scientific knowledge, they also noted that he was not an experienced agriculturalist and had made several mistakes since taking on the position of Director of Agriculture. They additionally wrote of concerns that Cousins only visited one cultivation, foregoing a more extensive inspection.²¹⁴ By far the most vocal opposition to Cousins’ report, however, came from S.S. Stedman. In an editorial responding to the report, Stedman described Cousins’ report as “somewhat misleading” and he was “truly amazed at the small attention given by Cousins in his report to the disease which was reported some months ago.” He too voiced concerns that Cousins did not visit the supposedly affected field and called on Cousins to perform his duty and thoroughly investigate the matter.²¹⁵

Faced with criticism of his actions and asked by the Colonial Secretary and Governor to look further into the matter, Cousins launched a second investigation into the reported disease in Portland, this time enlisting the services of Robert Carol Westmore, overseer of UFCo plantations in Costa Rica who had been dealing with Panama Disease for several years. The pair, joined by the agricultural instructor, visited the Buff Bay River Valley on December 27th, examining three smallholdings and Stedman’s land. Westmore determined that the supposed cases on the smallholdings were not the disease, but that the plants were dying because of attempts to plant on

²¹³ “Report on the Banana Disease in Portland,” *The Daily Gleaner*, November 17, 1911, 3.

²¹⁴ “A Recent Scare and a Report by Mr, Cousins,” *The Daily Gleaner*, November 17, 1911, 8.

²¹⁵ “Banana Plant,” *The Daily Gleaner*, November 17, 1911, 13.

heavy hillsides, while the trouble on Stedman's estate came from an overuse on subsoil on land not typically suited for banana cultivation. After concluding these investigations, Cousins reported to the Colonial Secretary that "I am unable to find any indication of the Panama Disease of bananas in Jamaica nor is there any reason to fear that any deadly or dangerous disease is at work in the banana fields of Portland." He also used this opportunity to attack those who made the claims of Panama Disease, especially Stedman, claiming that Jamaican agriculture had been set back by the "unfounded and baseless report."²¹⁶ The *Gleaner* editorial board celebrated the findings, stating in a January 6th article "that there is no Panama Disease of bananas in Jamaica may now be accepted as gospel truth" and that "we may now breathe freely in the sure and certain knowledge that Panama Disease is still a stranger to the banana plantations of Jamaica."²¹⁷ For the editors of the *Gleaner* the perceived knowledge of the colonial officials was more valuable than that of a concerned planter.

This relief proved to be short-lived. Worried about the reported discovery of Panama Disease in Jamaica, the United Fruit Company sent one of their own disease experts, Goldsmith Williams, to investigate the claims. On January 9th, Williams visited D.A Macfarlane's land and claimed that the disease was in fact Panama Disease. Williams then met with Cousins, who he convinced that the disease was present on the island.²¹⁸ After reporting the presence of the disease, the *Gleaner* attempted to downplay its severity, calling the situation concerning but not yet alarming. They did not hold back, however, in attacking Director Cousins. They blamed him for the lack of responsiveness to the threat and his unwillingness to acknowledge it, going so far as to

²¹⁶ "Banana Plants in Portland," *The Daily Gleaner*, January 6, 1912, 6.

²¹⁷ "Freedom of Jamaica from Panama Disease," *The Daily Gleaner*, January 9, 1912, 8.

²¹⁸ "Banana Blight," *The Daily Gleaner*, January 27, 1912, 1.

say that “the discovery of the disease shattered forever Mr. Cousins’ reputation as a scientific agriculturalist.”²¹⁹ In their first meeting since the discovery, the Jamaica Agricultural Society spent a large portion of their discussion of the disease questioning Cousins and his lack of preparedness. It was through this questioning that it was revealed that although Cousins visited three smallholdings as part of his second investigation, he still had not visited MacFarlane’s farm, prompting a round of criticism from JAS members, particularly S.S. Stedman.²²⁰

With the focus now turning to how the disease came to Portland, the transnational nature of this encounter became apparent. According to MacFarlane, his brother moved to Costa Rica some years before to earn money working on a banana plantation. Around 1909, he returned to Jamaica to visit his family, bringing the clothes he wore on the plantations and wearing the boots he used while working. MacFarlane believed that this was the likely origin of the disease on his land, as he had noticed symptoms now determined to be those of Panama Disease for the last three years. After this discussion, Williams also came to believe that this was how the disease entered MacFarlane’s land.²²¹ This view was not shared by everyone, however, as Cousins rejected the theory, believing it more likely that the disease had been present in Jamaica for some years and was something present in nearly all tropical soil. This idea of the disease as an innate part of tropical soil remained popular for years, as the uncertainty over the causal organism of the disease lasted through much of the 1910s.²²²

²¹⁹ “Panama Disease Present in Jamaica,” *The Daily Gleaner*, January 27, 1912, 8.

²²⁰ “Discovery of the Panama Disease in the Buff Bay Valley,” *The Daily Gleaner*, January 19, 1912, 6.

²²¹ “Banana Blight,” *The Daily Gleaner*, January 27, 1912, 6.

²²² H.H. Cousins, “Banana Disease,” *The Journal of the Jamaica Agricultural Society* 16, no.10 (1912): 518.

The one aspect all invested parties could agree upon was the need for aggressive treatment of the infected land. Based on his experience with Panama Disease in Costa Rica, Goldsmith Williams recommended that every banana plant be dug up in the infected area and the removed plant covered in quick-lime before being placed in a pile to be burned. Regarding the land itself, he advised all plants to be dug up within a one-hundred-yard radius from the infected land in hopes of keeping the disease contained.²²³ He finally recommended that the boots of all of the workers treating the land be thoroughly disinfected so as to prevent spread. Employees of the Department of Agriculture cut down twenty-six acres worth of bananas in and around the infected plot and covered the area with lime. The one aspect Cousins did not instruct his employees to follow was the disinfecting of boots, as he did not believe that the disease could be spread this way, highlighting not only the limitations of Cousins' scientific expertise but also of his knowledge of the centrality of movement to life in the Circum-Caribbean in the early twentieth century.²²⁴

By the spring of 1912, MacFarlane's land had been treated and a few cases found in adjacent areas also dealt with. With these cases resolved, many officials and Jamaican elites felt confident that they had defeated Panama Disease. In his annual report of the Department of Agriculture for 1912, Cousins wrote of the department's success in combating the disease, as there appeared to be no further spread. He believed that due to Jamaica's climate, the banana in Jamaica had "natural advantages in the resistance of bananas." and that as long as Jamaicans kept a watchful eye, they had little to fear from the disease.²²⁵ Echoing Cousins' confidence, the *Gleaner* published

²²³ "Banana Blight," *The Daily Gleaner*, January 27, 1912, 6.

²²⁴ H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending March 31, 1912," *Jamaica Gazette*, August 29, 1912, CO 141/75, British National Archives.

²²⁵ *Ibid.*

an article in July declaring victory over the scourge of Panama Disease and shared his belief that Jamaica's geography gave the island's bananas resistance to the disease.²²⁶ One of the voices of dissent with this triumphant view, as was the case with the first discovery of the disease, was S.S. Stedman. At a meeting of the Jamaica Agricultural Society, Stedman voiced concerns that the disease was not wiped out, especially since he received reports that suckers from MacFarlane's land had washed down the river due to a flood.²²⁷ This disconnect between agricultural officials and growers would manifest constantly over the following few decades.

3.3 Rivers, Railways, and Boots: How Panama Disease Spread Across Jamaica

To understand how Panama Disease in Jamaica went from isolated concern in 1912 to an island-wide outbreak by the mid-1920s, I analyze the role human migration/labor, methods of transportation, and non-human nature played in its spread. I argue that the three primary means for the continuous transmission of Panama Disease in Jamaica were the mobile nature of the Jamaican working class and smallholding community, rivers and railroads facilitating rapid microbial movement across the island, and weather events such as hurricanes leading to crop destruction and blowing of infected soil and plants across land and into waterways.

The turn of the twentieth century Caribbean was a place of constant migration and movement, a perfect recipe for a pathogen's spread. For many Afro-Caribbeans in the late-nineteenth and twentieth centuries, travel around the circum-Caribbean was essential to their

²²⁶ "Is the Fight Against Banana Disease Being Waged With Care and Skill?" *The Daily Gleaner*, July 19, 1912, 8.

²²⁷ "Banana Disease," *The Journal of the Jamaica Agricultural Society* 16, no. 4 (1912): 194.

livelihoods. As mentioned previously, the 1834 emancipation of the enslaved within the British Empire opened the door for many Afro-Caribbeans, especially in the West Indies, to leave their home islands and seek opportunity elsewhere.²²⁸ Finding institutional structures in place at home that minimized upward mobility and restricted pay, freedmen and women hoped for better chances elsewhere. These migrations built on one another, as those migrants who established themselves in other countries acted as both proof of the possibility of successful emigration and as assistance for those looking to travel. All told, from 1850-1910 roughly 200,000 British West Indians left their home islands for the Caribbean coast of Central America, creating a series of networks, both economic and familial, across the region.²²⁹

For Afro-Jamaicans in particular, two of the largest drivers of movement were the construction of the Panama Canal and employment opportunities on Central American banana plantations, both of which would bring these workers into areas where Panama Disease was already present. In terms of the Panama Canal, between 80,000 and 90,000 Jamaicans alone are believed to have traveled to the Canal zone during construction, which occurred from 1905-1913. With travel rates from Jamaica only \$5 per trip, the equivalent of two weeks' worth of labor in Jamaica or one week in Panama, travel to and from the zone quickly paid for itself.²³⁰ With few available jobs paying as well in Jamaica, the canal project provided a chance for Jamaicans to establish a sound economic footing. However, once production neared completion, many Jamaicans returned to their home island, where they often used their money to purchase land.²³¹

²²⁸ Richardson, "Caribbean Migrations," 203.

²²⁹ Putnam, *The Company They Kept*, 35.

²³⁰ Ibid., 60.

²³¹ Richardson, "Caribbean Migrations," 211.

At the same time that tens of thousands of Jamaicans made their way to Panama, thousands of others left the island to work on banana plantations in Central America, particularly in Costa Rica. Between 1901 and 1921, over 33,000 Jamaicans emigrated to Central American banana zones. As these numbers exclude seasonal and short-term migrants, the total population traveling to these areas on a year-to-year basis was significantly higher.²³² The fruit companies, particularly United Fruit, sought out Jamaican workers, wishing to use their knowledge of banana cultivation to maximize yields on their plantations.²³³ Although the migration was initially structured by fruit companies, the ease and cheapness of travel across the region led to more independent travel.²³⁴ Though the majority of these workers spent their time on UFCo plantations, other fruit companies recruited in Jamaica as well, with several hundred Jamaicans leaving in early 1911 to work on Kurrinwass Fruit Company plantations in Nicaragua.²³⁵

The height of these migrations between Jamaica and Central America came in the few years leading up to the initial discovery of Panama Disease within Jamaica.²³⁶ With both Panama and Costa Rica as disease hotspots, all it took was for a large enough pathogen load to latch on to cutlasses, boots, or clothes for the fungus to have a path to Jamaica. With thousands of workers

²³² George W. Roberts, *The Population of Jamaica* (Cambridge, U.K.: Conservation Foundation at the University Press, 1957), 51, 139; as cited in Lara Putnam, *Radical Moves: Caribbean Migrants and the Politics of Race in the Jazz Age* (Chapel Hill: The University of North Carolina Press, 2013), 29.

²³³ Marquardt, ““Green Havoc,”” 51.

²³⁴ Putnam, *The Company They Kept*, 36.

²³⁵ “Labor Fields. Jamaicans Now Leaving for Nicaragua,” *The Daily Gleaner*, February 9, 1911, 6.

²³⁶ By the late 1910s, the migration patterns had shifted more towards Cuba than Central America, with 60,000 Jamaicans leaving for Cuba between 1919 and 1921. This was more for sugarcane harvesting than banana cultivation; Putnam, *Radical Moves*, 29.

traveling to and from Jamaica each year, this then resulted in disease hotspots developing across the island without The Department of Agriculture connecting them.²³⁷

Just as hundreds of thousands of Jamaicans were part of transnational migration networks, an even greater number engaged in local networks of movement, from working multiple jobs to traveling to and from markets. And as migration facilitated the movement of microbes to the island, local movements allowed the disease to spread to new hotspots and soils across the island. For many smallholders, the primary mode of transportation to and from markets and banana buying stations was the cart. However, as carts were too expensive for many of the smallholders to own, smallholders would group their goods together to send on one cart. According to Mr. A., who used this method to transport goods, five or six men would load their crops on the cart and follow them to market. Once market day ended, everyone would then return on the cart.²³⁸ In cases where no smallholders nearby owned a cart, a wealthier planter would come and take bananas and other crops on their own wagon for a fee.²³⁹ In either scenario, the crops, crop remains, and soils from several different smallholdings would mix together on one cart, which was then accessed by multiple farmers, creating an opportunity for microbes to hop from one farmer's land to another.

One of the ways smallholders made a living and supported owning their own plots of land was through working multiple jobs, often miles apart from one another, in positions that would bring them into contact with people and objects that carried the pathogen. Smallholding men would take work on banana plantations during the planting and harvesting seasons clearing land, digging

²³⁷ C.G. Hansford, "Some Remarks On Questions Raised by the Panama Disease of Bananas," in *Proceedings of the Ninth West Indian Agricultural Conference, Kingston, Jamaica, January 1924* (Kingston: Government Printing Office, 1925), 47.

²³⁸ "Mr. A., The Judge," in *Life in Jamaica in the Early Twentieth Century*, 4.

²³⁹ "Miss Lonie: A Woman Come Down in the World," in *Life in Jamaica in the Early Twentieth Century*, 6.

trenches, or harvesting fruit. Smallholding women would work to weed the banana roots and sometimes harvest and carry crops to carts for transport. Once the fruit reached the docks, primarily women would “run the ticket,” collecting and carrying bananas to the boats from which they would be shipped.²⁴⁰ At both the plantations and docks, these workers constantly contacted material that could act as carriers of fungal spores. Whether it was on the boots, clothing, or cutlasses on plantations, or clothing and baskets at the docks, by working in banana land workers potentially became carriers of microbes, which could then be brought back to their own lands or anywhere else they may have traveled.

Apart from the movement of people facilitating microbial spread, rail lines and the “banana trash” they carried played a crucial role in turning Panama Disease from an isolated problem to an island-wide crisis. The facilitation of the fungus’s spread thus became an unintended biological price of “modernization” and a British-empire wide push for technological advancement.²⁴¹ The likeliest way that the microbes spread throughout the island was through rail lines, latching onto “banana trash,” the remains of banana plants used as wrapping or mats to transport goods. For years, leaves and stems of banana plants had been placed onto rail cars to ensure safer cargo transport. With the advent of the era of Panama Disease, these rail cars became conduits for disease. The trash would either fall out of cars and onto the sides of the tracks, where the microbes could make their way into new soils, or the infected soil would attach to other goods, traveling to the cargo’s destination. With rail lines running through the chief banana growing regions in the

²⁴⁰ “Retired Postman,” in *Life in Jamaica in the Early Twentieth Century*, 2.

²⁴¹ For more on the relationship between environmental change and British imperialism, see Peder Anker, *Imperial Ecology: Environmental Order in the British Empire: 1845-1945* (Cambridge: Harvard University Press, 2001), Hodge, *Triumph of the Expert*; and Corey Ross, *Ecology and Power*.

eastern and central regions of the island and stretching from Port Antonio in the north to Kingston in the south, microbes could quickly jump from one region to another without anyone realizing.

Rail lines were by volume the most frequent mover of banana trash, but the materials were also used by smallholders carrying the trash to buying locations. Smallholders often had to travel two or three miles to get to one of these locations, and only by keeping the bananas wrapped were they able to prevent heavy bruising. From these buying locations, trucks would have to carry the plants another five miles to wharves, at which shipping companies would not buy the bananas unless they were wrapped. Between the rail lines, smallholders wrapping bananas, and wharves requiring wrapped bananas, the infrastructure of banana transport placed a premium on the use of banana trash.²⁴² Banana trash was a logical and cost-effective use of ecological resources by both smallholders and other banana transporters that helped minimize the risk of damage to crops for years. But with the spread of Panama Disease, these very processes that helped support the banana industry eventually hastened its demise.

It took nearly a decade for planters and agricultural officials to recognize banana trash as a chief conduit of disease spread.²⁴³ Banana trash was first mentioned in the context of Panama Disease in a 1919 meeting of the Jamaica Agricultural Society, where a planter expressed concerns that the packing material carried the fungal spores.²⁴⁴ By 1920, signs had been put up by members of the JAS at various ports and banana buying stations throughout the island warning about the use of banana trash, but members complained that people were tearing down the signs. A few members

²⁴² "Letter from Wilmington Branch," *The Journal of the Jamaica Agricultural Society* 31, no. 11 (1927): 455.

²⁴³ H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending December 31, 1920," *Jamaica Gazette*, November 3, 1921, CO 141/84, British National Archives.

²⁴⁴ "Board of Management," *The Journal of the Jamaica Agricultural Society* 23, no. 11 (1919): 365.

wished to make it a punishable offense to tear down these signs, but nothing ever came of these calls.²⁴⁵

It was not until 1921 that H.H. Cousins and the Department of Agriculture first mentioned the dangers of banana trash. In his 1921 annual report, Cousins described banana trash as “one of the chief ways in which this disease is spread.”²⁴⁶ In this report, the concern with banana trash centered around taking leftover banana trash from buying centers and using it to mulch fields. Along with its use as packing material, this was one of the primary uses of the organic material. The JAS and its instructors had long advocated using the trash as mulch and had its instructors travel throughout the island demonstrating to growers the value of trash as mulch. However, soon after the Department of Agriculture’s report, the JAS released its own instructions to halt the use of the materials as manure, despite the benefits it offered. Both the Department of Agriculture and JAS placed posters at buying stations warning against using the trash. Constant reports of these posters being ripped down cast doubts on whether this practice was actually discontinued, however.²⁴⁷

By 1926, scientific investigations confirmed that banana trash acted as a carrier of Panama Disease. C.G. Hansford, Jamaica’s microbiologist at the time, confirmed this through laboratory testing of trash materials. Hansford took banana trash from diseased plants and placed them in sterilized soil tubs with banana plants growing within them. After several months, the plants in the

²⁴⁵ “Board of Management,” *The Journal of the Jamaica Agricultural Society* 25, no. 8 (1921): 272.

²⁴⁶ H.H. Cousins, “Report of the Department of Science and Agriculture for the Year Ending December 31, 1920,” *Jamaica Gazette*, November 3, 1921, CO 141/84, British National Archives.

²⁴⁷ “Banana Trash,” *The Journal of the Jamaica Agricultural Society* 26, no. 1 (1922): 15.

tubs began showing symptoms of Panama Disease and eventually died.²⁴⁸ This discovery coincided with the Plant Diseases Law being updated with a section devoted specifically to banana trash. The updated legislation banned any utilization of banana trash for wrapping of goods publicly transported, except for instances where the wrapped bananas were brought for export and the materials used to wrap them were left at the buying station and burned within a day. It additionally forbade the removal of banana trash from buying stations for the purposes of mulching, putting into law what had been recommended by the Department of Agriculture and JAS for several years.²⁴⁹ While agricultural officials and other proponents of the legislation saw it as a way to help curb the spread of Panama Disease, for many Afro-Jamaican growers, this new policy was an attack on their vernacular practices of banana cultivation and transportation.

Despite the new law and confirmation of the disease spreading through trash, the Department of Agriculture did not strictly enforce banana trash destruction. The trade of this lack of enforcement was that it implicitly allowed smallholders to continue using banana trash for transport in the short-term while in the long run hastened the spread of Panama Disease across the island. After British Plant Pathologist C.W. Wardlaw's visited Jamaica in 1928, he wrote in his report that all banana material should be burned on site and none should be used as banana trash, recognizing the threat it posed. In response Cousins argued that there was no other material that could be used as effectively as banana trash to move fruit to the wharf. It seemed that Cousins was not willing to accept the trade-off of the loss of banana trash, as he saw the priority of banana

²⁴⁸ C.G. Hansford, "Panama Disease in Jamaica," *Microbiological Circular - Department of Agriculture, Jamaica* 5 (1926): 7.

²⁴⁹ R.E. Stubbs, "Protection from Plant Disease (Banana Trash) Order, 1926," in C.G. Hansford, "Panama Disease in Jamaica," *Microbiological Circular - Department of Agriculture, Jamaica* 5 (1926), 34-35.

transport was ensuring the delivery of bananas to ships without bruising, which the banana trash helped ensure. By destroying all banana trash, Cousins believed he would be costing the industry upwards of one million pounds annually. He then admitted to refusing to enforce any destruction of banana trash as he saw that “every ton of banana trash destroyed is a loss to the fertility of our banana lands which will be expensive to replace.”²⁵⁰ This line of thinking highlights a challenge of disease management for a crop with high economic value, as agricultural officials were often judged by invested parties on securing profits in the short-term, even if those policies had negative long-term ramifications.

Along with rail lines, rivers and human interactions with the rivers also facilitated the spread of microbes. In the early years of the disease’s presence on the island, planters with diseased crops who did not report them to agricultural officials often disposed of them by cutting the infected plants down and throwing them into the river. S.S. Stedman reported in a 1917 JAS meeting that he watched growers throw diseased plants into rivers, and believed this to be why the disease was spreading near his land.²⁵¹ Growers would also attempt to rid banana suckers of any insects, such as weevil borers that would weaken suckers through their tunneling, by immersing them in rivers for an extended period of time, allowing material to enter the water.²⁵² Similarly to the case of banana trash, this strategy was a logical, free technique of pest control that until the advent of Panama Disease helped to support growers’ banana cultivations. But with the arrival of this new disease, it served to facilitate, rather than protect from, disease spread. From their entry

²⁵⁰ H.H. Cousins, “Letter from Director of Agriculture Cousins to Colonial Secretary,” October 31, 1928, 1B/5/79/256, The Jamaica Archives.

²⁵¹ “Board of Management,” *The Journal of the Jamaica Agricultural Society* 21, no. 2 (1917): 39.

²⁵² Wilfred Edwards, “Pests of Banana in Jamaica,” *Entomological Circular* 14 (1934): 3.

points into the river, the plant material, still carrying the microbes, would make their way down the river and wash up on other land, thereby introducing the spores to new lands.²⁵³ The disease spreading through rivers can be seen in the case of the Bog Walk region of St. Catherine. Located in a low-lying region along both the Rio Cobre and the Rio Minho, the area became a hotbed of Panama Disease in the late 1920s, as infections made their way from the upper headwaters of both rivers.²⁵⁴

Natural events outside of the hands of growers, such as wind damage and flooding from hurricanes and other storms also contributed to the spread of disease along the rivers. In 1915, 1916, and 1917, hurricanes destroyed upwards of 90% of banana plants across the island, as the plants have little wind resistance. The destroyed crops then either blew into waterways or were thrown in by growers to dispose of them. As the disease can take several months to show symptoms, even healthy looking plants tossed into the rivers could have carried spores.²⁵⁵ Along with the crops being blown into the water, the winds and rains caused an uprooting of the surface soil, which was carried away in run-off water and into the rivers.²⁵⁶ Although the number of cases remained low throughout the 1910s, the 1915, 1916, and 1917, hurricanes likely facilitated the spread of the microbes to new regions, opening up new potential hotspots that would break out in the coming years.

²⁵³ “Panama Disease of Bananas,” *The Journal of the Jamaica Agricultural Society* 21, no.2 (1917): 39.

²⁵⁴ F.E.V. Smith, “Panama Disease of Bananas in Jamaica,” 1932, 1B/5/77/130, British National Archives.

²⁵⁵ C.G. Hansford, “The Panama Disease of Bananas,” *Microbiological Circular - Department of Agriculture, Jamaica* 1 (1923): 8.

²⁵⁶ Egbert Tai, “Report on Damage Done by 1939 Hurricane from Egbert Tai, Acting Agricultural Officer,” November 3, 1939, CO 137/833/9, British National Archives.

Apart from hurricane winds resulting in plant material flowing down the rivers, river flooding after storms also helped to spread the fungus. During the rainier months of the year, much of the low-lying land near rivers would be constantly oversaturated by water. The standing water in the fields would then quickly distribute microbes from one area of the land to the rest of the nearby growing land without any barriers. The ability to quickly move soil from one end of a farm or plantation to another minimized the potential benefit of any chain-length quarantine measures, which were unable to keep up with the moving water.²⁵⁷ Additionally, if a large rain came before officials completed treatment, the chopped down plants would be swept up in the water and carried throughout the rest of the field.²⁵⁸ The combination of human and weather related destruction led to the spread of the disease along the island's riverways, with investigations in the 1920s showing the low areas of river valleys were the growing regions most damaged by Panama Disease.²⁵⁹

The parish of St. Catherine, in southern Jamaica, saw some of the largest declines in banana production between 1917 and 1922, even as reported Panama Disease cases remained low over this period. Over this five-year period, total acreage in St. Catherine dropped from 10,971 acres, to 5,738, a decrease of 48%. Based on plantation acreage data and as shown in the Figure 6 the changes in location and size of plantations between 1916 and 1922, the region of Bog Walk (circled on the maps) in northern St. Catherine was hit the hardest. As the below images show, Bog Walk served as a hub both of rail lines and rivers, as the town served as one of the primary rail stations in St. Catherine and was near the meeting point of the Magno, Cobre, and Pedro rivers.

²⁵⁷ A. Davidson Goffe, "Letter from A. Davidson Goffe to Administrator General J.M. Nethersole," November 4, 1931, 1B/5/77/39, The Jamaica Archives.

²⁵⁸ V.E. Silvera, "Letter from Custos of St. Mary V.E. Silvera to Colonial Secretary Jelf," March 17, 1934, 1B/5/77/39, The Jamaica Archives.

²⁵⁹ C.G. Hansford, "Panama Disease in Jamaica," *Microbiological Circular* 6 (1926): 7.

Additionally, the nearby Linstead Market was one of the largest markets in the area, with buyers and sellers traveling for miles to reach it. This combination of the movement of people and rail and river routes created a perfect storm for Panama Disease to reach the area.

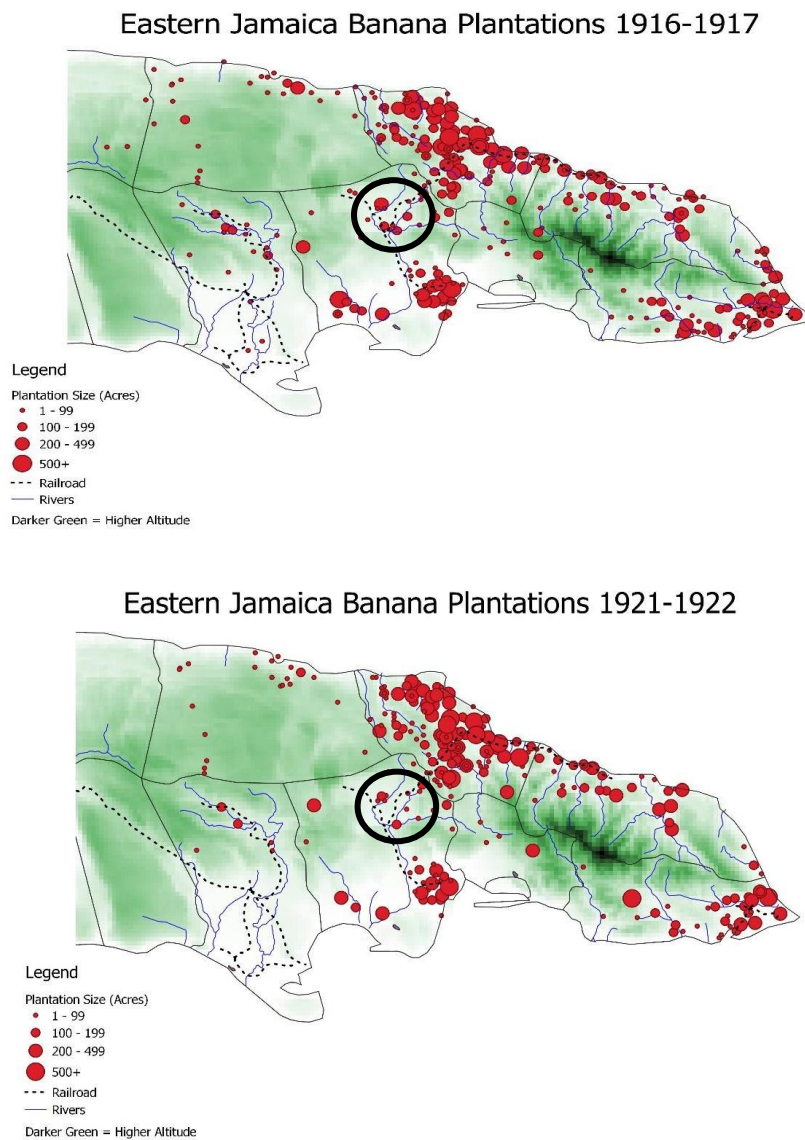


Figure 6: Banana Plantations and Acreages in Eastern Jamaica, 1916-17 and 1921-22²⁶⁰

²⁶⁰ Maps created using QGIS. Shapefiles imported from DIVA-GIS. Data set compiled from annual reports in the *Handbook of Jamaica*.

3.4 Managing People and Plants, Not Microbes

Throughout the 1910s and 1920s, Panama Disease was often viewed by officials and planters as a people and plant problem, rather than a microbe problem. Rather than focusing on the microbe itself, Jamaican agricultural officials focused their attention on the cultivation methods and actions of the Afro-Jamaican smallholders and on the banana plants themselves. Through legislation, oversight, and public and private statements, Department of Agriculture and JAS officials painted a picture of smallholders as inadequate cultivators who did not possess what they saw as the necessary techniques nor will to practice a form of “modern” agriculture seen as necessary in the face of the encroachment of Panama Disease. When officials did turn towards the other-than-human components of the disease outbreak, they focused almost all of their attention on destroying infected banana plants with little thought for how the disease infected them in the first place.²⁶¹ In doing so, officials ensured that they continuously remained well behind the actual spread of the fungus. Jamaican officials’ efforts to manage Panama Disease highlight one of the inherent flaws of the “high imperialism” ethos, as it assumes a mastery of nature among the officials who implement this ethos that was not possible to possess.²⁶²

²⁶¹ This course of action that paralleled the management of animal and some human infectious diseases at the time: population level control, in which officials combating disease look beyond one infected individual to all nearby members of the species who could potentially become infected. By managing an entire population, they hoped to better hinder disease spread. At the time of Panama Disease, mitigation of disease through population level control was a relatively new epidemiological approach. The first attempts at managing transmission this way came in the 1890s with the restriction of cattle movement or killing of entire herds to halt the spread of Texas Fever.; Christoph Gradmann, “Robert Koch and the Invention of the Carrier State: Tropical Medicine, Veterinary Infections and Epidemiology Around 1900,” *Studies in History and Philosophy of Biological and Biomedical Sciences* 41, no. 3 (2010): 232.

²⁶² Ross, *Ecology and Power*, 9.

Before discussing the attitude towards smallholders, it is important to note the comparative lack of attention paid to Panama Disease on plantations during this initial first decade after discovery. In nearly all official discussions and newspaper articles on Panama Disease during the 1910s, the only time plantations are mentioned are as passive recipients of the disease. A 1912 *Gleaner* article described Panama Disease as having “made its appearance on one or two banana plantations in Portland” without offering any explanation of how it could have arrived.²⁶³ In the 1920 *Report of the Department of Agriculture*, Cousins mentions that the disease “has given trouble” to plantations for several years.²⁶⁴ This was the first mention of plantations in relation to Panama Disease in any of these annual reports. As will be discussed shortly, this lack of attention to plantations is in stark contrast to the focus on smallholders.

The one exception to this trend came in the “Comments” section of the March 1915 edition of *The Journal of the Jamaica Agricultural Society*. An unnamed member of the JAS wrote of concerns over lax growing habits by planters large and small. They described a carelessness of growing, as they saw in both large and small banana cultivations dead, rotting banana plants and other signs of indifference to the potential of disease spread. The writer attributed this attitude to the fact decades of banana growing without diseases led growers to believe that they did not need to change their growing methods, even with a disease confirmed on the island.²⁶⁵ But with no further discussion of the subject throughout the 1910s, it is unclear how many other JAS members were of the same opinion.

²⁶³ “The Application of Science to Agriculture,” *The Daily Gleaner*, January 2, 1912, 8.

²⁶⁴ H.H. Cousins, “Report of the Department of Science and Agriculture for the Year Ending March 31, 1920,” *Jamaica Gazette*, 1920, CO 141/85, British National Archives.

²⁶⁵ “Comments: Disease of Bananas,” *The Journal of the Jamaica Agricultural Society* 19, no. 3 (1915): 107.

Virtually absent from any discussions of Panama Disease during this period was the United Fruit Company, despite their ownership of nearly one-fifth of all banana land in Jamaica during the 1910s.²⁶⁶ When UFCo did appear it was only in passing mentions to Panama Disease being found on some of their plantations.²⁶⁷ No mention of UFCo was made in any of the Department of Agriculture's reports on Panama Disease throughout the 1910s. Based on this lack of attention even with an awareness of Panama Disease being found on UFCo land, the colonial officials seemed to treat UFCo's handling of Panama Disease as a completely separate matter from the rest of the island's cultivations.

From the first discovery of the Panama Disease in Jamaica in 1911 through to the mid-1920s, agricultural officials viewed Afro-Jamaican smallholders and their holdings as the primary spreaders of Panama Disease. With the first case being on a smallholders' plot, these growers became instant targets of blame for the disease's presence. In reports from both the Department of Agriculture and the JAS, lack of cooperation among smallholders was cited as the primary reason for disease spread, as, according to microbiologist S.F. Ashby writing in 1915, "evidence indicates the disease spreads almost solely by human agency."²⁶⁸ But in discussing this human agency within the context of smallholder agriculture, this "human agency" seemed limited to Afro-Jamaican smallholders and not anyone involved with plantation agriculture.

As with most interactions between colonial officials/planters and smallholders, racialized paternalism towards smallholders framed the discourse and conditioned the actions towards them.

²⁶⁶ *The Handbook of Jamaica for 1907*.

²⁶⁷ S.F. Ashby, "Memorandum to the Assistant Director, Kew Gardens, on the proposals submitted by Sir Francis Watts and Sir David Train regarding Panama Disease," 1920, CO 137/742/12, British National Archives.

²⁶⁸ H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending March 31, 1915," *Jamaica Gazette*, July 8, 1915, CO 141/80, British National Archives.

In a 1921 meeting, one of the members of the JAS noted that although some smallholders were willing to accept the knowledge being given them by agricultural instructors, “there is still a shy, suspicious, impassive bulk, who hold aloof and are self-sufficient and as a whole are ignorant.”²⁶⁹ When discussing in 1914 the potential of paying growers for notifying inspectors about the disease, Legislative Council member P.C. Cork argued against it, suggesting that the smallholders should not be trusted with this and would use the opportunity to intentionally infect their lands with Panama Disease to get the money. In the same discussion, H.Q. Levy advocated for the government to claim any of the smallholders’ lands infected with Panama Disease. Otherwise, “if they left the matter to the small settler, they would have to watch that small settler for many years.”²⁷⁰ All told, the discussions surrounding smallholders and Panama Disease painted them as a thriftless, untrustworthy group.

The most common explanation for the spread of Panama Disease offered by members of the Department of Agriculture and Jamaica Agricultural Society was that the smallholders hid the disease from inspectors. At a 1921 meeting of the JAS, two inspectors from St. Ann commented on the unwillingness of smallholders to notify them about diseases. The inspectors stated that “Little or no help can be expected from the small settler class. They will hide any suspicious case, even when full description of it has been given as a warning.”²⁷¹ In 1928, an inspector of plant diseases wrote to Director Cousins along a similar line, saying that settlers hid the disease by cutting off the upper portions of the plants, making it look like the fruit had already been

²⁶⁹ “Panama Disease of Bananas,” in *The Journal of the Jamaica Agricultural Society* 25, no. 12 (1921): 467.

²⁷⁰ Discovery of Panama Disease Among Bananas Here, *The Daily Gleaner*, October 16, 1914, 10.

²⁷¹ “Board of Management,” *The Journal of the Jamaica Agricultural Society* 25, no. 11 (1921): 411.

harvested.²⁷² Cousins incorporated claims such as these in the Department of Agriculture reports throughout the 1920s, mentioning an unwillingness of smallholders to cooperate with disease mitigation in nearly every annual report. In a 1929 letter to the Colonial Secretary, Cousins went one step further, saying that the community of smallholders had for years only removed the infected plant from their land rather than following proper quarantine procedures. Had it not been for this refusal to follow guidelines, Cousins argued, “the status of Panama Disease would not have been one tenth of what it is today.”²⁷³

This belief about smallholders hiding the disease was institutionalized through a 1915 “Protection from Disease (Plant) Law” that seemed specifically targeted at smallholders. Among the powers given to the Governor by the new law were the authority to prescribe treatment of areas suspected to be disease sites, isolate infected districts, destroy plants, order disinfections, ban the replanting of bananas, and limit the movement of people and animals from infected districts. Anyone believed to have passed over infected land was supposed to have their possessions disinfected, including animal hooves, cutlasses, and clothes. The law also gave the Governor the ability to appoint persons with the same authorities, giving greater power to inspectors of plant diseases. It further established that anyone who attempted to conceal the disease from officials was subject to fines of up to fifty pounds and/or up to three months of imprisonment. As Afro-Jamaican smallholders were the ones most often accused of concealing cases by agricultural officials, the legislation seemed particularly aimed at them. Additionally, as Afro-Jamaican smallholders had to

²⁷² J.B. Sutherland, “Letter from J.B. Sutherland, Senior Inspector of Plant Diseases, to Director of Agriculture,” October 30, 1928, 1B/5/79/256, The Jamaica Archives.

²⁷³ “Letter from Director of Agriculture Cousins to Colonial Secretary,” November 4, 1929, CO 323/1049/14, British National Archives.

constantly move about the island for either trips to the market or to work other jobs, they were much more likely to travel near infected land than white planters.

Despite the existence of stringent regulations and constant claims about smallholders hiding the disease, only five cases were prosecuted between 1915 and 1921, suggesting that growers were not hiding cases or inspectors did not have the ability to find those who did. One of the few cases came in 1919, when a grower in Portland was fined by a magistrate for failing to notify officials about disease on his land. When an agricultural inspector went through the land and found two diseased plants, he notified the grower, who was not home at the time. When the inspector returned ten days later to begin treatment, the dying plants were gone, but there was no sign of any further treatment. The grower was then fined twenty pounds.²⁷⁴ In another case, where complaints arose about a smallholding woman using a post meant to quarantine her land as a tool to cook dinner, the agricultural inspector claimed that she was too poor to prosecute under the legislation. According to the *Gleaner*, the inspector “helped her out of his own pocket,” but it is unclear what that help entailed.²⁷⁵ With how few cases were noted, the fact that one of the few that did receive attention ended with the inspector actually helping the supposed violator suggests that officials were not as punitive in practice as in rhetoric.

Even excluding the belief about smallholders hiding the disease, the class of growers overall still received blame, as officials believed that their lack of knowledge about agricultural practice led to the disease spreading across and out from their lands. In a 1926 report on Panama Disease, microbiologist C.G Hansford stated that the primary method of disease transmission among smallholders in the parish of Portland was through ground provisions grown next to

²⁷⁴ “Banana Grower Heavily Fined,” *The Daily Gleaner*, July 17, 1920, 1.

²⁷⁵ “Panama Disease Menace to Banana Industry of Jamaica,” *The Daily Gleaner*, January 16, 1926, 1.

bananas. According to Hansford, when the bananas start showing signs of disease, smallholders move banana cultivation to a new area but take the yam and cocoa heads with them, which carry the diseased soil.²⁷⁶ Unmentioned in this description of smallholder movement was the fact that many of the banana rhizomes carried to new areas also likely held the disease, as no system existed for smallholders to access healthy rhizomes. In response to the report, the Jamaican government passed a regulation in 1927 that ended payments to smallholders for ground provisions destroyed in Panama Disease treatment.²⁷⁷ Officials hoped that ending payments for these destroyed crops would deter smallholders from planting any ground crops with their bananas.

For many smallholders, this decision was an attack on their agricultural practices and very way of life. In the months following the resolutions, smallholders across the island, through branch societies of the Jamaica Agricultural Society, petitioned the government for restoration of payments. One petition, signed by a group of smallholders in Westmoreland, claimed that should Panama Disease arrive in their fields, without payments they would “be left in a destitute and helpless condition.”²⁷⁸ The petitioners argued that they grew ground provisions between banana crops out of necessity, being that their holdings were in small areas requiring crowded crops. Bunching their crops together was the only way for them to make enough money to subsist. With the government actively punishing co-cropping cultivation, they were attacking practices smallholders had used for generations to obtain the most they could from their land.

²⁷⁶ C.G. Hansford “Report in Relation to Panama Disease in Portland,” 1926, 1B/5/77/312, The Jamaica Archives.

²⁷⁷ C.G. Hansford, “Letter from Microbiologist to Director of Agriculture,” July 24, 1928, 1B/5/77/20, The Jamaica Archives.

²⁷⁸ “Petition from Lambs River Branch of the Jamaican Agricultural Society (signed by small settlers) to the Governor,” July 10, 1928, 1B/5/77/20, The Jamaica Archives.

The Department of Agriculture's policy of handling known cases of Panama Disease in the 1910s and 1920s disproportionately impacted smallholders. As described above, the four-chain quarantine method of treatment meant that in addition to the diseased plants, a number of healthy plants were also destroyed. This level of treatment often crippled smallholders' cultivations, as the scale of the four-chain treatment often meant the destruction of their entire crop. And the banned replanting of any crop, not just bananas, would mean a complete cessation on the cultivation of any crops on their land, and therefore completely remove their means to earn money off of their plots. Planters meanwhile could simply rely on crops on the rest of their expansive holdings.

For some smallholders, the method of treating Panama Disease felt more harmful financially than the threat of the disease itself. This view was summed up in a 1926 *Daily Gleaner* Letter to the Editor, where a Portland resident, E.A Comrie, wrote in on behalf of the smallholders in the area. He called out the Department of Agriculture and the Jamaican government for ignoring the different realities of small and large cultivators and using the same scale of treatment for both. He described the agricultural officials as “destructive animals,” who made life nearly impossible for the smallholding class who relied on banana cultivation for their livelihoods. When faced with the “two evils” of Panama Disease and its treatment, Comrie argued that it made more sense for smallholders to grapple with the “lesser” evil of Panama Disease.²⁷⁹

The focus of agricultural officials' Panama Disease management and rhetoric on smallholder agriculture highlights the challenges Afro-Jamaican smallholders faced with the spread of Panama Disease. On the one hand, the policies enacted by the Department of Agriculture and the Jamaican legislature threatened to upend decades worth of strategies smallholders used to

²⁷⁹ E.A. Comrie, “Panama Disease in Portland,” *The Daily Gleaner*, May 4, 1926, 8.

make the most effective use of their land and maximize their returns on banana cultivation. Additionally, decades if not centuries of evidence of colonial officials not having smallholder interests at the heart of agricultural and economic policies gave smallholders little incentive to follow the direction of instructors even if they had a clear understanding of Panama Disease's transmission methods. On the other hand, many of these strategies, such as co-cropping and banana trash usage, helped facilitate the spread of Panama Disease across the island. There was no overarching response among smallholders to this complex situation. Rather, thousands of smallholders across the island had to make individual decisions about what they viewed as the best way to ensure their continued ability to earn enough money to survive. And as would become clear as cases of Panama Disease eventually rose in the 1920s, smallholder agriculture was only one small part of the island's overall disease landscape.

3.5 Climate Confidence Leading to Complacency

Despite the increasingly detailed and aggressive legislation and discourse aimed at Afro-Jamaican smallholders, the Department of Agriculture, led by Director Cousins, continued to downplay the threat to the island's banana crop and industry writ large, for both environmental and economic reasons. On the environmental side was a belief that Jamaica's specific environment could withstand the threat of Panama Disease while on the economic, officials feared a cure could damage Jamaica's banana industry financially. During the first roughly fifteen years of management, agricultural officials were not willing to accept the economic tradeoffs that would come with a more concerted effort to manage the disease or find a cure. The belief in the uniqueness of Jamaica's environment combined with efforts to maintain Jamaica's standing within

the global banana industry combined were then used by agricultural officials, especially H.H. Cousins to treat Panama Disease as a minimal threat.

Much of the overconfidence of the Department of Agriculture stemmed from the belief that Jamaica's climate acted as a barrier to the spread of Panama Disease. Throughout the 1910s and the beginning of the 1920s, agricultural officials would time and again claim that Panama Disease in Jamaica was under control due to the island's exceptional climate. This confidence partially came from Jamaica being the birthplace of commercial banana exportation but one of the last banana producing regions to have identified cases of Panama Disease. In the 1911 Department of Agriculture report, published only a few months before the disease was confirmed on the island, Cousins wrote that "Our climate is a natural one for this plant (the banana) and it grows healthy and is in consequence immune from the diseases that have played such havoc in the banana plantations in other countries where the conditions are more tropical."²⁸⁰ For Cousins, Jamaica's location within the West Indies provided the island with more inherent protection of banana crops than those in Central America.

Even after the discovery of Panama Disease, for the subsequent decade the Department of Agriculture, primarily Cousins, continued to speak about the climate offering protection from the disease, though focusing more on how it would mitigate spread rather than prevent its arrival. In 1912, Cousins wrote in the Report of the Department of Agriculture that the lack of spread of Panama Disease on the island showed that "we have natural advantages in the resistance of bananas grown in Jamaica to a disease, which in more southerly countries, has been found incapable of

²⁸⁰ H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending March 31, 1911," *Jamaica Gazette*, August 29, 1911, CO 141/74, British National Archives.

control.”²⁸¹ The *Daily Gleaner*’s editorial board echoed Cousins’ statements, writing in 1914 that it is too far north and possesses a climate “which is inimical to the spread of Panama Disease.”²⁸² In 1920, when discussing Panama Disease in a memorandum on the subject, Cousins argued that the “conditions” of Jamaica meant that the disease did not “justify any great alarm.”²⁸³

This view of Jamaica’s climate as protecting the island from Panama Disease was not shared by all. Other planters, particularly in the Jamaica Agricultural Society, pushed back against this exceptionalist narrative, revealing that the views of agricultural officials and planters on Panama Disease were not a monolith. In the aforementioned “Comment” on Panama Disease in the 1915 *Journal of the Jamaica Agricultural Society*, the member argued that rather than a sign that Jamaica would remain safe from Panama Disease, the relative lack of cases up to 1915 gave growers a false sense of security. They believed that if growers did not alter their cultivation methods, the island would not be prepared to “meet the possibility of serious trouble coming in.”²⁸⁴ In a 1918 meeting of the society, S.S. Stedman argued against the optimistic view taken by Cousins, stating his belief that drastic action was needed to save the banana industry and that the actual facts did not support Cousins’ view of the matter.²⁸⁵ The planter suggested that the growers have not yet come to terms with the fact that how they grew and disposed of bananas in 1910 was no longer a safe way of operating.²⁸⁶

²⁸¹ Ibid.

²⁸² “The Future of Jamaica as a Banana Producing Country,” *The Daily Gleaner*, May 5, 1914, 8.

²⁸³ H.H. Cousins, “Memorandum by H.H. Cousins,” June 5, 1920, CO 137/741/30, British National Archives.

²⁸⁴ “Comments: Disease of Bananas,” *The Journal of the Jamaica Agricultural Society* 19, no. 3 (1915): 107.

²⁸⁵ “Board of Management,” *The Journal of the Jamaica Agricultural Society* 22, no. 8 (1918): 355.

²⁸⁶ “Board of Management,” *The Journal of the Jamaica Agricultural Society* 19, no. 3 (1915): 107.

When faced with criticisms over his perceived overconfidence, Cousins strongly pushed back against those making the claims, attempting to place blame for any of the perils the banana industry faced on their shoulders. He often spoke of “exaggerated scares” that did more harm to the banana industry than Panama Disease was doing, as these scares frightened away potential investors in the industry and, he argued, capped its growth potential.²⁸⁷ Cousins seemed particularly concerned with how claims about the disease impacted outside perceptions of the banana industry and the efficacy of the Department of Agriculture. Cousins maintained throughout the 1910s that the disease was well contained within the island and that any claims to the contrary only led to scientists and researchers from outside the colony coming to investigate the disease and offer ways to alter production practices on the island.

Cousins especially feared that any changes to Jamaica’s banana cultivation system would damage Jamaica’s standing as the world’s leading banana exporter, and quite possibly his own standing as the official in charge of this perceived agricultural success story.²⁸⁸ Throughout the 1910s, as Cousins continued to downplay the threat of the disease, he applied to several agricultural posts throughout the British Empire, including positions in South Africa and India.²⁸⁹ Both of these positions were viewed as progressions in his career path. But through his continued condescension towards any in Jamaica who spoke of the threat of Panama Disease, he made enemies in Jamaica itself, including the island’s governors. In 1916, Governor William Henry Manning wrote to the Under Secretary of State advocating for a demotion, rather than promotion, for Cousins. He

²⁸⁷ H.H. Cousins, “Report of the Department of Science and Agriculture for the Year Ending March 31, 1913,” *Jamaica Gazette*, June 28, 1913, CO 141/76, British National Archives.

²⁸⁸ H.H. Cousins, “Letter from the Director of Agriculture H.H. Cousins to the Colonial Secretary,” June 9, 1920, 1B/5/76/3/384, The Jamaica Archives.

²⁸⁹ “Cousins Desires Appointment,” 1920, CO 137/743/29, British National Archives.

described Cousins as “absolutely devoid of tact” and that “things have reached a crisis” due to Cousins offending planters and the general public and “antagonizing the majority of those interested in banana cultivation.” He asked for Cousins to be sent to one of “the new German colonies” where he would not have to face as much public criticism.²⁹⁰ While the Undersecretary made inquiries about moving Cousins, he found that due to Cousins’ “standing and salary” he could not move him to one of these newer colonies.²⁹¹ Cousins would remain in his post in Jamaica until 1932.

Throughout the 1910s and into the 1920s, the cases of Panama Disease in Jamaica seemed to support agricultural officials’ confidence in Jamaica being able to ward off the disease. After the initial outbreak of 625 diseased plants in 1912, from 1913 through 1920, no more than 268 diseased plants were found in a year. On average, the Department of Agriculture recorded 188 new cases annually during this period, compared to the roughly ten million bananas annually exported per year.²⁹² Nearly 90% of these cases were found in Portland, making the disease much more of an isolated rather than island-wide issue at the time. Cousins and the majority of Jamaican officials and planters saw these numbers as confirmation that the disease did not have a firm hold within Jamaica. In his reports on the disease during this time, Cousins continually referenced the low numbers to argue that the disease could be easily controlled in Jamaica through the quarantine measures already in place. By focusing attention on the areas where the disease did appear,

²⁹⁰ It is unclear from the letter what specific colonies Manning meant by “new German colonies.” It is possible that he was referring to British Togoland in West Africa, after the 1916 British and French partitioning of German Togoland.

²⁹¹ William Henry Manning, “Letter from Governor Manning to Grindle.” October 2, 1916, CO 137/716/1, British National Archives.

²⁹² *Handbook of Jamaica for 1921*.

officials believed that they would keep Panama Disease well in check without any large-scale transformations of the banana industry.

Backed by low disease numbers, the Jamaican legislators and agricultural officials refused to put large sums of money towards banana research efforts, particularly in the form of Caribbean-wide research stations. During the early 1910s, British colonial officials began discussing establishing a college of agriculture in the West Indies, either in Jamaica or Trinidad. Cousins had been firmly against such an institution, describing it as a “very expensive luxury” that would not justify its costs.²⁹³ World War I pushed the project to the backburner, but at the conclusion of the war, efforts towards establishing the college once more took hold. Despite a number of Jamaican planters advocating for the placement of the college on the island, a committee appointed to investigate where to place the college chose Trinidad on account of a larger infrastructure of intercolonial communication and transit facilities as well as its location outside of the hurricane zone.²⁹⁴

Upon its opening in 1921, the Imperial College of Tropical Agriculture immediately became a hub of Panama Disease research in the Caribbean. The research program included several different methods of approaching the disease, including a study of the disease fungus, collecting as many banana varieties as possible to test them for immune varieties, and attempts to produce new seedling banana varieties with disease immunity.²⁹⁵

²⁹³ H.H. Cousins, “Report of the Department of Science and Agriculture for the Year Ending March 31, 1913,” *Jamaica Gazette*, June 28, 1913, CO 141/76, British National Archives.

²⁹⁴ “Proposal to Establish West Indian Agricultural College, Jamaica in Running for Site,” *The Daily Gleaner*, March 12, 1920, 1.

²⁹⁵ “Board of Management,” *The Journal of the Jamaica Agricultural Society* 25, no. 4 (1921): 143.

Despite requests for funding aid from the Secretary of State for the colonies, Jamaica, the world's largest banana exporter at the time, refused to take part in the research scheme, the only British colony in the West Indies to refuse. In a rare instance of agreement between the Department of Agriculture, Jamaica Agricultural Society, and Legislative Council, Jamaican agricultural interests near universally rejected contributing to the college's banana research scheme. For many of those who gave their opinion, the refusal seemed to be based on resentment that Jamaica was not chosen as the site of the college. At a meeting of the Jamaica Agricultural Society, S.S. Stedman, the JAS planter who most vehemently spoke out about the threat of Panama Disease to Jamaica, described holding the investigations in Trinidad as "absurd," as Trinidad was not a banana-growing island and therefore no one there knew anything of bananas or disease. He believed that in holding the investigations in Trinidad and asking Jamaica to contribute funds, the Imperial Department of Agriculture was neglecting Jamaica.²⁹⁶ Cousins agreed, saying that due to a ban on foreign banana sucker imports, Jamaica would not be able to benefit from the research done in Trinidad.²⁹⁷ Although it was in his power to lift the embargo, he believed doing so went against the wishes of growers on the island, as the planting community and JAS supported the continuation of the ban.²⁹⁸ In their debate on the funding, the Legislative Council echoed this sentiment, with one member describing the potential of funding the college in Trinidad "as an injustice to the people of Jamaica" because it was not for their own college. Those opposed to

²⁹⁶ Ibid., 144.

²⁹⁷ "Matters Dealt With in the Island's Legislature," *The Daily Gleaner*, May 16, 1923, 6.

²⁹⁸ H.H. Cousins, "Letter from H.H. Cousins to Colonial Secretary," November 27, 1920, 1B/5/76/3/384, The Jamaica Archives.

funding the college won out, defeating a motion put before the legislature to fund the college and striking a blow to a vision of a unified imperial high modernism throughout the British Empire.

Although publicly using the sucker ban as a reason to oppose contributing to the Trinidad region, the actual reason that Cousins opposed banana research was that he did not believe it in Jamaica's best interest to find a cure. In a series of letters to the colonial office in June 1920, Cousins laid out the reasons why researching a new banana variety was not useful to Jamaica. He argued that any immune variety would be worthless unless it was commercially equivalent to the Gros Michel. As no known banana varieties were equivalent, he did not see how researching these varieties would prove fruitful. Additionally, he argued that the disease was not bad enough in Jamaica that they needed a new variety, describing the disease as being controlled and having done very little damage.²⁹⁹ Finally, apart from not needing a new banana variety, he argued that Jamaica did not *want* one. He stated that should an immune, commercially viable, variety found "it would be a serious blow to the future success of our banana industry."³⁰⁰ Cousins saw Jamaica's status as the world's leading banana exporter as "due entirely" to Panama Disease and the failure of the United Fruit Company to discover an immune variety for use in Central America. Prior to the onset of Panama Disease, Jamaica was in danger of losing its leading status to banana lands in Central America, but because of the damage wrought by the disease there, Jamaica remained at the top.³⁰¹

²⁹⁹ H.H. Cousins, "Memorandum," June 5, 1920, CO 137/741/30, British National Archives.

³⁰⁰ H.H. Cousins, "Letter from the Director of Agriculture H.H. Cousins to the Colonial Secretary," June 9, 1920, 1B/5/76/3/384, The Jamaica Archives.

³⁰¹ The United Fruit Company reportedly used this same reasoning in regards to their Central American plantations. See Philippe I. Bourgois, *Ethnicity at Work: Divided Labor on a Central American Banana Plantation* (Baltimore: The Johns Hopkins University Press, 1989).

Jamaican agricultural officials, led by Cousins, would often cast aspersions on any efforts at research done at the Imperial College. When C.W. Wardlaw, Plant Pathologist for Banana Research at the college, visited Jamaica in 1928 to investigate the disease on the island, Cousins disagreed with nearly every claim he made. He dismissed Wardlaw's investigations on the grounds that Wardlaw had never examined the fungus in a lab nor had any personal experience in dealing with the disease, meaning he could not possibly claim to be an expert in the disease.³⁰² He described Wardlaw's (correct) identification of the fungus causing the disease as "quackery" and "not true science" and called his overall views of the disease and its ability to spread apart from banana land as "absurdly incorrect." Due to his belief that Wardlaw was presenting false information, Cousins called for the suppression of Wardlaw's published report on his investigations.

The combination of frustration that the Imperial College of Tropical Agriculture was not constructed on Jamaican soil and the belief that the lack of an immune banana variety benefitted Jamaica led the Jamaican government to refuse to participate in any international research efforts in the 1920s and early 1930s. Jamaica remained so isolated from these cooperative activities that even the British government began filing Jamaican agricultural records separate from the rest of the West Indies. Any regional reports would be published with a note saying, "excluding Jamaica." Rather than engaging with a community of researchers regarding the disease, the Jamaican government and agricultural officials chose to isolate themselves, adopting a hostile attitude towards any work done outside of the island. The actions of this small minority of officials would

³⁰² H.H. Cousins, "Letter From Director of Agriculture Cousins to Colonial Secretary, October 31, 1928," 1B/5/79/256, The Jamaica Archives.

then reverberate to affect the thousands of Jamaicans who depended on the banana industry for their livelihood but were not consulted in any of this decision-making.

Due to the combination of climate exceptionalism and perceived economic benefits of inaction, the Department of Agriculture did not pour in the necessary resources to fully combat and investigate the disease, and were unequipped to handle the spike in cases when it came in the 1920s. Combined with treatment methods that focused predominantly on the plants themselves and already discovered outbreak areas, the efforts to combat Panama Disease were not commensurate with how serious a threat to the island's banana industry the microbe was. Instead, led by Director Cousins, the Department of Agriculture worked primarily to maintain the status quo within the island's banana industry, attempting to rely on perceived natural advantages Jamaica's climate offered to prevent the disease from becoming a widespread threat. However, by the mid 1920s, the damage this approach caused would become fully apparent.

3.6 The End of Exceptionalism

Throughout the 1910s, Jamaica's low number of cases seemed to justify the confidence agricultural officials presented about the island's position vis-a-vis Panama Disease. However, starting in the early 1920s, the number of cases began to skyrocket. The largest percentage jumps occurred between 1920 and 1921 and 1921 and 1922. Cases went from 456 diseased plants in 1920 to 1,247 in 1921, a 173% increase, and in 1922 reached 3,804, a 205% increase from 1921.³⁰³ For

³⁰³ H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending December 31, 1929," *Jamaica Gazette*, June 12, 1930, CO 141/93, British National Archives.

the rest of the decade, as seen in Figure 7, cases increased by an average of 60% annually, reaching over 87,000 cases by 1929. The vast majority of these cases were discovered in Portland, which held roughly 70% of the diseased plants. On average, the number of cases in Portland was twenty times worse than in any other parish. St. Mary and St. Ann each also reached over 1000 cases per year by the end of the 1920s, but these numbers paled in comparison to those in Portland.³⁰⁴

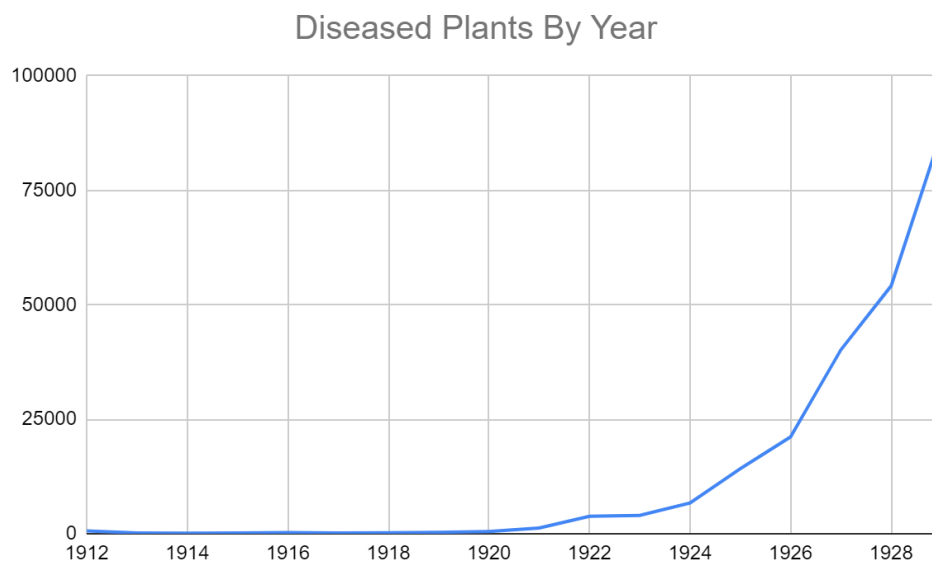


Figure 7: Number of Diseased Banana Plants Identified Per Year³⁰⁵

It was not until 1923, nearly twelve years after the first cases of Panama Disease were discovered on the island, that officials began expressing concerns about the disease's spread. In the 1923 Report of the Department of Agriculture, Director Cousins stated that Panama Disease

³⁰⁴ H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending December 31, 1927," *Jamaica Gazette*, June 17, 1928, CO 141/91, British National Archives.

³⁰⁵ Data taken from "Report of the Department of Science and Agriculture," 1929.

cases increased to a “noticeable degree” and that the number of cases increased in 1922 and 1923 to a “regrettable” extent.³⁰⁶ This is the first time Cousins noted the severity of an increase in his departmental reports. In response to the increase, the Governor, along with Cousins, appointed an advisory committee with four of the island’s most prominent planters to assist with managing Panama Disease on the island. Despite recognizing the severity, Cousins still couched his remarks with optimism for Jamaica’s ability to deal with the disease, as compared to Central American cultivations, Jamaica suffered much less from the ravages of disease. Additionally, he partially attributed the rise in cases to the fact that more testing was being done, not to any mounting crisis. This sort of optimistic statement fell in line with Cousins’ previous stance on the disease, but the creation of the Panama Disease committee suggests the beginning of a shift in his attitude about Jamaica’s disease resistance.

Microbiologist C.G. Hansford’s 1926 “Panama Disease in Jamaica,” published as part of the Jamaican Department of Agriculture’s *Microbiological Circular*, was the first official report to recognize the full severity and potential consequences of the increase in Panama Disease, but by this point the disease had spread to such a point that recognizing its threat was years too late to mitigate it. In this report, Hansford summed up the evolution of the threat to Jamaica by saying that “Panama Disease is no longer merely a matter for plant pathologists and banana experts but has now become entirely an economic problem of first importance to Jamaica.”³⁰⁷ Hansford was the first to suggest that Panama Disease in Jamaica had reached a point where it could do serious harm to the prospects of banana exports. Hansford cited the acceleration of cases since 1920 as

³⁰⁶ H.H. Cousins, “Report of the Department of Science and Agriculture for the Year Ending December 31, 1922,” *Jamaica Gazette*, July 5, 1923, CO 141/88, British National Archives.

³⁰⁷ C.G. Hansford, “Panama Disease in Jamaica,” *Microbiological Circular* 6 (1926): 4.

evidence of this danger and called on the government to decide how valuable the banana industry was to the island and determine from that valuation how much money should be spent fighting the disease.

3.7 The Institutional Response to Panama Disease's Spread

With the number of Panama Disease cases rising exponentially, growers and officials had little choice but to alter their response to the disease, resulting in a restructuring of the island's banana geography and in some cases, putting banana production back into the hands of smallholders. Whether through new policies for treatment or changing the geography of the industry, both growers and officials by the 1920s dramatically altered their previous approaches to the disease in the hopes of being able to mitigate its spread. However, with Panama Disease having made inroads throughout the island by this point, most proposed solutions could not keep pace with the continued spread.

In terms of official policies, one of the first changes made was to reduce the scope of quarantine in Portland, where cases of Panama Disease in the early 1920s were highest. As the number of cases continued to rise, growers found the four-square chain approach impossible to sustain economically. Between 1920 and 1924, the number of recorded Panama Disease-infected plants in Portland rose from 220 to 5,163. C.G Hansford estimated in 1924 that over half of the

nearly two million banana plants grown in Portland would have been destroyed, a burden that the growers of Portland were unwilling to bear.³⁰⁸

The timing of this case spike in Portland coincided with efforts by largely Afro-Jamaican middle farmers, in coordination with smallholders, to bolster smallholder agriculture through JAS branch societies. Alliances between smallholders and middle farmers emerged in the 1920s to push colonial officials to pay greater attention to the needs of the smallest cultivators on the island.³⁰⁹ The first reported organized protest against the treatment method came at a meeting of the JAS branch in Hope Bay, Portland in March 1924.³¹⁰ The main speaker, Legislative Councilman A.E. Ffrench complained to the present agricultural inspector that the treatment area was too large, that the treatment method was “ridiculous,” and that those who carried out the treatment method were “irresponsible scoundrels” who actively spread the disease to ensure they remained employed.³¹¹ In May, the JAS branch in Hope Bay formally passed a resolution calling for a reduction in treatment scope and in July, the main body of the JAS passed the resolution.³¹² Faced with mounting protests and growing economic concerns, the Department of Agriculture altered their treatment methods down to the destruction of one square chain, quartering the amount of plants impacted.

³⁰⁸ C.G. Hansford and J.B. Sutherland, “Report from Microbiologist C.G. Hansford and Supervising Inspector of Plant Diseases J.B. Sutherland to Director of Agriculture, 1926, 1B/5/77/312, The Jamaica Archives.

³⁰⁹ For more on the development of this alliance, see Fernandez, “Jamaica in the Age of Development,” 56-7.

³¹⁰ “How to Treat the Panama Disease Here,” *The Daily Gleaner*, March 31, 1924, 11.

³¹¹ This appears to be the only reported instance of the accusation about disease treatment workers actively spreading Panama Disease.

³¹² “Half Yearly Meeting of Jamaica Agricultural Society,” *The Daily Gleaner*, July 25, 1924, 5.

Growers quickly found even this reduced scope to be unsustainable, as the number of cases continued to rise and the economic toll continued to mount.³¹³ In 1925 alone, microbiologist C.G. Hansford reported 11,000 cases of Panama Disease in Portland, which he stated meant the destruction of roughly 300,000 banana roots.³¹⁴ While smallholders remained the most significantly impacted, it was the protests of middle and large growers that drove these changes. Once more, the Hope Bay branch of the JAS took center-stage in these protests, as in a November 1925 meeting, the group passed a resolution once more condemning the treatment of Panama Disease as “unreasonable, irrational, and unscientific and a waste of the taxpayers’ money.”³¹⁵

In January 1926, H.H. Cousins approved a reduction in Portland’s treatment scope from one square chain to the nine-root treatment, meaning that only the infected plant and the eight plants surrounding it would be destroyed.³¹⁶ Had the policy been in place in 1925, only 100,000 banana roots would have been destroyed in Portland, a two thirds reduction in healthy plants killed.³¹⁷ By the end of 1926, after a combination of greater disease spread outside of Portland and more concerted calls for an island-wide reduction, the Department of Agriculture extended this policy throughout the entire island. Through making these changes, Cousins hoped that planters would be more willing to cooperate, as they no longer faced complete destruction of their crops. Others however saw these actions as an abandonment of necessary Panama Disease mitigation

³¹³ According to the Government Microbiologist, in 1925 alone, the Jamaican banana industry lost £54,000 to Panama Disease to go along with £16,000 spent by the government in combating it; “The Great Enemy,” *The Daily Gleaner*, January 15, 1926, 10.

³¹⁴ C.G. Hansford and J.B. Sutherland, “Report from Microbiologist C.G. Hansford and Supervising Inspector of Plant Diseases J.B. Sutherland to Director of Agriculture, 1926, 1B/5/77/312, The Jamaica Archives.

³¹⁵ “Panama Disease Preventative Acts Condemned,” *The Daily Gleaner*, November 11, 1925, 9.

³¹⁶ “Banana Disease Spreading,” *The Daily Gleaner*, December 24, 1925, 7.

³¹⁷ Hansford and Sutherland, “Report from Microbiologist.”

efforts. Following the changes, the *Daily Gleaner* editorial board described the new policy as “Jamaica’s Death Knell,” and predicted that Panama Disease would spread faster than ever before.³¹⁸

At the plantation level, one of the main responses was to plant bananas on new, uninfected land. Throughout Central America, fruit companies facing Panama Disease often chose to practice shifting agriculture in the hopes of minimizing losses from the disease. Companies such as United Fruit and Standard Fruit abandoned infected farms, changed rail paths, and constructed new plantations out of forested areas to try to run from the fungus.³¹⁹ By 1930, tens of thousands of acres of banana plantations in Central America had been deserted. This abandonment and construction of new plantations had a cascading effect, as much of the land newly selected for cultivation had poor soil properties, leading to lower yields. As a result, the lack of productivity, combined with Panama Disease quickly making its way to the new plantations, led to companies and plantation owners abandoning more and more land until, as John Soluri describes, the Caribbean Coast of Central America was full of “Gros Michel ‘graveyards.’”³²⁰

The political ecology that made shifting agriculture possible in Latin America, particularly the availability of new land and governments willing to grant land concessions, were not nearly as viable in Jamaica, making shifting agriculture much more challenging for fruit companies and planters.³²¹ One of the main reasons for this was the significantly lower acreage viable for

³¹⁸ “Jamaica’s Death Knell,” *The Daily Gleaner*, January 5, 1926, 8.

³¹⁹ Soluri, *Banana Cultures*, 70

³²⁰ *Ibid.*, 71.

³²¹ For more on the political ecology of Latin American banana cultivation, see Soluri, *Banana Cultures*, Marquardt, “Green Havoc;” Mario Argueta, *Bananos y política: Samuel Zemurray y la Cuyamel Fruit Company* (Tegucigalpa: Editorial Universitaria, 1989); Phillippe Bourgois, *Ethnicity at Work: Divided Labor on a Central American Banana Plantation* (Baltimore: Johns Hopkins University Press, 1989); Marcelo Bucheli, *Bananas and Business: The United*

plantation agriculture in Jamaica as compared to Latin America. Jamaica in its entirety is 4,420 square miles in area. And much of this land, particularly in the eastern parishes, is made up of hilly terrain in the Blue Mountains unsuitable for plantation agriculture.³²² In contrast, Honduras consists of 43,433 square miles of land, nearly tenfold higher than Jamaica.³²³ And while not all of this land could be used for plantation agriculture, there was significantly more land available than in Jamaica. As Figure 8 shows, apart from an abandonment of large plantations in Portland, the geography of banana plantations changed little from pre-Panama Disease times to 1930. The primary areas of growth occurred in the western parishes of St. James and Hanover along both the Great River and the rail lines, as well as in St. Elizabeth within the Vere plains and along the rail line. The change in proportion of banana acreage by parish echoes this data, with no parish showing more than a six percent increase or decrease in proportion of total banana acreage between 1905 and 1930.³²⁴

Fruit Company in Colombia, 1899-2000 (New York City: NYU Press, 2005); Steve Striffler and Mark Moberg, ed., *Banana Wars: Power, Production, and History in the Americas* (Durham: Duke University Press, 2003); Peter Chapman, *Bananas: How the United Fruit Company Shaped the World* (Edinburgh, Scotland: Canongate, 2007).

³²² “Land Area – Jamaica,” Data, The World Bank, accessed March 14, 2022,

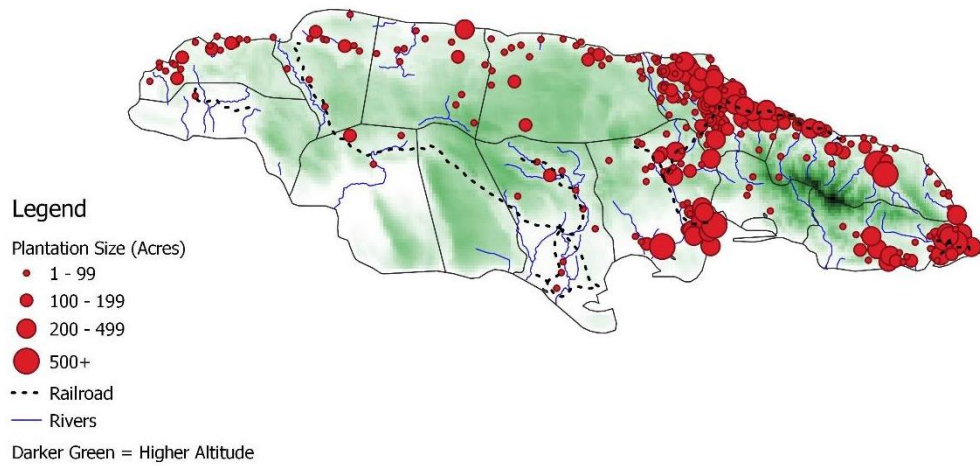
<https://data.worldbank.org/indicator/AG.LND.TOTL.K2?locations=JM>

³²³ “Land Area – Honduras,” Data, The World Bank, accessed March 14, 2022,

<https://data.worldbank.org/indicator/AG.LND.TOTL.K2?locations=HN>

³²⁴ *Handbook of Jamaica for 1905, Handbook of Jamaica for 1930.*

Banana Plantations 1905-1906



Banana Plantations 1930-1931

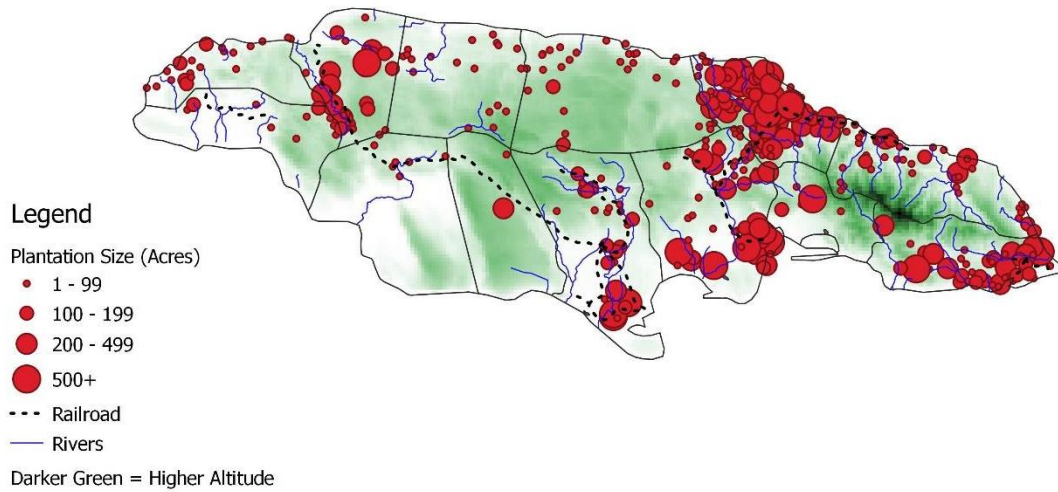


Figure 8: Banana Plantations and Acreages in 1905-6 and 1930-1³²⁵

³²⁵ Maps created using QGIS. Shapefiles imported from DIVA-GIS. Data set compiled from annual reports in the *Handbook of Jamaica*.

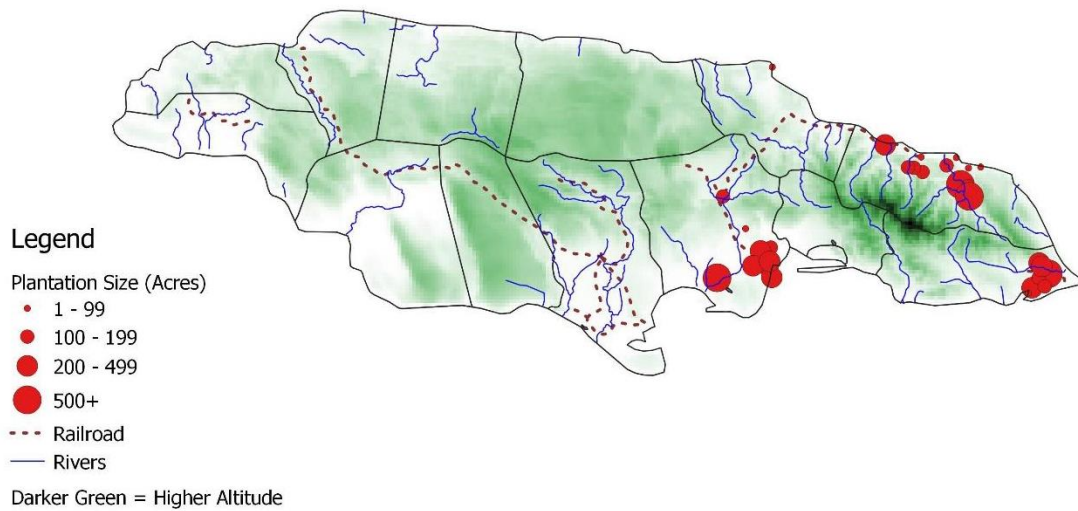
The shifting cultivation that did take place was predominantly carried out by the United Fruit Company even as they downsized their direct ownership of land in Jamaica. As shown in Figure 9, in 1905, the center of United Fruit production in Jamaica was centered in Portland around Port Antonio, but by 1930, this center shifted to the southern coast of Jamaica, in both St. Elizabeth and St. Catherine. UFCo constructed a pier in Kingston's harbor in 1921 to accommodate the relocation of much of their production to the southern parishes.³²⁶ By 1935, United Fruit would completely abandon any efforts at cultivation in Portland. Through this transformation, while UFCo's banana acreage increased from 6,957 to 8,609 acres, its acreage proportional to the entire Jamaican banana industry fell from 19% in 1907 to 15% by 1932.³²⁷ As they did on their Central American holdings, UFCo managers shifted in the 1920s and 1930s to entering into contracts with growers as opposed to owning and operating their own land.³²⁸ This had the effect of shifting the overall risk of banana disease onto growers rather than the company itself.

³²⁶ "What It Means," *The Daily Gleaner*, November 8, 1921, 8.

³²⁷ *The Handbook of Jamaica for 1907*; *The Handbook of Jamaica for 1932*.

³²⁸ Marquardt, "Green Havoc," 69.

UFCO Banana Holdings 1905-1906



UFCO Banana Holdings 1930-1931

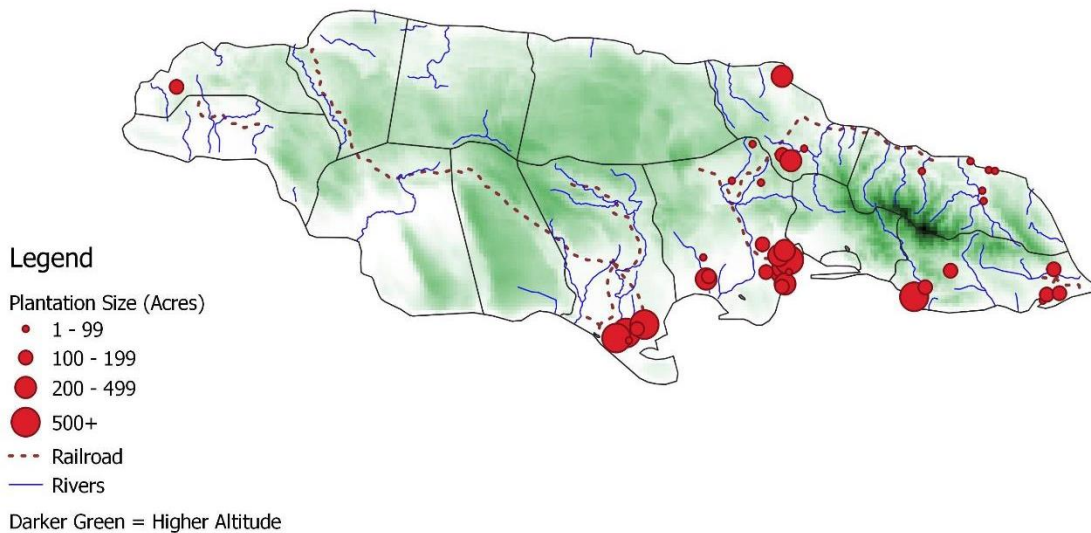


Figure 9: UFCO Owned Banana Plantations in 1905-6 and 1930-1³²⁹

³²⁹ Maps created using QGIS. Shapefiles imported from DIVA-GIS. Data set compiled from annual reports in the *Handbook of Jamaica*.

By and large, UFCo remained apart from any discussions around Panama Disease in Jamaica in the 1910s and 1920s, operating within a political ecology of banana cultivation that seemed completely separate from Jamaican-owned cultivations, even though the microbe itself ignored these theoretical boundaries. The company appeared content to continue with shifting agriculture and leave the research side of Panama Disease to their Central American holdings. In 1926, in the midst of the rapid increase of Panama Disease cases, UFCo President Victor Cutter told reporters from the *Daily Gleaner* that rather than relying on bananas, Jamaicans should look to switch to other crops, such as sugar.³³⁰ The only noted research experiment undertaken on UFCo owned land during this period was a testing of a one-root treatment of Panama Disease on already abandoned land in Portland.³³¹ Nearly the entire crop succumbed to Panama Disease within a year and the experiment quickly ended.³³²

This lack of engagement within Jamaica itself was likely due to a combination of economic and imperial factors. Looking at the economics, United Fruit's hold on the Jamaican banana trade, while significant in a Jamaican context, made up only a small fraction of UFCo's entire enterprise. UFCo's investment in Jamaican agriculture in 1922, just as Panama Disease cases started to skyrocket on the island, totaled \$4,318,216. This accounted for only 4.6% of UFCo's \$92,683,983 expenditures on "Tropical Plantations and Equipment." Of UFCo's 1,738,580 acres of total holdings (owned and leased) in 1922, only 64,967 acres, or 3.7%, were in Jamaica. This was by

³³⁰ "Sees Need for Development of Our Minor Products," *The Daily Gleaner*, March 3, 1926, 1.

³³¹ With one-root treatment, only the diseased plant is destroyed.

³³² H.H. Cousins, "Letter from Cousins to Wardlaw," November 5, 1929, CO 323/1049/14, British National Archives.

far the least of any of their holdings mentioned in their annual report.³³³ With so little comparatively invested in Jamaica, it made more sense financially for the company to center their research in Central America, where the vast majority of their holdings and investments were located.

This lack of engagement with Jamaican-led efforts against Panama Disease also speaks to the two competing imperial spheres involved within the Jamaican banana industry: American and British. With United Fruit the only major banana enterprise in Jamaica able to practice shifting agriculture during this period, UFCo had little incentive to assist Jamaican officials with managing or finding a cure to Panama Disease. Doing so would only harm the company's prospects in Jamaica, as with a new variety or a cure, more groups and organizations, likely with British-backed capital, would be able to further develop the island's banana industry. It made more sense to focus their efforts where American economic hegemony was not in question, as they did not have to worry about inter-imperial rivalry in most of their Central American holdings. Even as cases rose in the 1930s and 1940s, as the following chapters will discuss, UFCo still remained absent from Panama Disease management effort, as they did from discussions about Panama Disease by the Department of Agriculture and JAS. They instead chose to abandon direct banana cultivation in Jamaica altogether.

UFCo management's decision to practice shifting agriculture and abandon their Portland holdings ended up benefitting smallholders in the short term. Despite being the epicenter of Panama Disease in the 1920s, Portland largely retained its share of banana production in relation

³³³ *Twenty-Third Annual Report to the Stockholders of the United Fruit Company for the Fiscal Year Ended December 31, 1922*, 12-15, Accessed via HathiTrust, <https://babel.hathitrust.org/cgi/pt?id=njp.32101065131573&view=1up&seq=9&skin=2021>.

to the rest of the island, dropping only from 14% of banana acreage in 1905 to 11.6% in 1930. The overall acreage devoted to banana cultivation actually increased during this period, from 8,818 acres to 9,511 acres.³³⁴ In a 1926 report on conditions in the parish, the supervising inspector of plant diseases noted that roughly 20,500 acres of land remained that could feasibly be put to banana cultivation. However, the vast majority of this land was in hilly and steep land, conducive to smallholder agriculture more so than plantation based. Up to this point, the disease had primarily spread in the flat, lower areas of river valleys, leaving hill land largely untouched.³³⁵ Officials believed that the hilly lands offered more sanctuary from Panama Disease owing to cultivated areas' isolation from one another, making it more difficult for the fungus to spread throughout the growing region.

The key impact of this shift to the hills was putting the parish's production back into the hands of smallholders, once more shifting the political ecology of banana cultivation. In the 1926 report on Panama Disease, the agricultural inspector for Portland noted that the reserve lands would likely not be profitable for the large fruit companies, as the land was more divided and lacked major infrastructure leading to and from the land, except for narrow footpaths. Instead, the inspector argued that smallholders would have to be relied upon for maintaining the parish's production, as they resided in these sections of the island and had experience and a willingness to grow bananas in hillier regions. He argued that aiding the smallholders in this endeavor would then both put unused land into cultivation as well as ensure that the parish's banana production did

³³⁴ *Handbook of Jamaica for 1905, Handbook of Jamaica for 1930.*

³³⁵ C.G. Hansford and J.B. Sutherland, "Report from Microbiologist C.G. Hansford and Supervising Inspector of Plant Diseases J.B. Sutherland to Director of Agriculture, 1926, 1B/5/77/312, The Jamaica Archives.

not dramatically decrease.³³⁶ However, this call to aid the smallholders ran parallel to the previously discussed rhetoric that framed smallholders as the ones to blame for the island's troubles with Panama Disease and as unworthy of this assistance.

3.8 Conclusion

Examining the first two decades of Jamaica's encounter with Panama Disease highlights the uncertainty growers and officials had over how to properly manage the disease's spread, an uncertainty that was fundamentally at odds with the technocratic ethos of high imperialism that trumpeted human control over nature.³³⁷ This chapter explored how a lack of knowledge among agricultural officials as to the primary methods of disease spread in the 1910s resulted in the implementation of mitigation strategies that targeted plants and people, rather than the microbe itself. It was not until the 1920s, when Panama Disease cases were already skyrocketing, that Jamaican scientists honed in on the microbe and the chief methods of its spread. In the meantime, colonial officials focused their attention for the spread on smallholders, whose mobility and co-cropping agricultural practices did result in disease spread but was only one piece of a much larger agricultural system that facilitated Panama Disease's growth across the island. Smallholders were forced to choose between abandoning agricultural practices they had used for decades or to risk punishment by violating Panama Disease management laws. Without knowing the long-term

³³⁶ Ibid.

³³⁷ Ross, *Ecology and Power*, 9.

impacts of Panama Disease, combined with agricultural officials continuously downplaying the threat, many likely chose to continue their previous agricultural practices.

The uncertainty over Panama Disease and how this uncertainty impacted its spread resulted in a constant reshuffling of the island's political ecology in the 1910s and 1920s. Specific policies over how to manage the disease, such as the level of quarantine required, were implemented and replaced within a matter of years, while the unequal impacts of the disease across the parishes resulted in very different agricultural landscapes and mitigation practices across the island. As cases grew to over 100,000 per year by 1930, agroecosystems that even six months prior appeared stable became hotbeds of disease. Most emblematic of this was Portland, which went from the center of the island's banana cultivation in the 1910s to left to the ravages of the disease by 1930. In some cases, smallholders were able to seize upon this upheaval, as in Portland, hilly land unsuitable for plantation agriculture became the new frontier of banana land untouched by disease. And as the following chapter will reveal, the threat of Panama Disease also led to a revitalization of sugar production on the island, a revitalization initially spearheaded by smallholders.

4.0 “The Price That Has Been Paid”: Smallholders, Sugar, and Navigating Plant Disease

Mr. F., a farmer who spent several years working on sugar plantations in Cuba to be able to purchase his own land in Clarendon, recounted in 1972 his experiences cultivating bananas and sugarcane. “After the devastation with the Panama Disease; then everybody had to just stick in the canes... Because when Panama Disease now, the officers come in and they just cut down an acre today, cut down an acre tomorrow, and they just cutting down all the bananas and demolishing the things.”³³⁸ The same held true in the island’s western parishes. Miss G, a teacher in Westmoreland detailing her family’s holdings, described how around 1928 “a disease broke out you know. Took place at that time and the banana crop failed and then afterward they turned to canes.”³³⁹ Miss Lonie, as previously mentioned, recounted a similar experience of switching from bananas to cane.³⁴⁰ “These three cases of smallholders switching from bananas to sugar are part of a larger shift that occurred in 1910s and 1920s Jamaica towards a revitalization of the island’s sugar industry.

In this chapter I argue that in the 1910s and 1920s, Jamaican smallholders and planters drove a reorientation of Jamaica’s agroecosystem away from bananas and towards sugar due to Panama Disease, weather events, and changes in global markets. Smallholders were the initial drivers of this transformation, trading the potential high profits of banana cultivation for what was perceived to be a more stable sugar crop. However, as with the banana industry a quarter century

³³⁸ “Mr. F, Man-Boy,” in *Life in Jamaica in the Early Twentieth Century*, 35.

³³⁹ “Miss G, Teacher,” in *Life in Jamaica in the Early Twentieth Century*, 7.

³⁴⁰ This recounting, and the others in this paragraph, occurred in the early 1970s to Jamaican sociologist and writer Erna Brodber in a series of oral interviews.

prior, the shift was taken over by the planter class and export sugar once more returned to a plantation-dominated system. At the local level, smallholders navigated both sudden (plant diseases and hurricanes) and gradual (centuries of cultivation altering the island's landscape) patterns of environmental transformations to reinvent, albeit briefly, a long declining sugar export agroecosystem around smallholdings rather than plantation agriculture. At the global level, smallholders utilized the upending of global sugar markets brought by a World War to claim a key role in the production of sugar for the British Empire and to profit from sugar in ways not seen on the island in over a century. But during the interwar period, the white planter class, with assistance from the Department of Agriculture, Jamaican government, and Colonial Office, pushed smallholders to the margins of the sugar trade and regained the pre-eminent position within the industry. Smallholders were also harmed by transformations in political ecology during the 1920s, such as a sugar market slump and a sugar plant disease known as Mosaic Disease. These developments left the smallholder class with few ways to profit from the sugar industry and created a gap in the sugar trade that planters quickly filled. The planter class capitalized off of the foundation laid by the smallholders to inaugurate a new era in the Jamaican sugar industry, one based on "modern" agricultural practices. Many smallholders still participated in this new model of the sugar industry but as a cane-farming subsector tied to individual factories rather than as independent cultivators.

The first section of this chapter discusses the nadir of sugar production in Jamaica at the turn of the twentieth century. I use the 1897 Norman Commission to establish sugar planter frustration with bananas becoming the dominant crop on the island and show their initial efforts to reverse the trend. The second section analyzes the 1910s as a period of smallholder-led growth for the sugar industry. I show how smallholders adapted their local market sugar production to become

more export centered once they saw the profits to be made from sugar and the pitfalls of relying solely on banana cultivation. Following this, I discuss how the perceived stability and safety of sugar production as opposed to bananas was not borne out in reality. Growers were switching out one set of risks for another. In the case of sugar, it took the form of global market fluctuations and another plant disease, Mosaic Disease. The combination of these two factors in the early 1920s drove smallholders out of the sugar business and opened the door for planters to re-establish control. In the final section I explore how planters established a central factory system of sugar cultivation and production that involved the formation of a cane-farmer subsector that thousands of small and middle farmers joined.

4.1 The Nadir of Jamaican Sugar Production

As discussed in Chapter Two, the post-emancipation period saw a profound transformation of Jamaica's political and ecological landscape. The combination of a loss of labor on sugar plantations, free-trade policies that no longer protected the value of Jamaican sugar, and an overall shift in imperial focus away from the West Indies led to a rapid decline in Jamaica's sugar industry throughout the nineteenth century. By the end of the century, a graveyard of abandoned sugar plantations dotted Jamaica's landscape.

This decline of the sugar industry was not unique to Jamaica but was part of a larger decline of the industry throughout the entirety of the Caribbean. One of the primary reasons for this region-wide collapse of sugar was the rise of beet sugar in the second half of the nineteenth century. Coming from a beet plant rather than from cane, sugar beet production began in Europe during the Napoleonic Wars but accelerated in the 1840s due to the combination of emancipation lessening

cane production and the expansion of the beet crop throughout much of Europe. By 1880, global sugar beet production eclipsed that of sugar cane for the first time. By 1900, 80% of the sugar Great Britain imported was beet.³⁴¹

The British West Indies were especially hard hit by this shift in sugar production, and in December 1896, British Colonial Secretary Joseph Chamberlain established a Royal Commission, the Norman Commission, to investigate the causes of economic depression and decline of the sugar industry within Britain's Caribbean colonies.³⁴² According to Chamberlain, the commission was a necessity to learn about "the facts and causes of the alleged depression of the Sugar Industry in Our said Colonies, and the general condition and prospects of that industry."³⁴³ While the commission itself covered the sugar industry, included in the appendices were a collection of interviews and letters from Jamaican government officials, laborers, and planters that shed light on the evolution of the West Indies' (for the purposes of this dissertation, Jamaica's) agricultural system at the turn of the twentieth century.

A common thread found throughout many of the published interviews and documents was the impact of duties and bounties the British Empire placed on sugar. William Morrison of the newly formed Jamaica Agricultural Society argued that "The fiscal policy of the mother country towards the West Indian Colonies is responsible to a great extent for the depression of the sugar

³⁴¹ Horatio Crespo, "Trade Regimes and the International Sugar Market, 1850-1980: Protectionism, Subsidies, and Regulation," in *From Silver to Cocaine: Latin American Commodity Chains and the Building of the World Economy, 1500-2000*, ed. Steven Topik, Carlos Marichal, and Zephyr Frank (Durham: Duke University Press, 2006), 151-156.

³⁴² *Report of the West India Royal Commission, with Subsidiary Report b D. Morris and Statistical Tables and Diagrams, and a Map* (London: Eyre and Spottiswoode, 1897), 2.

³⁴³ *Ibid.*, 2.

industry.”³⁴⁴ Morrison specifically cited the abolition of duties in 1846, toleration of sugar bounties from Europe and the United States, and the prevention of West Indies colonies from negotiating commercial treaties with other nations or colonies. Therefore, according to Morrison, the decline of the sugar industry was not natural but instead a direct consequence of these shortsighted actions taken by Great Britain. George Levy, Secretary of the JAS, shared Morrison’s sentiment. Focusing primarily on the sugar bounties, Levy argued that the bounties were “a gross violation of legitimate fiscal principles,” which the mother country should long ago have shut down. The depression and threatened extinction of the West Indies sugar industry was primarily the responsibility of the “deaf ear” that Britain had taken toward the region.³⁴⁵ Like Morrison, Levy placed direct blame on Britain, rather than any entity in the West Indies, for sugar’s decline.

Sugar planters and merchants writing and speaking to the Commission argued that the Colonial Office needed to change its sugar policies to protect Jamaica’s economy, as sugar was the only crop that would be able to keep Jamaica’s economy afloat long-term. Thus, when the commissioners broached the possibility of bananas becoming the island’s primary export, the sugar interests met the idea with a large degree of skepticism if not hostility. When asked about the success of the banana industry, Robert Craig, a member of the Jamaica Sugar Planters’ Association, challenged the interviewees, arguing that the banana industry should not be viewed as a success. He questioned whether the returns from the banana industry justified “the price that has been paid.”³⁴⁶ While Craig does not expand on what he means by the price paid, he goes on to

³⁴⁴ “Mr. William Morrison examined”, in *Report of the West India Royal Commission Appendix C*, 266.

³⁴⁵ “Extracts from a Memorandum Submitted by Mr. Geo. Levy, Secretary of the Royal Agricultural Society of Jamaica,” in *Report of the West India Royal Commission Appendix C*, 371.

³⁴⁶ “Messrs. Robert Craig, J.M Farquharson, E.J Sadler, L.C Shirley, George Murray, and Henry Sewell (Jamaica Sugar Planters’ Association) examined,” in *Report of the West India Royal Commission Appendix C*, 258.

mention the inability of the banana industry to support the laboring class compared to the sugar industry due to less labor being involved for banana cultivation as well as returns on bananas diminishing in recent years.

Despite the stream of pleas from sugar planters, the members of the Norman Commission did not see the Jamaican sugar industry in need of significant aid. In their concluding report, the commissioners described Jamaica as the West Indian colony best fit to recover from the decline in the sugar industry.³⁴⁷ The report did acknowledge the negative impact the industry's depression had on the island and the 39,000 inhabitants who relied on sugar for their wealth, such as sugar planters, laborers, merchants, rum producers, and cattle breeders. However, it stated there was no evidence that the future of Jamaica was bleak, even if the sugar industry completely collapsed.³⁴⁸ The report advocated for the British colonial government supporting the Jamaican sugar industry and the island's planters but offered little in the way of practical ways to bring this about. The report did not argue for a countervailing duty to be placed on beet sugar nor did it support an international agreement to remove sugar bounties.³⁴⁹ Rather than work to maintain the number of sugar estates, the report suggested a culling of the weaker plantations, with only the ones with the newest machinery and lowest cost of production surviving.³⁵⁰ According to the commissioners, these abandoned estates should be replaced by other crops, such as the banana, grown by a system of peasant proprietors on small holdings.³⁵¹

³⁴⁷ H.W Norman, E. Grey, and D. Barbour, "Report of the West India Royal Commission" (London: Eyre and Spottiswoode, 1897), 59.

³⁴⁸ *Ibid.*, 60, 62.

³⁴⁹ *Ibid.*, 9, 11.

³⁵⁰ *Ibid.*, 16.

³⁵¹ *Ibid.*, 17.

All told, the Norman Commission offers a glimpse into the nadir of sugar production in colonial Jamaica. The existence of the commission in the first place does show that despite the decline of sugar in the West Indies and of British attention to the region, sugar planters in Jamaica and across the region still maintained enough influence that their complaints were at least considered by the colonial government. The Commission also highlights that despite the increase in banana cultivation and the eclipsing of sugar as Jamaica's primary export, a group of large landowners claimed that they committed to the revival of sugar and did not consider bananas the future of the island's economy. But as the following section shows, it was smallholders, not large landowners, who would lead the initial revival of sugar on the island.

4.2 Searching for Stability: A Smallholder-Led Sugar Revival

To understand how and why Afro-Jamaican smallholders were able to spearhead the revival of the Jamaican sugar industry, it is necessary to examine the confluence of local, regional, and global political and ecological factors. At the local smallholder-oriented level, many smallholders' decision to switch from banana to sugar cultivation came down to a search for stability. The combination of the discovery of Panama Disease and a series of hurricanes from 1915 to 1917 led to the destruction of smallholders' banana cultivations and an assessment that sugar was a less economically risky crop to grow. At the regional and global level, World War I created greater economic incentives for sugar cultivation over banana cultivation on the island. The war disrupted banana trading networks, making it harder for smallholders to sell their bananas. Additionally, the disruption of sugar production in continental Europe led to an increase in the prices that could be gained from Jamaicans selling sugar for export. It was smallholders who first

seized on this opportunity and began cultivating sugar on a larger scale, with many turning their already operating sugar production from local to global sugar markets, while others began cultivating sugar for the first time.

For many smallholders, cultivating sugar for sale was nothing new. What changed in the 1910s was the destination and buyer. For centuries, and especially since emancipation, smallholders cultivated sugar and sold it at local markets, known colloquially as “wet sugar.” Smallholders grew their own sugar and used wooden mills turned by animals and iron cauldrons to coarsely refine it. Once refined, smallholders would either carry the “heads” of sugar themselves or place the sugar in mule-drawn wagons to bring it to local markets for sale.³⁵² These small-scale operations were common throughout the island, with an 1897 survey finding over 6,000 wooden and iron mills owned by smallholders. Records of sugar production in late nineteenth-century Jamaica show sugar being cultivated in all parishes, despite those such as Manchester and Portland not having any functioning estates. This indicates that in these parishes, smallholders cultivated all of the sugar.³⁵³

For these smallholders, sugar cultivation and local sale was a key aspect of daily life. Mr. D., a snowball cart worker born in Kingston in 1898, spent much of his childhood around sugar. His father owned an iron mill and boiling house. Mr. D. would harvest the cane from the field, tie it in a bundle, and carry it to the mill. Once the sugar was refined, he would put it in a hamper and go with his father to market, where they would sell the sugar for half a penny per head.³⁵⁴ In many cases, the smallholders made the mills themselves out of the wood from a dogwood tree. They

³⁵² Mintz, *Sweetness and Power*, xxi.

³⁵³ Satchell, *From Plots to Plantations*, 54.

³⁵⁴ “Mr.D - Snowball Man,” in *Life in Jamaica in the Early Twentieth Century*, 4.

would then attach an animal such as a cow or horse to the mill shafts and have it walk around it, thereby turning the mill.³⁵⁵ Mr. Wilfrid, born in Clarendon in 1901, made much of his living from selling boiled sugar. The process was laborious, as he had to do all of the work himself with grinding, mixing, and creating the sugar heads before he could sell it at market.³⁵⁶

Women also frequently cultivated their own sugar, showing how artisan-scale sugar production was not divided by gender. Miss Lonie from Clarendon described the attachment she had to her cultivation, recounting that “I bought an acre for meself and I wouldn’t ‘low no-body to work it. I work it myself. I plant it out with cane meself, plant it, and what I can’t do I hire friends.”³⁵⁷ A unnamed woman from Manchester likewise told of how she made her own sugar heads and carried them with the help of a donkey to market in Mandeville.³⁵⁸ Another unnamed woman from St. Catherine had a fifteen acre farm with a mill and copper boiler for her cane.³⁵⁹ These women’s experiences with cane reveal a much different demographic make-up of smallholder sugar cultivation than the male dominated sugar plantation complex.

Sugar cultivation statistics from the 1910s and early 1920s reveal that between 1916 and 1921, many of these smallholders who had been producing sugar for local markets began selling their sugar for export. In fact, smallholders became the island’s main sugar producers by 1920. From 1916 to 1921, the amount of sugar cultivated throughout the island increased from 33,830 acres to 53,794, a 59% increase over the five-year period. During this period, estate-cultivated sugar only increased by 1,000 acres, meaning the remaining roughly 19,000 acres, or 95%, of the

³⁵⁵ “Miss Min With Forebears from Guinea,” in *Life in Jamaica in the Early Twentieth Century*, 1.

³⁵⁶ “Mr. Wilfred S.- Journey of a Dispersed Child,” in *Life in Jamaica in the Early Twentieth Century*, 5.

³⁵⁷ “Miss Lonie - A Woman Come Down in the World,” in *Life in Jamaica in the Early Twentieth Century*, 3.

³⁵⁸ “Happy Wife, in *Life in Jamaica in the Early Twentieth Century*, 7.

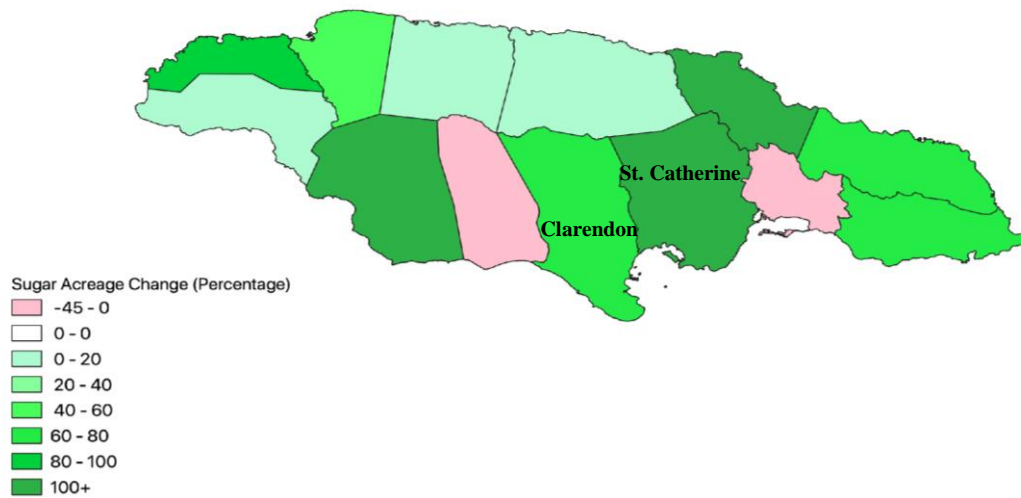
³⁵⁹ “Deacon,” in *Life in Jamaica in the Early Twentieth Century*, 8.

increase came from non-estates.³⁶⁰ As a result of this surge in smallholding sugar cultivation, the percentage of the island's sugar produced by smallholdings rose from 36% in 1916 to 58% in 1921.³⁶¹ These gains occurred throughout the island, but were most heavily concentrated in Clarendon, with a 6,000 acre increase, and St. Catherine, with a 6,500 acre, or 304% increase (as shown in Figure 10).

³⁶⁰ The *Handbook of Jamaica* lists estates as any single piece of land over 20 acres.

³⁶¹ The *Handbook of Jamaica for 1917*, 427-432; *The Handbook of Jamaica for 1922*, 437-442.

Sugar Acreage Percentage Change 1917-1922



Sugar Acreage Change 1917-1922

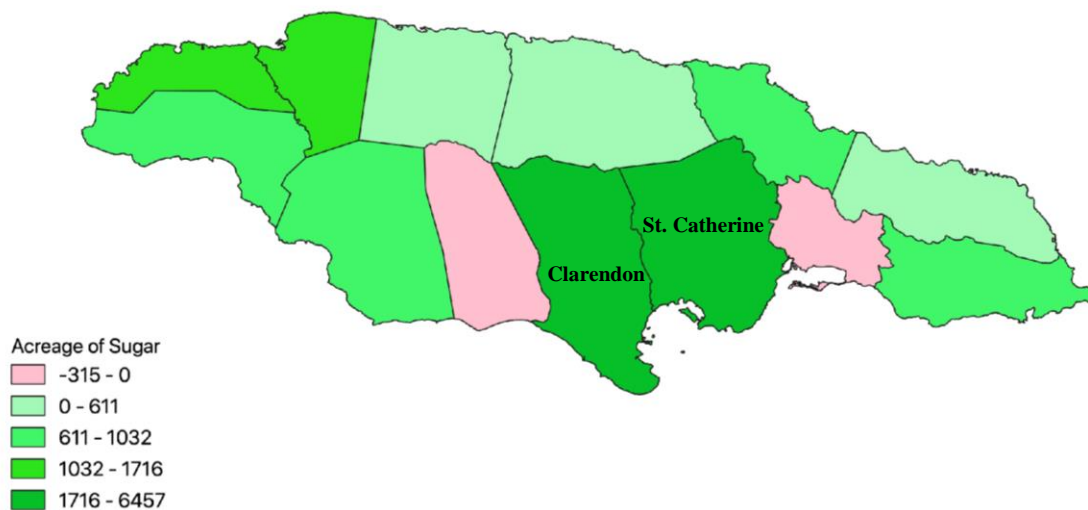


Figure 10: Sugar Percentage and Acreage Change by Parish, 1917-22³⁶²

³⁶² Maps created using QGIS. Shapefiles imported from DIVA-GIS. Data set compiled from annual reports in the *Handbook of Jamaica*.

The above statistics and maps point to a significant shift in the overall structure of the Jamaican sugar industry. The *Daily Gleaner* editorial board summarized this transformation in a 1918 column, stating that “cane farmers (with less than five acres of land) are growing in numbers daily” and that “The sugar industry is no longer in the hands of a few. It is more than ever a national industry. It has saved our country in the last four years.”³⁶³ The three factors that drove so many smallholders to sugar cultivation for export were Panama Disease, hurricanes, and World War I.

The first factor that incentivized smallholders to switch from local to export-based sugar production was the discovery and subsequent spread of Panama Disease. While cases remained low in the 1910s, the majority of discovered cases were on smallholdings. And often, when the quarantine measures were put into place, these smallholders opted to plant sugar to replace their destroyed banana crop. For example, in 1916, growers in the Balcarres district of Portland, where the disease was first discovered in 1911, reported a new outbreak. The disease was found on nine separate holdings in the district.³⁶⁴ After agricultural inspectors came in and destroyed six acres worth of bananas across the holdings, the majority of the affected smallholders chose to plant cane in the affected land.³⁶⁵

The smallholders in the Balcarres District and elsewhere were likely encouraged to plant the cane by the agricultural instructors, as substituting diseased banana plants with cane had the backing of the Department of Agriculture and JAS. The first mention of this connection came in 1913, little more than a year after the first cases of Panama Disease were identified in Jamaica. H.H. Cousins described in the 1913 Report of the Department of Agriculture how Portland’s

³⁶³ “Our Sugar Industry,” *The Daily Gleaner*, December 9, 1918, 8.

³⁶⁴ “Banana Plant,” *The Daily Gleaner*, February 2, 1916, 13.

³⁶⁵ “To Plant Cane,” *The Daily Gleaner*, February 18, 1916, 11.

peasantry found in sugar a profitable alternative to bananas and stated the department's intention to assist in promoting cane cultivation in the areas where Panama Disease was found.³⁶⁶ The Jamaica Agricultural Society supported Cousins' push. In a 1914 meeting discussing the spread of Panama Disease in the Balcarres region of Portland, members spoke of a need to grow sugar rather than attempting to regrow bananas in the infected lands.³⁶⁷

Apart from just an alternative to bananas in areas with Panama Disease, agricultural officials viewed sugar cultivation as a way to stop the disease's spread. In a 1920 letter to the Colonial Secretary, H.H. Cousins spoke of thousands of acres of banana land in St. Mary, Portland, and St. Thomas having been switched over to sugar. For Cousins, these instances of new sugar cultivation were a win-win. They both helped to revive a sugar industry long struggling and, according to Cousins, "revolutionized" the Panama Disease situation on the island. In his view, having an alternative crop to grow gave Jamaicans more confidence in their ability to handle the disease.³⁶⁸ *The Daily Gleaner's* editorial board shared the same sentiment, suggesting the belief in sugar as a way to manage Panama Disease extended beyond just the Department of Agriculture. In regards to the smallholders in Balcarres switching to sugar in 1916, the *Gleaner's* editorial board lauded the development, stating that this would be the most effective means of "eradicating" the threat of Panama Disease. With fewer banana plants on the island, they believed it would be much harder for the disease to spread.³⁶⁹

³⁶⁶ H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending March 31, 1913," *Jamaica Gazette*, June 28, 1913, CO 141/76, British National Archives.

³⁶⁷ "Report of Special Committee on Panama Disease Made to the Board of Management," *The Journal of the Jamaica Agricultural Society* 18, no. 11 (1914): 452.

³⁶⁸ "Letter from H.H. Cousins to Colonial Secretary," November 27, 1920, 1B/5/76/3/384, The Jamaica Archives.

³⁶⁹ "To Plant Cane," *The Daily Gleaner*, February 18, 1916, 11.

A second factor that drove smallholders towards sugar was a series of hurricanes that struck the island each year from 1915 to 1917. As noted previously, banana plants are extremely susceptible to weather, with high winds and heavy rains capable of destroying entire cultivations worth of plants. In 1915, 1916, and 1917, the Department of Agriculture reported that nearly all bananas were destroyed by hurricanes that struck the island.³⁷⁰ In the case of the 1915 hurricane, *The Daily Gleaner's* reports on the damage spoke of banana destruction throughout the island. A reporter described the view on the train from Kingston to Annotto Bay as one where "one passes through a mutilated and benighted panorama of broken-down banana trees and madly surging rivers and streams" and described the damage to banana cultivation as "appalling." Traveling around St. Catherine and Portland, other reporters took note of a majority of banana trees blown to the ground, with many of the ones still standing damaged so badly that they would not grow further.³⁷¹ The same held true for the 1916 and 1917 storms, crippling the banana industry for three consecutive years.

The physiology of the sugar plant made it appear a safer replacement for bananas in the face of storms continuously crippling banana cultivation. Sugarcane, unlike bananas, was able to effectively withstand high winds and heavy rainfall, traits that after three straight years of destructive hurricanes looked increasingly important to growers. Members of the JAS Board of Management discussed the issue in a 1917 meeting, noting that because of the hurricanes, both

³⁷⁰ H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending March 31, 1915," *Jamaica Gazette*, July 8, 1915 CO 141/78, British National Archives; H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending March 31, 1916," *Jamaica Gazette*, July 6, 1916, CO 141/79, British National Archives; H.H. Cousins, "Report of the Department of Science and Agriculture for the Year Ending March 31, 1917," *Jamaica Gazette*, June 28, 1913, CO 141/76, British National Archives.

³⁷¹ "Damage to Banana Fields in St. Mary and Portland," *The Daily Gleaner*, August 16, 1915, 4.

smallholders and planters were rethinking their focus on bananas. One of the members noted that while bananas could be profitable, it “was not wise to depend upon them so much as we have been doing.” They argued that central sugar factories should be established so that banana planters and smallholders could grow a “safer” crop than bananas. They believed that a balance of bananas and sugar was the best insurance against hurricanes.³⁷² H.H. Cousins’ 1918 Department of Agriculture report claimed that sugar saved the island from economic troubles following the hurricane. After noting three straight years of hurricanes, he stated that “the sugar industry has stepped into the breach,” left by the destruction of bananas.³⁷³

The combination of Panama Disease and hurricanes led to more growers (both smallholders and planters) and officials adopting the view that bananas were a risky crop to grow. They viewed sugar, in contrast, as much more stable. In a 1918 letter advocating for assistance to the sugar industry, the Jamaican Imperial Association, the voice of the white sugar planting elite, noted that smallholders in St. Catherine and St. Thomas had begun cultivating sugar on land previously used for banana cultivation. The association attributed this to a combination of hurricanes and Panama Disease. They stated that these growers saw sugar as a much safer and more stable industry. While they did not advocate the complete abandonment of banana cultivation, they viewed supporting the sugar industry as a way to have a second crop that growers could rely on.³⁷⁴ And with smallholders the ones expanding the sugar industry at this point, members of the Association likely saw trumpeting smallholder success as a way to further their

³⁷² “Food Crops,” *The Journal of the Jamaica Agricultural Society* 21, no. 10 (1917): 414.

³⁷³ H.H. Cousins, “Report of the Department of Science and Agriculture for the Year Ending March 31, 1918,” *Jamaica Gazette*, July 27, 1918, CO 141/81, British National Archives.

³⁷⁴ “Letter from the Jamaica Imperial Association to the Colonial Secretary,” August, 1918, CO 137/728/4, British National Archives.

own interests by bringing greater attention to the island's sugar industry. And while the view of the organization was biased towards sugar, the statistics of sugar cultivation support their claims of this shift taking place. Francis Watts, Commissioner of Agriculture for the West Indies, echoed this sentiment in a 1917 report on sugar expansion. He argued that the threats from hurricanes and disease to Jamaica's primary export—bananas—meant that the island needed another major industry. Sugar, in his eyes, was stable and not subject to the same risks as bananas.³⁷⁵

The third development in the 1910s that led to a push for sugar was World War I and its disruption of the global sugar trade, revealing the connection of Jamaican agriculture to global events. While Panama Disease and hurricanes highlighted the risks of bananas, World War I and its impact on sugar created a market where Jamaican sugar could be highly profitable. Prior to the war, England had been importing the majority of its beet sugar from continental Europe rather than from its colonies. With so many available sugar producing regions, the price of sugar coming from Jamaica remained too low to be profitable. However, when World War I closed the continental trade routes and halted production on European sugar beet fields, England had to once more look to its colonies for sugar supply.³⁷⁶ This created a sellers' market for those still producing sugar in Jamaica. The *Daily Gleaner's* editorial board saw this as the opportunity Jamaican sugar needed. A June 1915 editorial noted how the onset of the war brought attention to Jamaica as a sugar producing colony. The editorial board advocated for taking full advantage of the preference on colonial sugar brought by the war and argued that doing so would lead to more large-scale sugar

³⁷⁵ Francis Watts, "Francis Watts Report on Potential of Sugar Factories in Jamaica," 1917, CO 318/342/9, British National Archives.

³⁷⁶ "Our Sugar Question," *The Daily Gleaner*, December 23, 1914, 8.

operations on the island.³⁷⁷ Over the course of the war, Jamaicans were able to double their sugar cultivation, much of which, as previously shown, came from smallholdings.³⁷⁸

4.3 The Quick Decline of the Smallholder-Led Sugar Industry

Despite confidence among smallholders, planters, and officials that sugar offered stability, by 1921 this belief was proven incorrect. Due to a combination of environmental, economic, and political forces at both the local and global level, the perceived stability of sugar quickly deteriorated. In terms of the political and economic, 1920 and 1921 saw a return to pre-war sugar production levels across Europe, resulting in a global oversupply of sugar and a collapse of sugar market prices. Although many involved in the sugar trade recognized that prices would slump after World War I ended, few were prepared for the degree of market collapse that took place. In terms of the environment, many smallholders switched to sugar to escape Panama Disease, only to have much of their sugar crop succumb to a different plant disease: Mosaic Disease. In each of these cases, smallholders received no aid from the local or colonial government, leaving them with few pathways to success in the sugar export industry and highlighting the fact that sugar was only a stable crop with government and economic support.

Looking first at the global sugar market, sugar prices remained steady immediately following the war, but in April 1921 the sugar market slumped, lowering the price of sugar and

³⁷⁷ “Our Present Opportunity,” *The Daily Gleaner*, June 19, 1915, 8.

³⁷⁸ “West Indies Sugar Conference, Jamaica,” CO 852/440/10, British National Archives.

making it more difficult to sell.³⁷⁹ Part of the reason for this was supply quickly returning to pre-World War I levels. The beet sugar cultivation, which had dropped from nearly 9,000,000 tons in 1914 to 3,500,000 at the end of the war, rebounded, with over a 1,000,000 ton increase in 1920-21.³⁸⁰ This then combined with the increases in cane sugar production during the war. Cuba alone had increased its cane production by 1.5 million tons over the course of World War I.³⁸¹ The effect of this supply increase on prices was then made acute by a series of ruptures in 1920 and 1921. Over an eighteen-month period from January 1920 to July 1921, a global economic depression resulting from the global economy shifting from war to peacetime led to a rise in unemployment and currency deflation across the U.S. and Europe.³⁸² This limited spending power and resulted in a decrease in sugar consumption. In England specifically, a months-long coal miners' strike also led to a decrease in sugar consumption in England as well as a decline in the production of many goods that use sugar as an ingredient.³⁸³ As a result of this combination of factors, sugar prices declined over 80% between 1920 and 1921.

Jamaican sugar growers initially hoped that the colonial government would support the island's sugar industry through the crisis by placing a preference on Jamaican sugar. Members of the Jamaican Imperial Association wrote to then Colonial Secretary Winston Churchill, asking for

³⁷⁹ "Report of Select Committee of the Legislative Council on the Condition of the Sugar Industry," July 14, 1921, CO 137/749/1, British National Archives.

³⁸⁰ Frederick Simpich, "The World's Sugar Supply and the Beet-Sugar Production of Germany," *The Economic World New Series* 19, (1920): 659.

³⁸¹ "Sugar Beet Increases Share of Sugar Supply," *The Herald Democrat*, November 15, 1921, 8.

³⁸² James Grant, *The Forgotten Depression: 1921: The Crash That Cured Itself* (New York: Simon & Schuster, 2014).

³⁸³ "Report of Select Committee of the Legislative Council on the Condition of the Sugar Industry," July 14, 1921, CO 137/749/1, British National Archives.

assistance for the industry. They justified the request by arguing that Jamaica had helped support British sugar consumption during the war, and that now it was time for Britain to recognize Jamaica once more as a major source of sugar for the empire.³⁸⁴ This preference was not put in place, leaving Jamaican sugar fully exposed to market fluctuations.

When help did come for Jamaican sugar in the form of island legislation, the assistance was geared towards large planters rather than smallholders. On July 12th, the governor and Legislative Council agreed to the Sugar Industry Aid Loans Law. The law gave the governor and a newly created sugar board the ability to spend up to £400,000 to grant loans to sugar cultivators.³⁸⁵ It allowed for “owners” to apply for a loan from the board, which would consider all applications before distributing funds. The funds were then to be used for operations related to sugar cultivation alone. However, the law narrowly defined an “owner” as someone who operated a sugar plantation or estate, seemingly excluding smallholders from the ability to receive a loan. Despite the narrowness of the legislation, H.H. Cousins credited the Legislature’s intervention with saving the island’s sugar industry. He described sugar growers as coming “face to face with ruin,” but were brought back from the brink by the Legislature’s aid. In doing so, he believed that the obstacles to further sugar growth had been overcome and that the island was in prime position to develop the industry in the future.³⁸⁶ As was often the case with Jamaican agriculture, this perspective was centered primarily around the planter class.

³⁸⁴ “Letter to Colonial Secretary,” May 19, 1921, CO/137/748/12, British National Archives.

³⁸⁵ L. Probyn, “No. 10 - 1921,” in *The Laws of Jamaica Passed in the Year 1921* (Kingston: Government Printing Office, 1922).

³⁸⁶ H.H. Cousins, *Report of the Department of Agriculture for 1922*.

The sharp decline in sugar prices and lack of government aid directed towards smallholders drove many smallholders away from sugar and back towards bananas as they continuously searched for profitable crops. In 1921, U.A. McLaren, an agricultural instructor and member of the JAS, published a discussion of the sugar crisis in the journal. He noted that the high hopes for extended profits from canes had gone unrealized and that canes failed in “doing the trick.” Only those small settlers who continued to grow bananas and other foodstuffs made it through the sugar crisis without major financial repercussions. Those who had completely turned to sugar had now turned in a hurry back to bananas in hopes of making profits. He described the situation in St. Thomas, saying that “So feverish is the anxiety to elevate banana and dethrone cane that not only is the latter crop - set out at enormous expense - given over to sweeps, but destroyed to make room for banana.” He additionally worried that the planting of banana suckers without thought of the origin of the sucker or quality of the soil raised the potential for Panama Disease outbreaks.³⁸⁷ Cultivation statistics highlight this shift, as the island’s acreage in bananas rose from 55,368 acres in 1921 to 74,548 by 1925. Over the same period, sugar acreage declined from 55,518 to 44,004.³⁸⁸

In terms of ecological challenges smallholder sugar growers faced, Mosaic Disease proved the most difficult to overcome. Although the disease did not result in the wholesale destruction of smallholder produced sugar, it placed smallholders at a strong disadvantage in production compared to the planter class. Mosaic Disease, a virus that creates discolored patches on cane and reduces their yield, was first discovered in 1890 in Java. Like Panama Disease, global shipping

³⁸⁷ U.A. McLaren, “Bananas,” *The Journal of the Jamaica Agricultural Society* 25, no. 9 (1921): 323-4.

³⁸⁸ *The Handbook of Jamaica for 1927*, 343.

and migration led to its diffusion across the globe.³⁸⁹ By the early 1900s, the virus was found in nearly every major sugar producing country.³⁹⁰ Unlike Panama Disease, which effectively destroys infected plants, Mosaic Disease does not kill sugarcane. Instead, it reduces the yield of the infected canes by roughly thirty percent.³⁹¹ The most common methods of spread were through planting infected seedlings or through the air. One commonality Mosaic Disease did share with Panama Disease, however, was the lack of a chemical treatment. Growers had to either work to control the spread or plant an immune variety of cane.³⁹²

Mosaic Disease first garnered the attention of Jamaican agricultural interests around 1920, though not with the same level of attention as Panama Disease. In September 1920 the Jamaican government added a Mosaic Disease section to its 1915 Protection from Disease Plants Law. The order identified the virus as an infectious plant disease and laid out a series of steps for growers to follow should they identify it on their land. If less than 10% of canes in a field were infected, growers simply had to dig up the infected plants. If greater than 10% showed infection, no cane-tops or seeds from the infected fields were allowed to be planted anywhere else, all diseased plants would be dug up, and the owner could notify the Director of Agriculture for advice on whether further actions were necessary. Compared to the orders surrounding Panama Disease and the required destruction of all nearby plants, the orders for Mosaic Disease were much less strict, likely

³⁸⁹ The most common method of spread was through the export of infected seedling canes from Javan nurseries and their subsequent planting in other regions.

³⁹⁰ C.G. Hansford, "The Mosaic Disease of Sugar-Cane," in *Proceedings of the 9th West Indian Agricultural Conference, Kingston, Jamaica* (Kingston: Government Printing Press, 1924), 76.

³⁹¹ Also unlike Panama Disease, the virus does not remain in the soil or survive on the trash from infected plants.

³⁹² Hansford, "The Mosaic Disease of Sugar Cane," 83.

due to its more limited impact on the sugar yields as opposed to Panama Disease killing banana plants.

The discovery of Mosaic Disease on the island and its subsequent spread coincided with the expansion of the Jamaican sugar industry in the late 1910s. In discussing the disease in 1920, members of the Jamaica Agricultural Society noted that a few years before, the disease had been unknown on the island, but with the extension of sugar cultivation, it was now necessary that steps be taken to control it.³⁹³ Three years later, Jamaica's microbiologist C.G. Hansford discussed the disease at the West Indian Agricultural Conference, noting that the disease had spread considerably in the three years prior, with it now being found in nearly every cane growing region on the island.³⁹⁴

Of Jamaican growers, smallholders were disproportionately impacted by Mosaic Disease, with it often crippling their sugar output. In many instances, smallholders switched out of banana cultivation because of Panama Disease only to have their sugar crop infected by another pathogen. Due to the difficulty of identifying the virus and the fact that it did not fully destroy the plants, smallholders were slower to adopt control measures than planters or were unwilling to accept the tradeoffs that came with these measures.³⁹⁵ Smallholders often did not have the means to obtain or ability to cultivate immune varieties, which were created for and distributed primarily to plantations. The JAS reported that despite suffering heavily from Mosaic Disease, smallholders were unwilling to adopt the immune Uba cane due to more difficulty in cutting it and its

³⁹³ "Mosaic Disease of Canes," *The Journal of the Jamaica Agricultural Society* 24, nos. 10 & 11 (1920): 313.

³⁹⁴ Hansford, "Mosaic Disease," (1924), 79.

³⁹⁵ *Report of the Sugar Industry Commission, Jamaica. 1944-45*, (Kingston: Government Printing Press, 1945), 43.

incompatibility with the small mills they owned.³⁹⁶ Large estate owners in contrast were the first to receive advice on how to handle the disease and had an easier time switching their cultivations to Uba. As a result, they were not nearly as hampered by the disease as smallholders. A comparison in sugar production between smallholders and planters highlights this difference, as between 1921 and 1926, the proportion of sugar produced on smallholdings compared to plantations fell from 58% to 28%, driven by a combination of declining yields due to Mosaic Disease and smallholders abandoning sugar production due to low prices. Whereas smallholders cultivated 30,952 acres of sugar in 1921, the acreage declined to 12,155 in 1926, fifty acres less than they produced in 1916 before the smallholder sugar boom began.³⁹⁷ When discussing in 1930 why so many smallholders had abandoned sugar cultivation in the 1920s, a member of the JAS stated that Mosaic Disease was as much to blame as bad prices.³⁹⁸ With smallholder cultivation steadily declining from its peak in the early 1920s and markets rebounding from the 1921 low, the sugar industry was ripe for consolidation around the planter class.

4.4 A New Sugar Plantation Complex

While smallholders were concretely expanding their sugar production in the 1910s, the sugar planters' efforts towards sugar revitalization remained largely theoretical.³⁹⁹ However, the

³⁹⁶ "Our Crops," *The Journal Of the Jamaica Agricultural Society* 32, no. 3 (1928): 97.

³⁹⁷ *Handbook of Jamaica 1921; Handbook of Jamaica 1926.*

³⁹⁸ "Discussion with Lord Olivier," *The Journal Of the Jamaica Agricultural Society* 34, no. 3 (1930): 105.

³⁹⁹ Throughout 1916 to 1919, sugar planters and merchants continuously discussed the possibility of creating central sugar factories in Jamaica, though nothing ever came of these particular discussions.

discussions they held laid the groundwork for more direct action beginning in the 1920s that would push the sugar industry once more towards a planter-dominated structure. With prices having rebounded and government-backed loans given to estate owners, the 1920s and 1930s marked a period in which planters regained significant control over the cultivation and production of sugar within Jamaica. Driven by both potential profits and the threat Panama Disease posed to banana cultivation, sugar planters aimed to re-establish sugar's position as Jamaica's main crop. By the advent of World War II, the island's sugar industry bore little resemblance to that which existed prior to World War I. This transformation occurred in two roughly decade-long phases. The first, from 1921 to 1930, was largely a continuation of the industry's previous model. During this period, sugar production doubled on the island, from 33,029 tons to 67,788, with seventy-percent of all sugar and nearly all sugar used for export coming from estates owned by wealthy, white, often absentee planters.⁴⁰⁰ However, following another sugar market crisis in 1930, industry leaders, with the help of colonial officials, embarked on a wholesale reinventing of the island's sugar agroecosystem, with foreign capital, new technologies, and central factories all helping to reshape the industry. By 1939, the island's sugar output doubled once more to 117,946 tons, with the structure in place for another doubling of production by 1950. By this point, sugar, not bananas, had once again become Jamaica's primary export.

⁴⁰⁰ G.E. Cumper, "Labour Demand and Supply in the Jamaican Sugar Industry, 1830-1950," *Social and Economic Studies* 2, no. 4 (1954): 71.

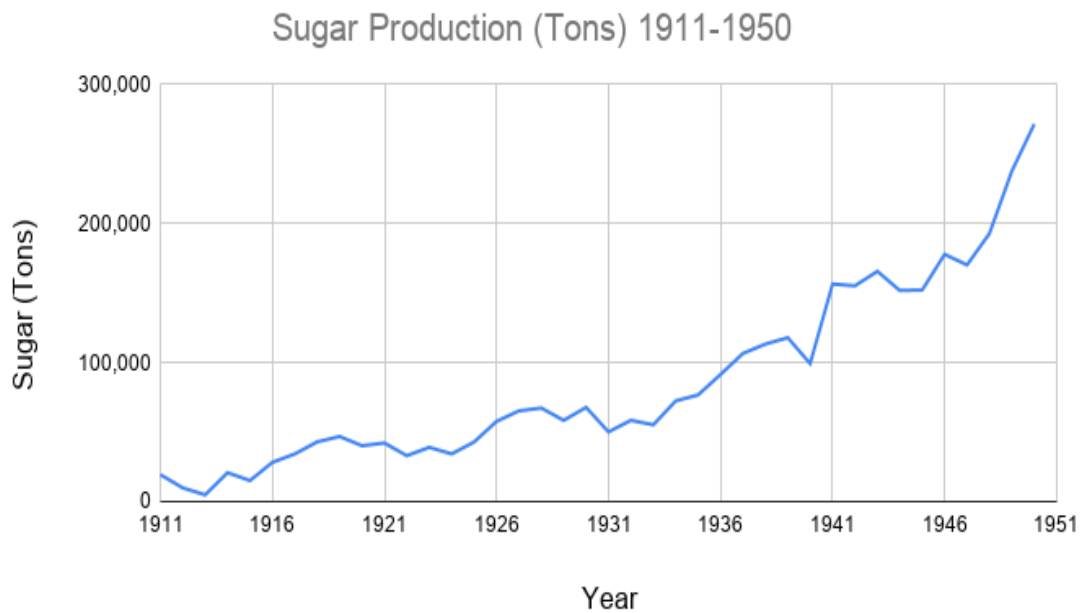


Figure 11: Sugar Production By Year⁴⁰¹

Just as with the smallholder sugar boom of the late 1910s, a key driver in the planter expansion of sugar cultivation was the growing impact of Panama Disease. As discussed in Chapter Three, cases of Panama Disease grew rapidly in the 1920s, with almost no banana producing regions in Jamaica left unaffected by the fungus. With planters now losing entire plantations worth of banana plants to the disease, many began looking for an alternative. For instance, in 1920, a planter in Serge Island, St. Thomas switched his plantation to sugar production as soon as he saw the symptoms of Panama Disease on several of his banana plants.⁴⁰² Individual decisions like this took place throughout the 1920s and 1930s as the disease spread, with the collective impact of these decisions becoming noticeable to the overall geography of agriculture

⁴⁰¹ Data taken from Cumper, “Labour Demand,” 71.

⁴⁰² H.H. Cousins, “Letter from H.H. Cousins to Colonial Secretary,” November 27, 1920, 1B/5/76/3/384, The Jamaica Archives.

in Jamaica by the mid-1930s. A 1936 memorandum on Jamaica's sugar industry called for an expansion of the industry and noted that in recent years many farmers whose banana crop was wiped out by Panama Disease had switched to sugar cultivation.⁴⁰³ In 1942, a colonial official reported that all of the flood-prone areas of the island, which were hit particularly hard by Panama Disease, had been switched over to sugar cultivation or cattle grazing.⁴⁰⁴ By 1945, colonial officials noted that sugar had regained its former status as the primary industry of the colony.⁴⁰⁵

One of the clearest indicators of the connection between planters increasing sugar cultivation and the spread of Panama Disease was the continued inroads of the United Fruit Company into the Jamaican sugar business. In a 1926 interview, the President UFCo, V.M. Cutter, spoke of the need for Jamaica to diversify its agriculture. Ironically, Cutter spoke of Jamaica's overdependence on bananas, a situation that the United Fruit Company played a direct role in fostering. He then applauded the efforts of planters who had switched to sugar cultivation, seeing it as a profitable avenue to develop an alternative crop.⁴⁰⁶ In 1928, UFCo entered the business themselves in Jamaica, purchasing two large sugar estates in Clarendon and one in St. Catherine. These three estates, Bernard Lodge, Amity Hall, and Moneymusk, were responsible for one third of the island's total sugar crop produced at the time of purchase. Most agricultural interests on the island assumed that UFCo purchased these estates to turn them over to banana production. However, UFCo decided to maintain these estates as sugar plantations, signaling a full-scale

⁴⁰³ "Memorandum on the Sugar Situation as it Affects Jamaica," February 25, 1936, CO 852/39/6, British National Archives.

⁴⁰⁴ "Letter from Officer Administering the Government to the Secretary of State for the Colonies," January 19, 1943, CO 852/512/2, British National Archives.

⁴⁰⁵ *Report of the Sugar Industry Commission 1944-45*, 15. For more on Leaf Spot Disease, see the following chapter.

⁴⁰⁶ "Sees Need for Development of Our Minor Products," *The Daily Gleaner*, March 3, 1926, 1.

diversification in their agricultural interests on the island beyond bananas, bringing their Jamaican holdings in line with those in Cuba.⁴⁰⁷

The Department of Agriculture, Jamaica Agricultural Society, and local government all promoted sugar cultivation in Panama Disease ravaged areas, offering institutional support towards white sugar planters that they failed to provide Afro-Jamaican smallholders in the 1910s. In 1926, the Department of Agriculture began a campaign to increase sugar cultivation on former banana lands through instructional talks and cane seedling distribution.⁴⁰⁸ The JAS lagged behind the Department of Agriculture in this endeavor, but by 1934 passed a resolution calling for the expansion of cane farming “due to the menace of Panama Disease.”⁴⁰⁹ Like the Department of Agriculture, the JAS began holding talks on sugar cultivation and sent out instructors to some of the areas most impacted by Panama Disease. The Jamaican government, led by the Governor Ransford Slater, began appealing to the British government for more attention to be paid to the sugar industry in terms of investing in new machinery and increasing sugar quotas. In a 1933 letter to the Secretary of State for the Colonies, Governor Slater spoke of the “increasingly grave” Panama Disease situation on the island and claimed that in ten years Jamaica would be without its banana industry. He argued that the best alternative crop for the areas affected by the disease was sugarcane and that the colonial government needed to fully support the island’s sugar industry for the colony’s economic well-being.⁴¹⁰

⁴⁰⁷ Cumper, “Labour Demand,” 78.

⁴⁰⁸ “Making Use of Land Devastated by the Panama Disease,” *The Daily Gleaner*, June 19, 1926, 1.

⁴⁰⁹ “Board of Management,” *Journal of the Jamaica Agricultural Society* 38, no. 6, 1934, 252.

⁴¹⁰ “Letter from the Governor to the Secretary of State for the Colonies,” September 29, 1933, CO 137/800/7, British National Archives.

The most impactful transformation that sugar planters and colonial officials undertook towards transforming Jamaica's sugar industry and taking it further from the smallholder-led system of the 1910s was the construction of central factories. Rather than having dozens of sugar processing locations throughout the island, as was the case until 1926, these factories acted as central hubs for cane to be taken and processed. Cane farms then often surrounded these central factories.⁴¹¹ The factories used technologies such as steam-powered mills, vacuum pans, and centrifugals to boost processing volume and speed.⁴¹² The increase in production from a central location came with a sharp decrease in the number of sugar mill owners, as smaller operators, particularly smallholders who still had wooden mills, could not compete with the efficiency of central factory processing.

Proponents of this system argued that along with the economic value brought by central factories came a positive cultural influence on the nearby populace. Central factories in Cuba have been described as “islands of modernity” due to their design and structures imitating American and European cities in the early twentieth century.⁴¹³ Proponents of central factories in Jamaica argued in 1917 and 1939 that the factories would lead to “increased mental activity” and greater “

⁴¹¹ These transformations towards central factories were not happening in Jamaica alone, but throughout the Caribbean. Centralization of the sugar industry in Cuba began in the late nineteenth century, with the switch to steam power pushing smaller growers with wooden powered mills out of business. See Gillian McGillivray, *Blazing Cane: Sugar Communities, Class, and State Formation in Cuba, 1868-1959* (Durham: Duke University Press, 2009).

⁴¹² Carl Henry Fe, “Better Must Come: Sugar and Jamaica in the 20th Century,” *Social and Economic Studies* 33, no. 4 (1984): 6.

⁴¹³ McGillivray, *Blazing Cane*, 65.

order” and that factories served as “centres of civilization.”⁴¹⁴ Implicit within these arguments was a belief among the white sugar planters that the members of the population needed this “civilizing” and “order.” In the case of Jamaica, this view was directed towards Afro-Jamaicans.

The first central factory in Jamaica began operations in 1926, with sugar planters and merchants viewing it as a watershed moment for the island’s sugar industry. Constructed by the Jamaica Sugar Estates with a capacity of 10,000 tons, the factory instantly became the largest sugar producer on the island. The opening of the factory was seen as such an important event for the island that the governor hosted the opening ceremony that was attended by a multitude of merchants and sugar planters from across the island.⁴¹⁵ The *Daily Gleaner* described the factory as Jamaica’s greatest effort towards sugar production in its history, a triumph of British enterprise, and a step towards ensuring the island remains economically successful once the onward creep of Panama Disease was inevitably complete.⁴¹⁶ Centralization continued gradually throughout the rest of the 1920s, as the number of sugar estates declined from sixty-six to thirty-nine, while their average size rose from 368 to 661 acres.⁴¹⁷

As the importance of central factories grew, smallholder cane became less valued to the sugar planting class. Once centralization began in the 1920s, estate owners focused on maximizing their own sugar cultivation so they would not need to purchase cane from other growers. Prior to the centralization push, many factories on the island obtained the majority of their cane from

⁴¹⁴ Francis Watts, “Memorandum on Central Sugar Factories for Jamaica,” February 27, 1917, CO 137/721/23. British National Archives; “Moyné Commission Memorandum: Sugar Manufacturing Association,” 1939, CO 950/83, British National Archives.

⁴¹⁵ “Giant Factory Making Sugar in East St. Thomas,” *The Daily Gleaner*, February 27, 1926, 1.

⁴¹⁶ “The Great Enterprise,” *The Daily Gleaner*, February 27, 1926, 12.

⁴¹⁷ Eisner, *Jamaica, 1830-1930*, 203.

external sources, including smallholders. Since estates during this period were not large enough to keep their factories running at full capacity, it was necessary to enter into contracts with outside growers. However, by 1929, only one third of manufactured cane came from outside the estates and factories. With a smaller number of estates and a higher acreage per estate, many of these estates were now able to keep their factories fully operational with their own cane. But as factory size continued to expand, this position soon became untenable.⁴¹⁸

4.5 Rise of the Cane-Farmer Subsector

By the 1930s, a convergence of economic, technological, and environmental factors led to a further reimagining of the Jamaican sugar industry, one with a further centralization of production but a seemingly firmer place for small cane farmers cultivating in service of central factories. Despite planter efforts in the 1920s to revive the plantation-based sugar industry, production still lagged well behind that of other sugar producing countries and colonies. By 1930, the West Indies sugar industry had entered another depression, leading the Colonial Office to send a commission to examine the cause of the depression and potential remedies. The main cause, according to the commission's findings, was an issue of supply and demand. As was the case with the 1920 crisis, too much sugar was being produced for the current demand. European beet sugar in particular was flooding the market and British tariffs allowed this sugar to enter the market at a lower price than that of colonial sugar. Throughout the British West Indies in 1930, it cost more to produce the sugar than it was being sold for at market. The only potential remedies for this

⁴¹⁸ Ibid., 208.

situation were for consumer prices to go up or for the British government to directly assist sugar planters.⁴¹⁹

Along with market issues, the commission argued that the labor structure of Jamaica's sugar industry damaged profit margins. The commission viewed the current structure as too reliant on low paid labor, particularly the amount of labor required to keep the system functioning. It recommended replacing much of the low-wage labor with small cane farmers, creating a small cane-farmer subsector. In this model, smallholders located around central factories would enter into contracts with the factory owners to cultivate and sell sugar to them. The commissioners believed this would lead to more efficient labor operations compared to the "extravagant" use of low-paid labor on land directly owned by the factories. They also felt this would help more of the central factories reach full capacity for processing. The commission cited the existence of several potentially valuable central factories in St. Thomas and St. Mary, but neither had the requisite sugar to run at full capacity. If small growers could be incentivized to cultivate sugar and sell it directly to the factories, factories would incur less cost and be more efficient. The only problem, according to the commission, was to convince the smallholders to stop growing bananas.⁴²⁰

Mirroring what drove smallholders to increased sugar cultivation in the 1910s, factory owners in the 1930s used openings presented by disease and environmental catastrophe to call for more smallholders to begin cultivating sugar for estate processing. In particular, they used the continued ravages of Panama Disease and a 1932 hurricane which destroyed most of the banana plants on the island as opportunities to draw more smallholders into the system. For those cultivators who had continued growing and processing sugar on their own farms, planters offered

⁴¹⁹ "West Indies Sugar Commission," 1930, T 161/296, British National Archives.

⁴²⁰ Ibid.

them a market for their product.⁴²¹ Much of this proselytizing was done by the Jamaica Agricultural Society. For example, in 1934 the Vice President of the JAS held a public meeting in the Bog Walk region of Jamaica, which was hit especially hard by Panama Disease, to call on small growers to switch to sugar cultivation. He urged growers to enter into contracts with nearby sugar factories so that they could make profitable use of their Panama Disease-infected lands.⁴²²

The sub-sector system continued to develop throughout the 1930s but was not firmly institutionalized until 1937 with the passing of the Sugar Industry Control Law. The key part of the legislation was the establishment of a registry of cane farmers. Farmers would sign up for the registry to be attached to a particular factory where they would sell their cane. In 1941, this went a step further with the formation of the All Island Jamaica Cane Farmers Association, joining all cane farmers under one umbrella organization. Having such a system, its founders argued, would help ensure that all growers were treated fairly and that they would have a platform to advocate for their interests.⁴²³ The passing of the 1937 law and the formation of the association helped to promote the development of the sub-sector. Between 1934 and 1943, the number of cane farmers in the sub-sector rose from 2,144 to 9,000, an increase from 15% to 37% of the total processed cane in factories.⁴²⁴

The location of the central factories often determined which smallholders could participate in this new sugar agroecosystem. While in a few cases (as will be discussed shortly in the case of Frome Estate), smallholders moved to become part of this system, the majority remained on their

⁴²¹ Fe, "Better Must Come," 7.

⁴²² "Urge Cane Planting By Small Settlers On Ravaged Banana Lands," *The Daily Gleaner*, April 6, 1934, 7.

⁴²³ *Report of the Sugar Industry Commission 1944-45*, 159.

⁴²⁴ Fe, "Better Must Come," 7.

original lands and engaged with the system if they were within close enough proximity to a factory. In 1944, 70% of cane farmer sugar was grown within five miles of a central factory and 94% within twelve miles. This largely had to do with difficulties in transport, as some cane was grown on land upwards of 2,000 feet of elevation with no access to main roads and no assistance from the factory in providing a cart or truck. This often forced growers to carry the sugar by pack animal or in baskets on their own.⁴²⁵

Jamaica Central Sugar Factories With 5 Mile Radius 1944

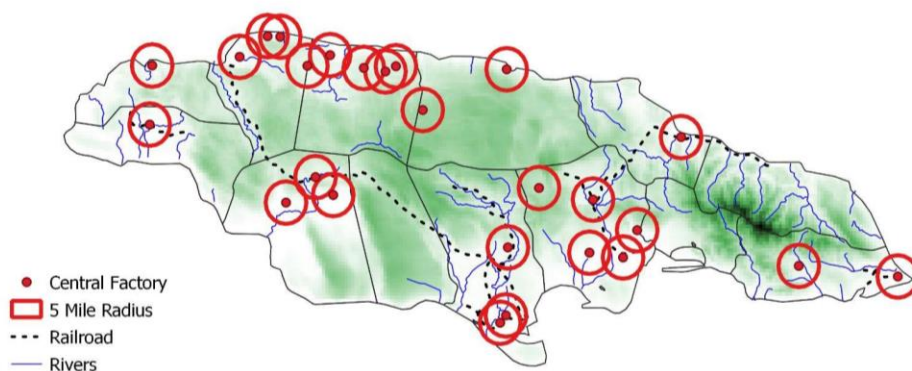


Figure 12: Jamaican Central Sugar Factories With Five Mile Radius⁴²⁶

Sugar planters and estate owners viewed the sub-sector system as an act of benevolence towards the smallholders. A 1944 sugar commission report described any smallholder living near a sugar factory as “fortunate.” Proximity guaranteed the smallholder a market for their sugar in

⁴²⁵ *Report of the Sugar Industry Commission 1944-45*, 33.

⁴²⁶ Maps created using QGIS. Shapefiles imported from DIVA-GIS. Data set compiled from annual reports in the *Handbook of Jamaica*.

almost any situation, giving them security that they would not have elsewhere.⁴²⁷ Advocates of the system claimed that it made planters pay greater attention to the quality of life of the farmers attached to their estates. Among the services offered were free planting material, loans to cover the cost of planting and cultivating, and instruction as to the best cultivation methods and highest yielding cane varieties.⁴²⁸ When farmers did not adopt these practices or did not sufficiently “appreciate” the techniques of sugar cultivation, planters blamed them for any problems with the industry.

By incorporating small sugar cultivators into this new system, many within the island’s agricultural organizations saw it as a way to end smallholders’ vernacular methods of cultivating and processing sugar, further incorporating them into this “modern” system of agriculture that elites believed would lead to increases in sugar production. In a 1934 memo, a Jamaica Agricultural Society member spoke of the need to move smallholders away from their old methods of production and processing and incorporate them into the central factory system. He argued that for smallholders to actually contribute to the island’s sugar industry, “the haphazard way of cultivating must be scrapped.” He saw it as a duty of the JAS to “educate” the Afro-Jamaican smallholder so that he could be a “real factor” in the sugar industry.⁴²⁹ This attitude pervaded the island’s agricultural institutions, as by the 1930s most believed that the only place for smallholders within the sugar industry was in the service of central factories.

The prized example of this new sugar agroecosystem was the Frome Estate in Westmoreland. By the mid-twentieth century, Frome was over 30,000 acres, roughly a seventh of

⁴²⁷ *Report of the Sugar Industry Commission 1944-45*, 42.

⁴²⁸ *Ibid.*, 46.

⁴²⁹ Theo McKay, “Memo on Sugar Industry,” *Journal of the Jamaica Agricultural Society* 38, no. 6 (1934): 273.

the total land area of Westmoreland. Like many other of the large estates on the island, Frome was bought by a multinational corporation, in this case Tate and Lyle, in 1931.⁴³⁰ In 1938, Tate and Lyle purchased nearly every other estate in Westmoreland, but centralized operations around Frome, placing it as the center of the sugar industry in the parish. An entire settlement system developed around this centralization. In the center of the estate around the factory lived primarily skilled workers and foremen. Expanding outward to the farms, general workers lived at the administrative center of each. Towards the edge of the canelands, three villages housed many of the cane workers.⁴³¹ With all of these settlements included, 64% of households included at least one sugar worker.

As Frome expanded, more and more inhabitants of Westmoreland, especially smallholders, became part of the estate's operations. For roughly five miles radiating out from the center of the estate, farmers cultivated cane they would then sell to Frome. Starting in the 1930s, the population of the canelands around Frome began expanding faster than in the rest of Westmoreland, suggesting migration both from other parishes and from the non-canelands of Westmoreland. These growers likely saw greater potential for profits by becoming semi-independent growers connected to the estate. While some growers in the canelands grew non-cane foodstuffs, the vast majority of the land was devoted solely to sugar cultivation. Once outside of the canelands proper, roughly 20% of inhabitants around the borders worked on the estate, but on the whole sugar had much less economic significance. Small settlers on the border were twice as likely to have their own land for the cultivation of foodstuffs as compared to those living within the canelands.⁴³²

⁴³⁰ Fe, "Better Must Come," 5.

⁴³¹ Cumper, "A Modern Jamaican Sugar Estate," 141.

⁴³² Ibid., 144.

The expansion of the central factory agroecosystem through the cane farmer subsector resulted in a massive expansion of Frome's sugar production. Between 1931 and 1951, sugar production more than quintupled. Frome produced 12,000 tons of sugar in 1931, which rose to 70,000 tons by 1951.⁴³³ At this point, around 40,000 people lived in the canelands and their periphery, an increase of roughly 13,000 from 1931. The nearby port of Savanna la Mar became essentially an appendage of the estate, with the majority of the ports business serving Frome's needs. Rail lines ran throughout the area as well, further connecting the estate to other island hubs.⁴³⁴ To planters and colonial officials, Frome likely appeared the perfect example of the economic and social benefits brought by the "modern" central factory system. But as the following chapter will discuss, this expansion did not benefit all involved, as Frome would become the first site of the 1938 Labor Rebellion.

4.6 Conclusion

The 1910s to 1930s was a period of near constant change for Jamaica's sugar industry and smallholders' role within it. Viewed at the beginning of the twentieth century as a failed enterprise by many growers and officials, by the middle of the century sugar had regained its original place as Jamaica's primary agricultural export. But by this point, the shape of the industry bore little resemblance to that of a few decades prior. This chapter revealed how many smallholders, faced with the threat of Panama Disease and seeing potential profits for sugar brought by World War I,

⁴³³ Ibid., 125.

⁴³⁴ *Report of the Sugar Industry Commission, Jamaica. 1944-45*, 87.

switched their cultivations from banana to sugar and launched the first concerted expansion of sugar cultivation on the island in over a century. This smallholder-driven sugar industry proved short-lived however, as a combination of a market crash and Mosaic Disease pushed them out of sugar cultivation and often back towards bananas. Planters, who lagged behind smallholders in making concrete inroads into expanded sugar cultivation, filled the gap left by smallholders and throughout the 1920s and 1930s worked to expand the industry and consolidate their control. Sugar planters, with support from the colonial government, constructed large factories with increased production capacity that centralized sugar production and processing. Smallholder cane once more became valued, as Afro-Jamaican growers around the central factories entered into contracts to supply factories with cane. Supporters of the endeavor, primarily among white elites, viewed the revitalization of sugar on the island as a boon for smallholders and as a way to ensure that the damage done to the island's economy by Panama Disease would be minimized. However, as the following chapter will show, the revival of sugar did not bring hoped for stability to Jamaica's political ecology. By the late 1930s, the combination of Panama Disease, a new banana disease in Leaf Spot Disease, and concerns over sugar markets had coalesced into a crisis point for many of the island's smallholders.

5.0 The Multispecies Roots of Smallholder Discontent, 1930-1938

In the summer of 1937, Jamaica Welfare Ltd. member H.P Jacobs, an English-born social reform advocate and ally of Norman Manley, undertook a survey of several Afro-Jamaican rural communities in St. Mary and St. Ann.⁴³⁵ Overall, the survey included ninety-five households totaling 533 people. Of the ninety-five households, over half (fifty-two) were considered smallholdings, as they held land or lived on “family land.” The total acreage of these fifty-two holdings was less than seventy-five, meaning on average, each family held less than 1.4 acres. According to Jacobs, nearly all of the holdings were too small for profitable cultivation. Even the largest of the holdings, up to six or seven acres, were unprofitable, as they were “swarming with people and riddled with Panama Disease.”⁴³⁶ He went on to note that the amount of food grown on the holdings was often very small. The most common crop was bananas, as the smallholders even in the 1930s still viewed it as their best source of potential income. Growers reported to him that they were struggling to obtain useful yields from most ground provisions and foodstuffs. In recent years, members of these communities began shifting to a focus on becoming “tradesmen” and for their children to aim for this line of work rather than agriculture, which they viewed as having no prospects.⁴³⁷ This was not the case five years prior, when agriculture as a whole was seen as having more prospects. But over the 1930s, Panama Disease “destroyed the small settlers’

⁴³⁵ In St. Mary, the survey included the Highgate District, Port Maria, Orange Hill, and Guy’s Hill. In St. Ann, it included Walker’s Wood.

⁴³⁶ H.P Jacobs, “Report on Survey of Rural Areas,” in “Moyne Commission Memorandum: Jamaica Welfare Ltd.,” 1939, CO 950/110, British National Archives.

⁴³⁷ Occupations of “tradesmen” included carpenters, tailors, smith, chauffeurs, and bootmakers to name a few.

holdings and forced the small settlers to enter the labour market.” Overall, Jacobs concluded that “most of these ninety-five families live in great poverty.” The picture of these communities that Jacobs paints is a grim one, and one that was not unique to these several villages.

Jacobs’ memorandum was submitted as part of the 1939 Moyne Commission, an investigative team headed by British House of Lords member Lord Moyne, to investigate the causes of discontent in Jamaica and the rest of the British West Indies. In the case of Jamaica, this was only several months following the 1938 Labor Rebellion, a series of strikes and protests that began at Frome Sugar Estate on April 29th, 1938 and spread throughout the entire island over the following days and weeks. Over the month and a half of protests, forty-six Jamaicans were killed, at least 429 injured, and thousands arrested.⁴³⁸ The commission spent several months on the island, collecting memoranda from nearly every major organization, leading political figures, and anyone who wished to write in. Most of the discussions revolved around what needed to be done to remedy the situation and resulted in a clear, albeit incomplete, picture of a Jamaican working class in crisis.

Some of the leading voices in the Moyne Commission memoranda advocating for economic and social reform for smallholders’ benefit were Norman Manley, founder of the People’s National Party, and other members of Jamaica Welfare Ltd., formed in 1937 to advocate for and facilitate aid to smallholders and working class Jamaicans.⁴³⁹ Memoranda by Manley and Jamaica Ltd. members, in addition to representatives from rural communities, pastors, and teachers highlighted the struggles of Afro-Jamaican smallholders and other members of the working class. For smallholders in particular, among the topics of concern brought up included plant pathogen

⁴³⁸ Post, *Arise Ye Starvelings*, 284.

⁴³⁹ Sybil Francis, “The Evolution of Community Development in Jamaica,” *Caribbean Quarterly* 15, no. 2/3 (1969): 44.

spread, land and market access, the structure of the sugar and banana industries, contract manipulation, and an overall lack of funding for smallholder agriculture. In this chapter I reveal how it was the interrelatedness of this multispecies range of issues that increased the plight of smallholders and shaped the overall political ecology of Jamaica in the 1930s.

Overall, I argue that a combination of the increased spread of Panama Disease, a second banana disease (Leaf Spot), elite and corporate pushback against a smallholding cooperative organization, and a further consolidation of the sugar industry around the planter class crippled smallholders' ability to participate in and profit from the two industries critical to smallholder participation in export agriculture. Local, circum-Caribbean, and global events and structures shaped each of these four factors and conditioned the ways in which smallholders could respond to developments in each. All of these interconnected forces then resulted in a new political ecology that was a contributing factor to the 1938 Labor Rebellion.

In terms of the banana industry, the continued spread of the fungus behind Panama Disease and the discovery and subsequent spread of a new banana fungus, Leaf Spot, made it increasingly difficult for smallholders to cultivate bananas without their crops succumbing to disease. With both diseases, the physiology of the plants themselves and their susceptibility to adverse weather conditions facilitated the rapid spread of the fungi. Due to Panama and Leaf Spot Disease, planters were able to consolidate greater control over the banana industry by having the means to cultivate new land, in the case of Panama Disease, or to treat the plants for Leaf Spot. Smallholders did not have the means for either of these. Additionally, smallholders had no platform to advocate for their place within the industry, as the organization founded supposedly with smallholder interests in mind, the Jamaican Banana Producers Association (JBPA),

capitulated to the United Fruit Company and turned from a co-operative into a stock company by the mid-1930s.

In regard to sugar, the transformation of the industry towards a central factory system with a small cane-farmer subsector placed nearly all of the industry's power in the hands of the factory owners and managers. When internationally imposed sugar production quotas took effect in the mid 1930s that limited the island's sugar output, factory owners pushed many cane farmers out of business by lowering the price paid for sugar so much that growers had to sell at a loss. Once viewed as the ideal alternative to bananas, sugar too became an unprofitable crop for smallholders. The crises of banana cultivation, combined with a lack of a profitable alternative in sugar resulted in a smallholding class with few means to make money.

The chapter is split into five sections. First, I discuss the continued spread of Panama Disease and the change in treatment methods that amounted to the Department of Agriculture essentially abandoning any efforts at mitigation. I then analyze the discovery and spread of Leaf Spot Disease, showing how the disease's movement and treatment methods favored the larger grower and acted as a barrier to smallholder banana growing. Thirdly, I show how the spread of these diseases coincided with the cementing of a monopoly by three fruit companies, United Fruit, Standard Fruit, and the Jamaican Banana Producers Association, despite the JBPA being founded for the purposes of breaking any monopoly. I then shift to sugar and examine the quota imposition and how it disproportionately impacted small growers. Finally, I explore smallholder participation in the 1938 Labor Rebellion. While each of the issues in the sugar and banana industries on their own were causes of discontent among smallholders, it is the intertwining of these four and the accumulation of their consequences that shaped their role in the uprising.

5.1 Panama Disease in the 1930s

Looking first at Panama Disease, the 1930s was marked by the seeming contradiction between a rapid increase in cases and the continuing increase in banana cultivation and export. This can primarily be attributed to the fact that smallholders, much more so than planters, were the ones who suffered the most from the continued rise in cases. Between 1930 and 1935, the *Handbook of Jamaica* records an increase of roughly 2000 acres in banana cultivation in Jamaica, from 58,019 to 59,981 acres. However, during the same period, the acreage on farms smaller than twenty acres decreased by over 12,000 acres, from 18,631 to 6,343.⁴⁴⁰ This meant that the proportion of the island's banana acreage on smallholdings fell from 32% to 11% over this five-year period.

The primary reason for this decrease in smallholder acreage was the continued spread of Panama Disease. By 1935, even excluding Portland, plant inspectors counted 415,931 diseased plants. Inspectors estimated that the number would have eclipsed 500,000 had Portland still been included (See Figure 13). Inspectors believed even these numbers undersold the spread of the disease on the island, as they presumed many growers concealed the disease. They estimated over a 50% annual increase in disease incidence and projected that by 1940, there would be almost four million diseased plants on the island. By 1945 it was expected to climb to nearly ten million. Looking at the loss in acreage, by 1935 over 32,800 acres had been lost to Panama Disease. This translated to roughly six million stems per year. In St. Mary alone, between 1932 and 1935, 578,648 diseased plants were reported by disease inspectors and 9,100 acres of land previously

⁴⁴⁰ *The Handbook of Jamaica for 1935.*

devoted to banana cultivation either abandoned or turned to other crops.⁴⁴¹ In this same time, the acreage in bananas cultivated by smallholders in the parish fell from over 12,000 to around 1,000.⁴⁴²

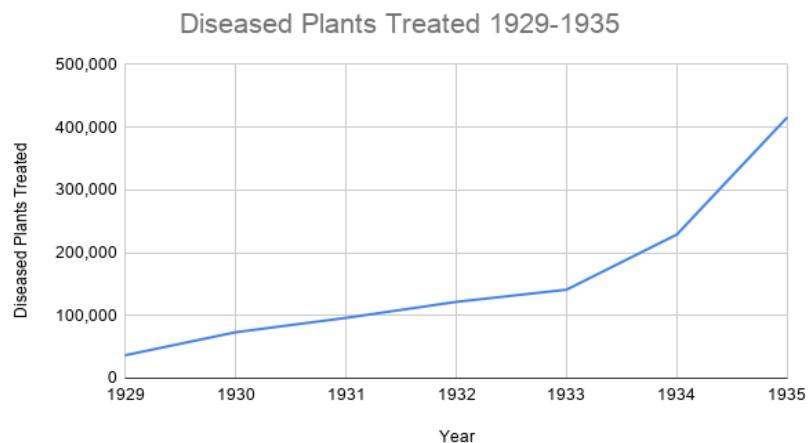


Figure 13: Panama Disease Infected Banana Plants Treated, 1929-35⁴⁴³

One of the reasons for the disproportionate impact on smallholders was the continued ability of fruit companies and plantation owners to practice shifting agriculture through much of the 1930s. The fruit companies on the island, namely United, Atlantic, and Di Giorgio's, had the capital to purchase previously uncultivated land with no history of Panama Disease in the soil, allowing them to continue expansion despite the rising number of cases. While planters and officials recognized that this was only a short-term remedy, as they would quickly run out of acreage to purchase, during much of the 1930s there was enough disease-free land to continue the

⁴⁴¹ F.E.V. Smith, "Memorandum on Panama Disease," 1936, CO 137/810/10, British National Archives.

⁴⁴² *The Handbook of Jamaica 1937-8*, 410.

⁴⁴³ Data taken from Smith, "Memorandum on Panama Disease."

practice of shifting cultivation. In Portland alone, which the Department of Agriculture abandoned in 1929, the United Fruit Company, Atlantic Fruit Company, and Di Giorgio's Fruit Company purchased tens of thousands of acres of land in 1930 and 1931.⁴⁴⁴ Due to the spread of the disease, and demand for uninfected land, the price of land rose in many parts of the island to over one hundred pounds per acre. With prices this steep, smallholders were largely unable to purchase new land and instead remained on their fungus-infested holdings.

A second reason for the disproportionate impact on smallholders was the focus of the Department of Agriculture and disease inspectors on locating Panama Disease on smallholdings rather than plantations. By the 1930s, inspectors were only tasked with finding and treating diseases on holdings less than twenty acres, leaving large landholders to treat their own land and report it to the local inspector. Smallholders were skeptical that these planters were actually reporting their cases and following proper treatment methods. Agricultural officials noted the lack of cooperation among planters, but it does not appear that they interfered or prosecuted any for their withholdings. Smallholdings, in contrast, were rigorously examined and treated. The Department of Agriculture justified their continued aggressive approach towards smallholders by claiming that were they to let them manage the treatment themselves, the result would be "disastrous." Microbiologist F.E.V. Smith argued that it would lead to both a reduction in the "morals" of the smallholders as well as lead to further disease spread, as he did not believe smallholders would actually treat their land. This combination of unequal treatment between small and large landowners, the economic damage treatment resulted in for smallholders, and the lack of any prosecution for large landowners increased smallholder ire towards the Department of

⁴⁴⁴ F.E.V. Smith, "Confidential Report from Microbiologist Smith to the Director of Agriculture," August 24, 1931, 1B/5/79/524, The Jamaica Archives.

Agriculture and likely drove many to conceal cases or obstruct inspectors from reaching diseased land.⁴⁴⁵ But as Figure 14 shows, the number of quarantined plots rose in the 1930s, and jumped to over 300,000 by 1935. The vast majority of these plots were on smallholdings, showing the level to which small growers bore the brunt of Panama Disease treatment.

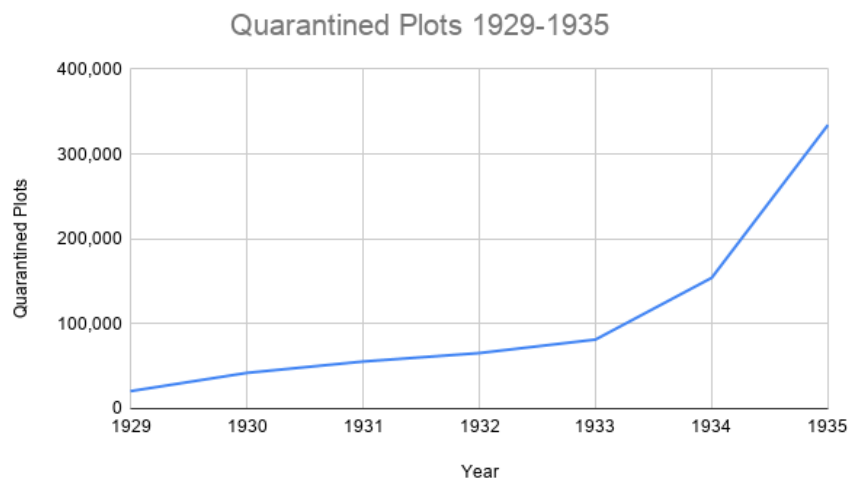


Figure 14: Plots Quarantined Due to Panama Disease, 1929-35⁴⁴⁶

As cases rose across the island and affected more banana cultivators, growers, both large and small, called for a further reduction in the scope of treatment. These calls stemmed from a lack of faith in the effectiveness of quarantine in mitigating spread along with the valuing of short-term economic benefit at the cost of long-term disease mitigation. In 1926, the Department of Agriculture reduced the treatment area from anything within four square chains of an infected plant to the nine closest plants. This was done to decrease the overall scale of destruction of seemingly

⁴⁴⁵ F.E.V. Smith, "Memorandum on Panama Disease," 1936, CO 137/810/10, British National Archives.

⁴⁴⁶ Data taken from Smith, "Memorandum on Panama Disease."

healthy plants surrounding a diseased plant. With the number of cases continuing to skyrocket in the early 1930s and the opportunities for shifting agriculture starting to diminish, calls arose once more among growers hoping to get as much banana production from their land as they could before their entire properties succumbed to the ravages of the disease.

Throughout the early 1930s, the parish of St. Mary became the hotbed of discussion for treatment reduction and the tradeoffs that came with treatment. As discussed above and as Figure 15 shows, St. Mary had the most reported cases of any parish in the early 1930s. As early as 1931, growers began organizing a push for a reduction in treatment scope. In September 1931, the Northern St. Mary Citizens' Association passed a resolution at a local meeting that called for a switch to a five-root treatment system. The association, made up of predominantly smallholders, stated in the resolution that the current nine-root system caused economic hardship and that the treatment worked faster than the disease itself in destroying banana plants in the parish. They believed that the five-root method would be just as effective as the nine-root and would prevent unnecessary destruction of healthy plants. Additionally, they proposed that growers be allowed to replant bananas in lands where the disease was found previously but had not had anything planted in them for over a year. Plants in these lands would then be subject to only a one-root treatment, where only the diseased plant was destroyed.⁴⁴⁷ They then submitted the resolution in a letter to H.H. Cousins and called on him to visit their area to examine the toll Panama Disease was taking. Cousins swiftly rejected their proposal, calling it a path to a "speedy ruin of the banana industry in the parish."

⁴⁴⁷ "Resolution from Northern St. Mary Citizens' Association," September 25, 1931, 1B/5/77/39, The Jamaica Archives.

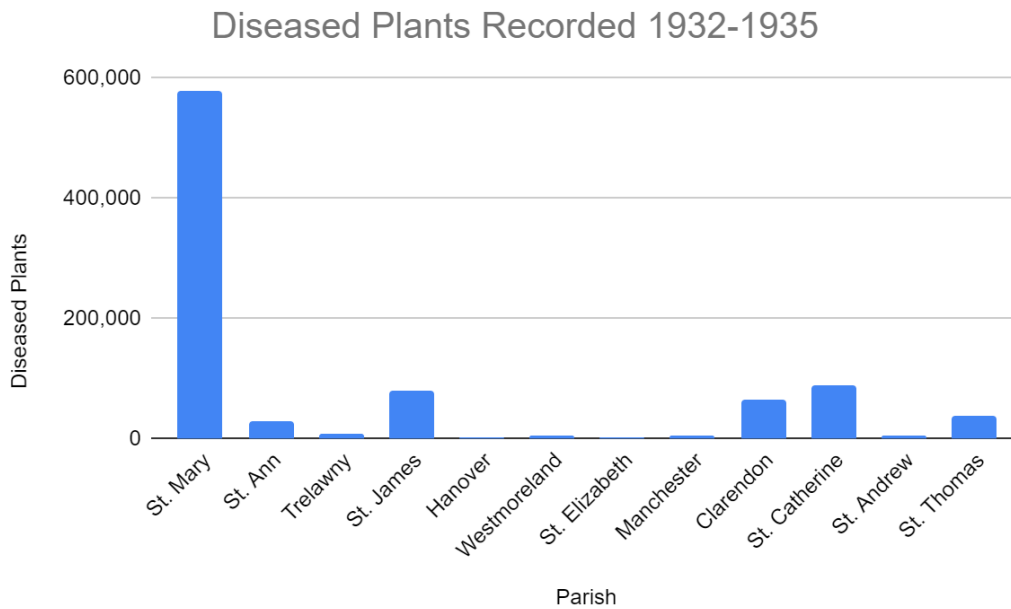


Figure 15: Disease Plants Recorded by Parish, 1932-35⁴⁴⁸

Despite the quick rejection from Cousins, the Citizens' Association continued to advocate for the reduced treatment throughout the rest of 1931 and into 1932, culminating in a June 1932 meeting of the St. Mary branch of the JAS where those favoring and opposing the reduced treatment debated the topic. Much of this debate boiled down to proponents of the reduced system arguing that the current treatment's economic cost outweighed any disease mitigation efforts while those in favor of maintaining the nine-root argued that keeping the system was the best way to ensure the longevity of the banana industry. A pastor, Reverend C. Isaac Higgins, spoke on behalf of the smallholders of St. Mary, telling the assembled crowd that the nine-root system led to smallholders' bananas being "wantonly destroyed" by disease inspectors. Higgins summed up the smallholders' position on quarantine procedures by saying that for many cultivators who owned a

⁴⁴⁸ Data taken from Smith, "Memorandum on Panama Disease."

small plot of land, one or two disease outbreaks was enough to destroy their entire cultivation under the current system. Stopping the spread of Panama Disease meant little to these growers if their land was already quarantined from banana cultivation. He ended his speech by asking for sympathy for the small grower.

The disease inspector for St. Mary, Mr. Sutherland, responded to Higgins, made a case for continued use of five-root treatment based around past experience and the potential of creating an immune banana variety. He began by citing the case of Portland, which had the root treatment reduced in the late 1920s and was almost immediately abandoned for banana cultivation due to an onslaught of Panama Disease. He then moved to a discussion of the prospects of a new banana variety immune to Panama Disease, which he believed would soon be able to be cultivated across the island. During his speech, Sutherland placed a bunch of bananas on the table next to him, which he referred to as the “Cousins Banana.”⁴⁴⁹ He described it as a variety immune to Panama Disease with a flavor superior to that of the Gros Michel. He stated that scientists were working with the variety to genetically engineer it to have longer fingers and that once this was done, it would be distributed throughout the island. He asked the members to maintain the nine-root treatment to give the Department of Agriculture time to perfect and distribute this new variety. Nearly all in attendance, including Rev. Higgins, decided to support Sutherland and withdrew the five-root resolution.⁴⁵⁰

⁴⁴⁹ This particular genetically modified banana was never used nor is a banana by this name mentioned in any official reports on Panama Disease.

⁴⁵⁰ “St. Mary Banana Men Favour 9-Root System of Panama Disease Treatment,” *The Daily Gleaner*, June 27, 1932, 10, 23.

Within a year, and over 100,000 new cases of Panama Disease later, the calculation between short and long-term economics shifted back towards short-term survival, especially among the smallholders. This led to a new call for reduced treatment, timed additionally in connection to a change in leadership in the Department of Agriculture. At the end of 1932, H.H. Cousins retired, with A.C. Barnes taking his place.⁴⁵¹ Barnes, who had worked previously in East Africa, was unknown to the people of Jamaica and many likely hoped that a new head of the department would lead to policy changes. Smallholders wrote to Barnes about the nine-root treatment as a threat to their livelihoods. One smallholder from St. Mary wrote in April 1933 decrying the department's inspectors going into fields and cutting down trees of "poor suffering people" and asked for the ability to dispose of the sick plants themselves since they were no longer receiving compensation for those destroyed.⁴⁵² The Custos of St. Mary also wrote, describing in March 1934 the "great hardships" the nine root system inflicted upon smallholders, as it "impoverished the planters and lessened their cultivations to a great extent." and requested a reduction to a one-root treatment, first advised in 1928 by C.D. Wardlaw.⁴⁵³

Following the series of letters, Barnes, along with the rest of the Banana Advisory Committee, toured St. Mary in late April 1934, realizing through the tour that nine-root was no longer sustainable in the parish and that thousands would lose their livelihoods with a continuation of the policy. The committee held a public meeting where it was agreed to reduce treatment from nine-root to one-root and on August 9th, 1934 Barnes authorized the new treatment method. From

⁴⁵¹ A.C. Barnes, "Moyne Commission Memorandum: A.C Barnes, Director of Agriculture," 1938, CO 950/114, British National Archives.

⁴⁵² "Letter from George's Hope St. Mary," April 4, 1933, 1B/5/77/39, The Jamaica Archives.

⁴⁵³ V.E. Silvera, "Letter from Custos of St. Mary V.E Silvera to Colonial Secretary Jelf," March 17, 1934, 1B/5/77/39, The Jamaica Archives.

then on, the onus of treatment fell completely on the grower, who was required to treat only the diseased root. They were to cut down the diseased plant and treat the material with an approved oil they could collect from depots throughout the parish. Barnes anticipated that other parishes would ask for the same treatment upon hearing the news and decided that St. Mary would serve as a one-year test case, whereafter the issue would be revisited for potential island-wide implementation.⁴⁵⁴ The implementation of this new policy marked a shift in the treatment approach on the island, making growers, not inspectors, responsible for managing the disease. With how widespread the disease had become, the Department of Agriculture felt they had little alternative.

After a year had passed with the St. Mary trial, A.C. Barnes chose to expand one-root treatment throughout the island, which he viewed as a “salvage measure” meant to prolong the ability to cultivate bananas in infected areas and help growers secure as much profits as they could from bananas before the disease completely overtook their lands. While still encouraging growers to continue with the nine-root method, Barnes authorized the use of one-root for all growers, who would then oversee treating their own land. For growers under five acres, the department would supply oils needed to treat their infected materials. For those who did not treat their lands, inspectors were authorized to implement the nine-root treatment by force. Additionally, new guidelines regulated the movement of banana suckers from holding to holding to further prevent the spread of diseased materials. Barnes claimed that in addition to the short-term economic benefits of one-root, it would also result in greater cooperation among growers. He argued that allowing them to treat the diseased plant on their own would disincentivize them from concealing any of the disease.⁴⁵⁵

⁴⁵⁴ A.C. Barnes, “Notice by A.C. Barnes,” August 9, 1934, 1B/5/77/39, The Jamaica Archives.

⁴⁵⁵ A.C. Barnes, “Panama Disease of Bananas Amendment Order,” 1936, CO 137/810/10, British National Archives.

The decision to switch to one-root treatment was not met with universal approval, as some felt that switching to one-root was akin to giving up on Gros Michel cultivation on the island. S.F. Ashby of the Imperial Mycological Institute stated his dissatisfaction with the reduction to the Colonial Office. He cited the rapid increase in cases in St. Mary in 1934 and 1935 as evidence of the total failure of the one-root treatment. Should the one-root be put in place island wide, it would soon lead to growers either having to abandon banana cultivation or to switch to a different banana variety. The only part of the altered treatment he supported was the controlling of suckers, as he believed that would help to slow the spread. Despite receiving these misgivings, the Colonial Office did not step in to alter the one-root treatment implementation.⁴⁵⁶

For smallholders, the shift to one-root treatment and the policies surrounding it came with several tradeoffs. On the one hand, the reduction in treatment scope allowed them greater autonomy over their holdings and prevented the destruction of the majority of their healthy plants. This provided short-term economic gains from the plants that a few years prior would have been destroyed. On the other, the Department of Agriculture placing the onus of disease identification and treatment on the grower left them to fend for themselves against the disease. One-root treatment likely hastened the inevitable point at which all bananas on their lands would succumb to Panama Disease. Additionally, this new phase of Panama Disease management coincided with a second banana disease spreading across the island that further harmed smallholder banana cultivation: Leaf Spot Disease.

⁴⁵⁶ S.F. Ashby, "Comments on Report of Amendment to Panama Disease Order," 1936, CO 137/810/10, British National Archives.

5.2 Leaf Spot in Jamaica

Twenty-five years after the discovery of Panama Disease in Jamaica, a new banana disease, Leaf Spot, swept across the island and added a further ecological obstacle to smallholder participation within the banana industry. Just as with Panama Disease, the experience of smallholders struggling to survive within the banana industry was shaped by a combination of political, other-than-human, and economic forces. What most separated the two diseases and their trajectories was the physiology of the Leaf Spot microbe and its susceptibility to fungicides. But this difference only served to further hinder smallholders' banana cultivation as the cost of the cure was attainable for plantation owners but often too steep for smallholders.

The trajectory of Leaf Spot in Jamaica and its disproportionate effects on smallholders closely mirror that in Central America, showing that often in the case of disease management, the incentives of a capitalist economy and the causes and impacts of a given disease trump differing political contexts. In the case of Leaf Spot in Central America, large fruit companies (primarily United and Standard Fruit) controlled nearly all disease management operations, which largely took the form of fungicide spraying, both on company and non-company farms.⁴⁵⁷ In Jamaica, the colonial government's Department of Agriculture managed most spraying operations, except for the 37 out of the island's 461 banana plantations, or 12.5% of the island's total acreage devoted to bananas, owned by UFCo.⁴⁵⁸ While the two models differed in response time to the threat, with United Fruit being much quicker to adopt fungicide spraying, the end result was nearly identical.

⁴⁵⁷ Soluri, *Banana Cultures*, 110.

⁴⁵⁸ *The Handbook of Jamaica for 1935*.

Plantations were the focus of spraying operations and quickly returned to pre-outbreak levels of productions while smallholdings were left behind.

In a September 1936 meeting of the Jamaica Agricultural Society, the Acting Secretary of the JAS informed the Board of Management that inspectors had found a new banana disease in the Ginger Hill region of Westmoreland.⁴⁵⁹ He noted that the disease seemed to affect the banana leaves in particular. The Director of Agriculture soon followed up, noting that the disease had first been discovered in June and that the officer who inspected the lands was supposedly familiar with diseases like it. According to the inspector, the disease, which he believed to be Black-Spot Disease, had been known in Jamaica for twenty years and had been found in most banana growing areas outside of Jamaica. He reported that within Jamaica, the disease only affected plants grown in unsuitable conditions, such as poor soil, high rainfall, and poor drainage. The infected plants showed small black spots on their leaves, from which brown patches extended. Despite their outward appearance, most of these plants bore fruit. Upon seeing these symptoms on the Ginger Hill plants, the inspector was confident that this Black-Spot Disease did not pose a threat to the banana industry.⁴⁶⁰

Perhaps having learned a lesson from misidentifying Panama Disease, a member of the Jamaica Agricultural Society, A.P. Hanson, followed up and examined the Ginger Hill holdings, coming away with a more pessimistic view of the disease. He reported that in almost all cases he saw, the tissues of the leaves were completely dried up, something that occurred only rarely with

⁴⁵⁹ P. St. L. Bacque, "Diseases of Plants and Animals: Insect Pests," *The Journal of the Jamaica Agricultural Society* 40, no. 10 (1936): 585.

⁴⁶⁰ A.C. Barnes, "Banana Disease at Ginger Hill," *The Journal of the Jamaica Agricultural Society* 40, no. 11 (1936): 667.

Black-Spot. Hanson also noted that the disease at Ginger Hill spread at a higher rate than Black-Spot normally did. It spread so quickly through the leaves that younger leaves were not able to take the place of the infected ones. This then resulted in the reduction of size of the plant or the infection spreading to the top of the plant, preventing it from bearing any fruit. After speaking to growers in the area, all of whom agreed that the disease was something different than Black-Spot, Hanson reported to the JAS that the disease “cannot be any longer said to be of small account.”⁴⁶¹ Another agricultural inspector, Gerald Wray, followed up on the matter and agreed with Hanson’s assessment that it was more serious than Black-Spot and that it was spreading, with twenty-six holdings showing signs of infection.⁴⁶²

Both Hanson and Wray were correct in their assessments, as the disease was not Black-Spot, but Leaf Spot Disease, also known as Sigatoka. Like Panama Disease, the pathogen behind Leaf Spot is a fungus, *Mycosphaerella musicola*, but spreads primarily through the air as opposed to the more soil-based Panama Disease.⁴⁶³ The fungus thrives off the leaves of the banana plant. Once infected, a banana plant’s leaf develops brownish-green markings that run alongside the leaf’s veins. From there, the leaf begins to form spots that kill the surrounding tissue and result in its destruction. The fungus then makes its way to the other leaves of the plant, leaving infected plants with only a few healthy leaves, the rest shriveled or fallen off. Without healthy leaves, the

⁴⁶¹ A.P. Hanson, “Report from Supervisor,” *The Journal of the Jamaica Agricultural Society* 40, no. 11 (1936): 669.

⁴⁶² Gilbert Wray, “Report From Inspector Wray,” *The Journal of the Jamaica Agricultural Society* 40, no. 11 (1936): 671.

⁴⁶³ Gusts of wind would launch spores from one plant to another, heavy rain resulted in splashing of the fungus between plants, and birds and insects acted as carriers facilitating movement across holdings; Soluri, *Banana Cultures*, 107.

plants either fail to produce fruit or produce bunches that ripen within two to three days, making them useless for commercial trade.⁴⁶⁴

As with Panama Disease, Leaf Spot was not unique to Jamaica. It had been recognized outside of Jamaica decades before, and by the 1930s. was spreading rapidly throughout circum-Caribbean growing regions The disease likely originated in East Asia, as Java reported the first case in 1902.⁴⁶⁵ Also like Panama Disease, Leaf Spot likely spread globally through intercontinental shipping, with cases recorded in Australia and Ceylon in the 1920s and in Suriname and Trinidad in 1933. By 1935, growers identified the disease throughout most of the banana producing regions of the Americas. In Honduras in particular, the spread of the disease reached a crisis point following severe flooding in late 1935. Within two months, the disease had reached nearly 11,000 acres of banana lands, leading to declines in banana yields in the affected areas. Within six months, the spread within Honduras had doubled, highlighting the rapidity at which the fungus traversed the plantations.⁴⁶⁶ And as also with Panama Disease, the constant movement of goods and people from Central America to Jamaica and vice-versa made it easy for the disease to hop from these infected banana lands to Jamaica.

Due to its spread in Honduras in 1935 and 1936, by the time of Leaf Spot's discovery in Jamaica in late 1936, colonial officials already had some understanding of the disease. The British Empire's agricultural office sent investigators to Honduras in late 1935 to collect information about the disease in the hopes of mitigating its spread across the empire. In November 1935, the investigators reported their findings, describing the conditions that facilitated the disease's spread

⁴⁶⁴ H.P. Smart, "Report on Leaf Spot Disease," November 25, 1935, CO 852/31/6, British National Archives.

⁴⁶⁵ The disease spread throughout the Sigatoka region of Fiji, from which it received its name.

⁴⁶⁶ Soluri, *Banana Cultures*, 104-105.

(primarily heavy rain), its impact on the ability of the plants to bear fruit, and potential treatment options. Unlike Panama Disease, it appeared that Leaf Spot was treatable through the spraying of fungicides. The United Fruit Company in particular had already embarked on a spraying campaign in their Central American lands and the officers believed the company would do the same in Jamaica should the disease continue to spread. Despite this potential treatment, the officers were concerned about the potential impact of the disease in Jamaica. Agricultural officer H.P. Smart stated in his 1935 report that if the disease spread in Jamaica, “it would probably completely ruin the banana industry.”⁴⁶⁷ Microbiologist S.F. Ashby shared his concerns, as he did not believe that spraying would be possible in Jamaica at the same scale as it had been in Central America.⁴⁶⁸

Despite this early knowledge about the threat of Leaf Spot, Jamaican agricultural officials delayed in adopting the spraying techniques that had proved successful in Central America, as they believed Leaf Spot did not pose a major threat to the island’s banana cultivations. In December 1936, the United Fruit Company began importing their spraying materials from Honduras and started the spraying process on their irrigated properties in Jamaica. Jamaica’s microbiologist, F.E.V. Smith, spoke out against United Fruit’s spraying operations, describing them as “rather extremist” and that should the department undertake a spraying campaign, it would be considerably modified from UFCo’s universal spraying approach. Smith acknowledged that the disease was having major effects in several regions of the island, but still maintained that there was “no reason for any panic.” He believed that the disease would continue to be of “minor

⁴⁶⁷ H.P. Smart, “Dispatch from Agricultural Officer H.P. Smart to the Colonial Secretary,” November 25, 1935, CO 852/31/6, British National Archives.

⁴⁶⁸ S.F. Ashby, “Remarks on a Report by the Agricultural Officer on Visit to Spanish Honduras,” January 27, 1937, CO 852/70/9, British National Archives.

consequence” to the prospects of the banana industry.⁴⁶⁹ Because of this view, the only properties with spraying processes from 1936 to 1938 were those owned by UFCo.

Over much of this two-year period, the Department of Agriculture and the JAS rarely spoke publicly about the disease, primarily due to the fact the only growers significantly affected during these years were smallholders. Thus, the disease did not have a large impact on the profitability of the banana export industry writ large. At a November 1937 meeting of the Legislative Council, Director Barnes once more argued that Leaf Spot was not a threat to the island’s industry. He noted that the disease had not impacted the highest quality land, which he referred to as “first class” land. He considered the land Leaf Spot had been found on as less fit for banana growing and therefore “second class” land. By and large, almost all of the holdings on “first class” land were owned by large planters, with smallholders forced to cultivate on “second class.”⁴⁷⁰ As long as the disease only affected “second class,” and therefore smallholder, land, he believed it would not threaten the island’s industry.

Some during this time did notice the effect Leaf Spot had on smallholders and attempted to call attention to their struggles. The editorial board of the *Daily Gleaner* wrote in their 1937 Christmas edition that many smallholders would be unable to fully celebrate due to the toll Leaf Spot was taking. They stated that the disease was causing more “havoc” than the public had been aware and that smallholders were bearing the brunt. Because of Leaf Spot some smallholders harvested hundreds of stems of fruit to find that only a handful could be sold. Others were unable

⁴⁶⁹ F.E.V. Smith, “Interim Report on the Leaf Spot Disease of Bananas in Jamaica,” June 30, 1937, CO/852/70/9, British National Archives.

⁴⁷⁰ “Leaf Spot Disease Not Menace to Banana Industry from Island Viewpoint,” *The Daily Gleaner*, November 17, 1937, 16.

to harvest and marketable fruit at all. As a result, fear of the future was pervading the smallholder class.⁴⁷¹ In comparison to the early years of Panama Disease on the island when the *Gleaner* parroted agricultural officials' statements, it is notable that the paper chose to amplify the threat of Leaf Spot, particularly in the context of smallholder agriculture.

By 1938, the disease began affecting large plantations across the island and reducing their output, leading growers and colonial officials to begin mobilizing a full response to it. The JAS passed a resolution in January calling on the Department of Agriculture and governor to step up their efforts in stopping the spread of the disease, as they stated it had reached a point where exports would soon be affected by its spread. They asked the Department of Agriculture to turn their attention solely to Leaf Spot and for the governor to assist in funding materials needed to manage it.⁴⁷² Both the Department of Agriculture and governor soon acted. A.C. Barnes formed a Leaf Spot Control Advisory Board with him as chairman to organize the response to Leaf Spot and coordinate a treatment campaign. One of their first actions was to request a £250,000 loan and an additional £250,000 grant to finance disease treatment through the Colonial Development Fund. The board claimed that while it was their hope that Jamaica would reach a point where they could self-fund treatment, they needed an initial influx of funds to get the spraying program off the ground. The money would go to materials and equipment, which made up over half the costs of spraying operations.⁴⁷³ Governor Richards then also wrote to the Colonial Office in support of the advisory board's request. While the Colonial Development Fund rejected the proposal, they agreed

⁴⁷¹ "Christmas!," *The Daily Gleaner*, December 24, 1937, 12.

⁴⁷² Mr. McKay, "Resolution re Leaf Spot Disease of Bananas," *The Journal of the Jamaica Agricultural Society* 42, no. 1 (1938): 4.

⁴⁷³ "Moyne Commission Memorandum: Report of the Banana Leaf Spot Control Advisory Board," 1939, CO 950/280, British National Archives.

to supply an £85,000 grant for the formation of a sub-sector of the Department of Agriculture charged with managing the treatment.⁴⁷⁴ Despite the initial reluctance to treat Leaf Spot as a serious concern, within two years of its discovery, all facets of the island's agricultural apparatus had turned towards combating the disease.

With focus now on Leaf Spot, the main priority in combating it was on obtaining the materials for and facilitating fungicide spraying. Over the previous two years, the United Fruit Company had demonstrated the effectiveness of a copper sulfate and lime mixture known as Bordeaux Spray on their lands in Central America and had managed to return the sprayed lands to their levels of production prior to infection.⁴⁷⁵ Both UFCo and Jamaica's Department of Agriculture were content to let UFCo coordinate their own spraying efforts on their Jamaican plantations, leaving the department's focus on the remaining banana holdings. The matter was not as simple as replicating UFCo's approach on all Jamaican banana lands. UFCo's estates were predominantly located on flat, irrigated lands, whereas the majority of other holdings on the island were in hillier regions that relied on rainfall rather than irrigation. As a result, the cost of acquiring, moving, and spraying across Jamaica would be higher.⁴⁷⁶ Despite repeated requests to the Colonial Office for more aid beyond the initial £85,000, the office refused, stating that spraying costs would have to be treated as routine operating costs for banana cultivation. This left the Department of Agriculture to figure out how best to efficiently and economically spray as much of the island's banana lands as possible with limited funds.

⁴⁷⁴ "Response of Colonial Development Fund Committee to Governor Richards," March 31, 1939, CO 852197/5, British National Archives.

⁴⁷⁵ Soluri, *Banana Cultures*, 108.

⁴⁷⁶ A.F. Richards, "Recommendations and Observations Based on Leaf Spot Control Board Moyne Commission Memorandum," 1939, CO 137/836/8.

The Department of Agriculture focused their spraying campaign on large landholdings, foregoing spraying on most smallholdings. The Leaf Spot Control Board explained their process as spraying only in areas “where production per acre warrants the expenditure involved, and where an adequate water supply for spraying can be obtained.”⁴⁷⁷ Governor Richards further explained the board’s position, arguing that Leaf Spot necessitated a complete reorganization of banana production on the island. Gone would be the “haphazard” cultivation of bananas, replaced by “intensive” and “intelligent” planting and spraying. Without mentioning them by name, it is clear that Richards was referring to smallholders with his statement about “haphazard” cultivations.⁴⁷⁸ Although he called for government support in spraying for planters and peasants, he was only willing to provide for some of the costs, meaning that even with some funding, most smallholders would still be unable to afford the process.

Apart from efficiency arguments, the Department of Agriculture justified their comparative lack of funding for smallholdings by claiming that smallholders’ decisions to grow bananas on unsuitable land was why their lands became infected. As early as 1936, agricultural officials noted a correlation between the spread of Leaf Spot and the quality of land. It was most commonly found in areas with a high volume of plants, poor drainage, and soils heavy with clay. These areas were most often in hilly regions where smallholders had their cultivations.⁴⁷⁹ A.C. Barnes remarked that due to the profits that came with banana cultivation, growers were attempting to grow bananas in locations previously deemed unsuitable because of soil and climate. It was in these locations that

⁴⁷⁷ “Report of the Banana Leaf Spot Control Advisory Board,” 1939.

⁴⁷⁸ A.F. Richards, “Recommendations and Observations,” 1939.

⁴⁷⁹ A.C. Barnes, “Letter from A.C. Barnes to Mr. Stockdale of the Colonial Office,” December 3, 1936, CO 852/31/6, British National Archives.

Leaf Spot was most common.⁴⁸⁰ A member of the Colonial Office noted a similar pattern between spread and quality of growing conditions and took it a step further, questioning whether “it was really desirable to retain in the industry the marginal producers” who could not bear the cost of spraying.⁴⁸¹

A third justification for a lack of spraying was a moral one: that smallholders had to be taught to care for their own lands. In discussing a lack of smallholding spraying, the Leaf Spot Control Board argued that it should not be the government’s responsibility to spray for smallholders. It would be “morally bad” for the government to do the spraying, as it would teach smallholders that the government would do everything for them. Next, smallholders would be asking for the government to “undertake the routine of forking operations.”⁴⁸² To the Board, spraying for smallholders was a slippery slope leading to smallholders placing the expectations on the government, not themselves, to care for their lands. No mention was made of the burden of cost being placed on the smallholder through this approach.

All told, the minimal support offered for smallholders meant another large hurdle for their participation in the banana industry and a further blight upon their land. Writing on the subject in 1939, Norman Manley, then chair of Jamaica Welfare Ltd., stated that “the ravages of this disease are falling with intense severity on the small peasant” and that “He is simply being put completely out of business as a banana producer.”⁴⁸³ In a separate memorandum on the need for a rural

⁴⁸⁰ A.C. Barnes, “Moyne Commission Memorandum: A.C Barnes Director of Agriculture,” 1939, CO 950/114, British National Archives.

⁴⁸¹ Henderson, “Note by Henderson on Duty” 1939, CO 950/880, British National Archives.

⁴⁸² “Memorandum on the Banana Leaf Spot Disease Situation,” 1940, CO 852/332/12, British National Archives.

⁴⁸³ Norman Manley, “Memorandum from Jamaica Welfare Ltd.,” in “Moyne Commission Memorandum: Jamaica Welfare Ltd.,” 1939, CO 950/110, British National Archives.

reconstruction, or land settlement, scheme, Manley expanded on his discussion of smallholders and Leaf Spot. He noted that because of a failure of their banana crops due to Panama Disease and now Leaf Spot, smallholders who were once independent growers “have not had the energy or the possibility of turning back to that land and finding substitutes. As a result, the lands were “lying idle” and the smallholders who had once cultivated them were now looking for positions as wage laborers.⁴⁸⁴

Despite some such as Manley calling attention to the plight of the smallholder, next to nothing was done to help with Leaf Spot. Almost every report about the disease, whether from agricultural or government officials, referred to spraying as the “new normal” for banana production on the island. What was left as an unspoken follow-up was that if you could not afford spraying, you could not, and should not, be part of the industry. It was not until 1951 that more efficient means of spraying, via airplane, were utilized, meaning smallholdings went fifteen years without Leaf Spot treatment.⁴⁸⁵ By that point the island’s banana industry bore little resemblance to that of the 1930s.

5.3 Vying for Control of the Banana Trade

In the case of both Panama Disease and Leaf Spot, as the diseases spread, smallholders bore the brunt of the impact. Apart from the structural challenges these growers faced in competing

⁴⁸⁴ Norman Manley, “Memorandum on Rural Reconstruction,” in “Moyne Commission Memorandum: Memorandum on Rural Reconstruction,” 1939, CO 950/86, British National Archives.

⁴⁸⁵ R.F Williams, *R.F Looks Back Autobiography of R.F Williams, a Jamaican* (Jamaica: R.F Williams, 1972), 87.

against plantation owners and large fruit companies, their efforts at maintaining their place in the industry were hindered by the lack of an organization that advocated on behalf of their interests and by a colonial government often unwilling to support them. This section analyzes the further marginalization of Jamaican smallholders in the banana industry throughout the 1930s. It explores the efforts of Jamaican growers to form a cooperative movement through the creation of the Jamaica Banana Producers' Association (JBPA) that would theoretically support smallholder cultivations. However, by the mid 1930s, the JBPA came into conflict with the United Fruit and Standard Fruit Companies, both of which wished to curtail the growing influence of the JBPA. By the end of this conflict, smallholders had little to no place within the JBPA, as the cooperative element was removed and the organization took the form of another large fruit company. And as Panama Disease continued its unabated spread and Leaf Spot swept across the island, these companies only looked to fortify their own lands, leaving Jamaican smallholders to fend for themselves.

Throughout the late 1800s and early 1900s several organizations emerged claiming to represent the interests of the small grower, but none of these were organized or run by smallholders themselves. This often meant that despite some calls among members to support smallholders, the actual support that emerged remained minimal. As Chapter Two discussed, despite the Jamaica Agricultural Society's claims that it advocated on behalf of the smallholder and educated them on "proper" cultivation practices, the organization ended up as another mechanism for middle Afro-Jamaican growers and white planters to exert their power over the agricultural developments on the island. The interests of those who owned only a few acres of land were ignored or further marginalized. By the 1920s, there were some shifts in this attitude, as the politics of Jamaican agriculture, particularly through JAS branch societies, shifted towards advocating for smallholders.

As part of this shift, calls came among small and middle farmers for the formation of a smallholder co-operative movement.⁴⁸⁶ As the United Fruit and Standard Fruit Companies cemented their control over banana exports from Jamaica, a co-operative movement among banana growers came to be seen as the only way to ensure that smallholders could survive within the industry.⁴⁸⁷

In 1927, the calls for a co-operative movement in the banana industry appeared to come to fruition with the formation of the Jamaica Banana Producers Association. Founded by Arthur Farquharson, Chairman of the Jamaica Imperial Association, the JBPA claimed to represent the all growers within the banana industry and ensure that these growers received a profitable market for their bananas.⁴⁸⁸ They particularly highlighted their role in supporting small cultivators with under ten acres of land, with one JBPA member describing it as a “special service.”⁴⁸⁹ The organization received the backing of the Jamaican government, which passed a series of laws in 1928 aimed at supporting the JBPA and the co-operative movement in general.⁴⁹⁰ Additionally, Governor Stubbs loaned the JBPA £200,000 for the purchase and use of refrigerated ships to transport bananas to England. The JBPA also secured the services of DiGiorgio’s Fruit Company to transport bananas to New York through a profit-sharing agreement.⁴⁹¹ With these agreements and loans, the JBPA seemed poised to quickly establish itself as a key player in the banana trade.

⁴⁸⁶ “Cooperation Among Producers,” *The Daily Gleaner*, February 22, 1919, 10.

⁴⁸⁷ Lord Olivier, “Moyne Commission Memorandum: Lord Olivier,” 1939, CO 950/28, British National Archives.

⁴⁸⁸ Ansell Hart, “The Banana in Jamaica: Export Trade,” *Social and Economic Studies* 3, no. 2 (1954): 220.

⁴⁸⁹ W. Gavin, E. Furnival Jones, and J.H. Gorvin, “The Report of the Jamaica Banana Commission,” 1936, CO 852/31/7, British National Archives, 15.

⁴⁹⁰ It authorized the JBPA to issue loans to its members and established a series of rules meant to ensure that the organization could enforce the terms of its contracts; R.E Stubbs, “No. 6: A Law in Aid of the Jamaica Banana Producers Association Limited,” in *Laws of Jamaica Passed in the Year 1928* (Kingston: Government Printing Office, 1929), 1.

⁴⁹¹ Hart, “The Banana in Jamaica,” 221.

Initial returns on the JBPA were extremely positive, especially among smallholders. Over the first few years of its existence between 1928 and 1931, 90% of the contracts the association gave out were to growers with less than ten acres of land. This represented 58% of the JBPA's total acreage. However, this volume of contracts obscured the fact that large plantations were still supplying the majority of the fruit, as between 1929 and 1935, 5.4% of the JBPA's members supplied 55.7% of the fruit exported.⁴⁹² The JBPA also purchased three refrigerated ships and chartered twelve others. While small in comparison with the twenty-seven ships owned and forty-one chartered by the United Fruit Company in the Americas, it was enough for the JBPA to cement a place within the banana trade. By 1929, the JBPA already handled 24% of all bananas exported from the island, compared to 20% by Standard Fruit and 54% by UFCo. Only a year later, the JBPA's share of exports had risen to 33% while UFCo's fell to 46%.⁴⁹³ In terms of acreages, by 1931, the JBPA contracted 58,976 acres, more than UFCo and Standard Fruit combined, showing just how quickly the JBPA's reach extended across the island.⁴⁹⁴ Advocates of the group claimed that gone were the days where during bad market times "you could scarcely walk through the railway station yard after a buying day because of the bananas left packed up five feet high that small growers had brought and been unable to sell."⁴⁹⁵ They claimed because of the JBPA, smallholders would have no need to worry about their bananas being rejected by buyers.

Despite claiming to end the era of banana rejections, by 1931, two years into a worldwide economic depression, some smallholders began complaining to the Jamaican government that they

⁴⁹² W. Gavin, E. Furnival Jones, and J.H Gorvin, "The Report of the Jamaica Banana Commission," 1936, CO 852/31/10, British National Archives, 18

⁴⁹³ Ibid., 8.

⁴⁹⁴ Ibid., 14.

⁴⁹⁵ R.F. Williams, *R.F. Looks Back*, 66.

were unable to sell their fruit. In April 1931 a delegation from Gayle, St. Mary traveled to Kingston to speak with the Governor about the plight of smallholders in the area. They submitted a resolution from growers that bemoaned the amount of fruit that had recently been rejected by fruit companies and government inspectors. The resolution stated that shipping companies were using false claims about fruit quality to back out of contracts when in actuality the companies were dealing with oversupply problems. The growers argued that since they had been cultivating bananas for years, they knew from experience that their fruit was high enough quality for market. Since they made their living growing bananas, these rejections were threatening their livelihoods. They went on to argue that as long as fruit can arrive in a country in good condition, no rejections should occur. They then called on the Governor to investigate the issue of fruit inspection.⁴⁹⁶ Upon receiving the delegation, Governor Stubbs passed their resolution on to the Banana Advisory Board who rejected the growers' claims, stating that only one tenth of one percent of the number of total bananas exported were rejected in the past year.⁴⁹⁷

The Gayle delegation did not prove to be a one-off, casting doubt on the board's claims that significant rejections were not occurring and on the JBPA's ability to protect smallholder banana sales. In 1933, grower Phillpotts Brown wrote to the West Indian Department complaining that inspectors were rejecting large amounts of exportable fruit. He noted that because of the rejections, many smallholders trying to sell their fruit at buying depots left "without one penny to provide their families with the necessities of life. And since no officials ever visited smallholders'

⁴⁹⁶ "Resolution From Gayle Regarding Bananaria Rejections," April 31, 1931, 1B/5/77/154, The Jamaica Archives.

⁴⁹⁷ "Letter from Colonial Secretary to W.H Westmoreland," May 23, 1931, 1B/5/77/154, The Jamaica Archives.

lands, there was no way for them to submit their concerns to anyone in a position of power.⁴⁹⁸ While neither the 1931 delegation nor the 1933 rejections complaint mention the JBPA, the claims casted doubt on the JBPA's ability to fully protect its contracted growers.

As the 1930s progressed, it became increasingly evident that the JBPA prioritized larger growers rather than its smallholding contract base. Part of this had to do with the structure of the organization itself. While the majority of the contracts the JBPA entered into were with smallholders, nearly all of the active members of the association involved with its day-to-day operations were large landowners. The Chairman of the organization, Arthur Farquharson, also served as Crown Solicitor of Jamaica and was one of the wealthiest residents of the island.⁴⁹⁹ Many of the other members of the board of directors had either served in government positions on the island or were the relatives of government members. For instance, one of the members of the board upon its founding was Charles Pringle, son of John Pringle, who owned the most individual land on the island.⁵⁰⁰ It is little surprise then that these individuals would have more of a focus on the interests of planters rather than smallholders. Additionally, as discussed above, the majority of the fruit exported came from a small fraction of JBPA growers. This then further incentivized a focus on the interests of this small minority of growers.

By 1935, both United and Standard Fruit, alarmed by the JBPA breaking their near monopoly over the island's banana trade, put into place a series of practices aimed at pushing the JBPA out of business. As early as 1933, some Jamaican planters came to believe that UFCo was

⁴⁹⁸ Phillpotts Brown, "Letter from Philpotts Brown to D.K Hodgson," September 13, 1933, CO 137/798/8, British National Archives.

⁴⁹⁹ Farquaharson did not own any land devoted to banana cultivation.

⁵⁰⁰ Post, *Arise Ye Starvelings*, 129.

flooding the British market with low quality fruit from Jamaica. Buyers in Britain began complaining about the decline in quality of fruit from Jamaica, especially compared to that from Central America. While much of the blame for the decline in fruit quality likely lay with a hurricane the previous year that destroyed most of the island's plants, Jamaican planters argued that UFCo was deliberately sending the bad fruit from Jamaica to make their Central American holdings look better. This would result, according to Jamaican growers, in Britain importing more Central American fruit at the expense of the Jamaican grower.

Whether the claims of these growers about United Fruit were true, by 1935, concerns over the future of the JBPA had reached such a point that the JBPA sent a delegation to England to complain that UFCo was trying to push the JBPA out of business and to ask for help. While the JBPA contracts guaranteed a minimum price for their fruit, UFCo began offering more for growers' bananas than the JBPA was able to pay. Due to hurricanes in 1932, 1933, and 1935, growers were faced with financial ruin and seized upon the opportunity UFCo offered to buy any of their bananas that were not destroyed. Judging from the tone of the delegation, many of the island's growers had taken UFCo up on this offer. As a result of what the delegation described as exploitative practices by UFCo, they were asking the Colonial Office to put into place "emergency procedures to protect the JBPA."⁵⁰¹

The delegation, made up entirely of white planters, used the plight of smallholders as a way to justify aid to be given to the JBPA. They argued that the JBPA was founded with the goal of assisting smallholders in finding markets for their bananas and has led to growers receiving 17% more for their bananas than they had prior to the association's founding. Since the majority

⁵⁰¹ "West India Committee Circular, The Banana Deputation: An Interview with Sir Charlton Harrison," December 19, 1935, CO 852/31/6, British National Archives.

of their contracts were with smallholders, they claimed that the loss of the JBPA would lead to only further monopoly by UFCo and the greater exploitation of smallholders.⁵⁰² Despite the association's greater focus on planters than smallholders in day-to-day business, they recognized that claiming to act as the mouthpiece of smallholders was the most effective means of claiming importance to Jamaica's overall interests.

In response to the concerns over unfair practices within the industry, in January 1936 the Colonial Office sent a commission to investigate Jamaica's banana industry, resulting in the transformation of the JBPA from a co-operative organization into a shareholding trading company. The commission spent five months in Jamaica, gathering evidence from 230 residents and organizations and traveling throughout the banana lands of the island, before submitting nearly one hundred pages worth of findings to Governor Denham. Despite acknowledging that many on the island supported the JBPA and that small settlers wanted an organization to call their own, the commission argued that the JBPA was acting more as a defense against monopoly than as a functional co-operative organization. They cited a number of criticisms investigators heard throughout their months on the island, including the high prices promised not being realized, managers having disproportionate salaries, inefficient marketing, and large growers receiving preferential prices. The commission acknowledged that the organization brought benefits, such as stabilizing the banana market and providing an outlet for smallholder crops but doubted whether it had the capital to continue in its present form, as it could not meet the prices of the other banana companies.

⁵⁰² Ibid.

The commission attempted to broker an agreement between the JBPA and UFCo where the UFCo would not drive prices offered to growers up to a point the JBPA could not compete with. However, UFCo refused to enter into any sort of arrangement with a co-operative organization. For the commissioners, the only path forward where the JBPA could remain a functioning organization was to remove its co-operative aspect and be reconstituted based solely on trading lines and shares of the company. The JBPA board eventually agreed, stating it would allow the organization to operate more effectively. Although expressing their disappointment over having to abandon the co-operative movement, they noted that contractors would still be able to be part of the association through the purchase of stocks.⁵⁰³ Additionally, UFCo agreed to a program where they would leave aside one American cent for every banana stem shipped from Jamaica to be used for development in Jamaica. The administration of the funds ended up being the driving force behind the creation of Jamaican Welfare Ltd.⁵⁰⁴ The deal was signed by all parties and in December 1936 the Jamaican Legislature passed a law transforming the JBPA into a joint-stock company.⁵⁰⁵

The transformation of the JBPA into a stock company further incentivized the organization to prioritize the interests of the large landowners rather than smallholders, as this minority of growers would make up the majority of the company's stockholders. In discussing the law to transform the JBPA, one of the legislators noted that nothing was stopping the shares of the company from ending up in the hands of a few individuals. Smallholders meanwhile would be

⁵⁰³ Gavin, Jones, and Gorvin, *The Report of the Jamaica Banana Commission*, 51.

⁵⁰⁴ Francis, "Community Development," 43.

⁵⁰⁵ Edward Denham, "No. 20: A Law to Reconstitute the Jamaica Banana Producers Association, Limited into a Trading Company," in *The Laws of Jamaica, 1936* (Kingston: Government Printing Office, 1937), 1.

ignored. Critics of the law transforming the JBPA claimed that the company and government were attempting to rush the bill through, without gaining input from any of the thousands of smallholders who held contracts with the JBPA. A legislator from St. Mary argued that the law intended to protect the company rather than the growers, the exact opposite of the spirit of co-operation the JBPA was supposedly founded under. For these critics, the reconstitution of the JBPA was little more than a capitulation to the United Fruit Company, with the smallholders the real losers in the deal. A Legislative Councilman from St. Elizabeth summarized the situation as “selling the country to a foreign state.”⁵⁰⁶

For smallholders, this reconstitution was the end of any hope that the JBPA was an organization for the promotion of their interests. In the few years following the agreement, smallholders found it increasingly difficult to profit from banana cultivation. The banana rejections that had partially led to the formation of the JBPA became more frequent, with one smallholder noting that upwards of 50% of produce grown by smallholders was being rejected by the three companies. When the smallholders filed complaints, the companies would make a show of attempting to load their ships with bananas, only to have to leave many on the dock because they could not fit the rest. Following this show, the companies would return to rejecting fruit. For those growers who did not wish to remain part of the new company, many were promised a return of the sinking funds they established through the JBPA.⁵⁰⁷ However, some received letters stating they would not receive their money until 1956. One of the smallholders in this situation, Simon Brissett, stated his belief to the Moyne Commission in 1939 that he would not live to see that money

⁵⁰⁶ Legislative Council Discussion of Banana Law,” 1937, CO 852/70/12, British National Archives.

⁵⁰⁷ A sinking fund is an account where a small amount of money is set aside each month. In this case, the funds were in the hands of the JBPA.

returned to him and expected many others would not either. He was planning on building a new hut with the money, but as he was sixty years old at the time, he did not think his hut would ever be built.⁵⁰⁸

The timing of these developments coincided with increased ecological crisis for smallholders. At the time of the agreement's signing, Leaf Spot was beginning to make its way across the island, with smallholders not having the means to spray fungicides. Without a co-operative organization, these growers did not have a platform to advocate for their needs, leaving them to the ravages of the disease. Additionally, Panama Disease continued its spread, and with the Department of Agriculture abandoning any efforts to assist in treatment or in managing the disease on the ground level, smallholders were further left on their own. By the end of the 1930s, the combination of rejections, Panama Disease, and Leaf Spot in the context of a global commodity price crisis made obtaining a profit within the banana industry nearly impossible for smallholders.

It is little surprise then that some on the island viewed the downfall of the co-operative banana movement as a reason for the Labor Rebellion. Speaking to the Moyne Commission in 1939, S.J.S. Dillon, a teacher on the island, directly linked the agreement between the JBPA and UFCo to the uprising. He described the situation as the JBPA “now running in league with the octopus and the Standard Fruit Company.” He argued that it brought Jamaica under the control of a monopoly and that “The present unrest in the country is proof” of the ill effects of the agreement.⁵⁰⁹ J.D. Williams, a resident of Port Antonio who also spoke to the Moyne Commission,

⁵⁰⁸ Simon Brissett, “Moyne Commission Memorandum: Simon Brissett,” 1939, CO 850/84, British National Archives.

⁵⁰⁹ Mr. S.J.S Dillon, “Moyne Commission Memorandum: Mr. S.J.S. Dillon,” 1939, CO 950/199, British National Archives.

noted the “discontent among the small cultivators” caused by their inability to grow and sell bananas. He noted that if they attempted to grow bananas, it would always be at a loss.⁵¹⁰ And as the following section will show, the once hoped for alternative to bananas, sugar, proved just as disadvantageous to growers.

5.4 Smallholders and Sugar in the 1930s

As Chapter Four discussed, smallholders and eventually planters reconstructed Jamaica’s sugar industry in the early twentieth century. By the 1930s, planters had once more taken control of the majority of sugar cultivation and production on the island. Gone were the days of scattered plots and plantations of sugar cultivated for export, replaced by central factories that amalgamated all sugar production in the surrounding area and created their own mini agroecosystems. Rather than producing sugar on their own and selling it to factories, many smallholders became part of these agroecosystems, either working on the factory owned land or as sub-contractors. Proponents of this new model viewed it as the ideal way for the industry to operate, giving these smaller growers employment and the guarantee that their cane would be purchased. But as this section reveals, by the second half of the 1930s the interaction of global and local forces resulted in a worsening of the conditions of the cane-farmer subsector. In particular, global sugar quotas resulted in a reduction in the amount of cane being grown on the island, and the growers most impacted by this were small cane farmers.

⁵¹⁰ J.D. Williams, “Moyne Commission Memorandum: Mr. J.D. Williams,” 1939, CO 950/228, British National Archives.

By the mid-1930s, global sugar production had reached such high levels that sugar interests from around the world agreed to meet to discuss more effective coordination of sugar production and marketing to ensure both a constant supply of sugar and for producers to profit. This took the form of the 1937 International Sugar Conference, held in London and attended by representatives from twenty-four total members of the League of Nations from Europe, the Americas, and East and South Asia. The members agreed to establish an International Sugar Council centered in London for the purpose of establishing sugar quotas for each of the sugar producing countries. An executive board would meet annually to analyze sugar statistics from the previous year to determine what the quotas for the following year should be. In terms of the United Kingdom, the conference agreed that the empire as a whole would have one quota, with British officials then able to decide how the quota would be allocated within the empire.⁵¹¹ Although Jamaica did not have any delegates at the Conference, the Legislative Council submitted a resolution to the Colonial Office advocating for a consideration of their needs. They noted that due to the spread of Panama Disease, sugar was of “prime importance” to the overall well-being of the island’s residents and requested that the British government do everything in its power to facilitate the industry’s further development.⁵¹² Based on several correspondences, it appears sugar interests on the island feared a limiting of Jamaica’s sugar output.⁵¹³

The council’s initial quota limited the British Empire’s annual production to 965,254 metric tons, of which Britain allocated 86,000 tons to Jamaica. Many within Jamaica’s’ sugar

⁵¹¹ *The International Sugar Conference*, (Geneva: League of Nations Publications, 1937), 8-12.

⁵¹² “Legislative Council Resolution on Jamaica’s Sugar Industry,” March 10, 1937, CO 852/84/2, British National Archives.

⁵¹³ “Letter from Jamaica Imperial Association to Colonial Office,” March 30, 1937, CO 852/84/2, British National Archives.

industry viewed this as catastrophic, as the island's factories were capable of producing 120,000 tons, with the expectation of reaching 150,000-ton capacity by the 1940s. Upon hearing of the quota, a Legislative Councilman from Westmoreland wrote to Governor Denham about the "serious consequences" that would result from the quota. He argued that no other crop could replace sugar in Westmoreland. Many had tried to grow bananas over the decades but with little success. He believed that unless the quota was raised to 150,000 tons, nearly twice its actual number, the sugar industry would be in peril. The Councilman argued that those who would be most affected were the cane farmers. Since factories would have more sugar than they could produce, they would break off contracts with many of the sub-contractors, with this class of growers "wiped off the slate entirely." This would then result in an unemployment crisis on the island.⁵¹⁴

One of the immediate effects of the quota imposition was a decline in prices paid to small cane farmers by central factories. By 1938, central factories were paying only nine to ten shillings per ton, resulting in cane farmers operating at a loss.⁵¹⁵ Cane farmers did not have the ability to bargain for an increased price, as the central factories kept the price fixed for all farmers. Even during periods of higher market prices for sugar, the central factories kept the pay of cane farmers static.⁵¹⁶ Sugar manufacturers justified the lower prices by claiming that the combination of more cane farmers and the imposition of the quota meant that it was the only way to secure any profits

⁵¹⁴ J.W.N. Hudson, "Letter from J.W.N. Hudson, MLC Westmoreland, to the Governor," May 14, 1937, CO 852/84/2, British National Archives.

⁵¹⁵ "Moyne Commission Memorandum: Small Farmers of Northern St. Elizabeth," 1939, CO 950/168, British National Archives.

⁵¹⁶ "Moyne Commission Memorandum: Westend Cane Farmers Association," 1939, CO 950/179, British National Archives.

for their cane. The Sugar Manufacturers Association noted that during the period in which the quota was imposed, the number of cane farmers more than doubled, from 2144 in 1934 to 5631 in 1938.⁵¹⁷ However, many farmers believed the manufacturers were lowering prices well below the profit line to push the cane farmers out of business. Members of the Imperial College wrote to the Moyne Commission that the companies possessed a “powerful incentive to discourage cane-farmers” due to the quota and the ability to get as much cane as they needed from their own lands. The college members doubted whether the cane-farming sub-sector would survive.⁵¹⁸

For many cane farmers, the new quotas threw into doubt whether they could continue to participate in the sugar industry. A contracted cane farmer spoke to the *Daily Gleaner* in 1937 following the quota imposition and noted that the majority of growers near his farm were being forced to sell cane to factories at a loss. He described the situation as cane farmers being “squeezed to death to permit manufacturers to make unjustifiable profits.” He provided several examples of small cane farmers abandoning cane cultivation on account of the poor prices. He felt that should the current situation continue unabated, it would be “impossible” for cane farmers to sell at a profit and more and more growers would be forced out of the sugar business.⁵¹⁹

In some instances, sugar factories began altogether rejecting small farmers’ cane. Following the quota imposition, the Jamaican government ruled that on account of the change in circumstances, sugar manufacturers would not be considered in breach of contract if they did not purchase all the cane grown by contracted farmers.⁵²⁰ This often played out with factories

⁵¹⁷ “Moyne Commission Memorandum: Sugar Manufacturing Association,” CO 950/83, British National Archives.

⁵¹⁸ “Memorandum from Imperial College to Royal Commission,” 1939, CO 318/438/5, British National Archives.

⁵¹⁹ “Thinks Govt. Should Set Up a Committee,” *The Daily Gleaner*, October 23, 1937, 7.

⁵²⁰ *Ibid.*

altogether refusing cane farmer's cane, as The Westend Cane Farmers Association noted in a 1938 memorandum. The purchasers claimed that the cane was lower quality due to the lack of machinery and fertilizer used during cultivation and therefore grounds for rejection.⁵²¹ Even in cases where outright rejections were not occurring, growers were advised not to put more money into managing their cane fields, such as by weeding, as it would only increase their losses.⁵²² S.J.S. Dillon, once more advocating on behalf of smallholders, summed up the situation as the continuation of generations spent penalizing 75% of the island's people at the expense of the few, in this case the sugar planters.⁵²³ Few saw any likelihood that the situation would improve, as the continuation of the quota system kept demands for smallholders' sugar to a minimum.⁵²⁴

By the end of the 1930s, the trajectory of smallholders within the sugar industry was a diametric reversal from a few decades prior. In the 1910s and 1920s, growers and officials saw sugar as the ideal alternative crop to the risks of banana cultivation. But now, the same concerns raised about smallholders and banana cultivation arose in the context of sugar. Colonial officials began discussing the dangers of cane cultivation for smallholders, as growers were not guaranteed that their cane would be purchased at a profit, if purchased at all. Instead, they began advocating for smallholders to switch to cultivation of food for local consumption only. They even discussed incentivizing this in the hopes of pushing these growers away from "the attraction of cane."⁵²⁵ The

⁵²¹ "Moyne Commission Memorandum: Westend Cane Farmers Association."

⁵²² "Mr. Lowe Calls Attention to Effect Sugar Conference Decisions May Have in Jamaica," *The Daily Gleaner*, May 20, 1937, 15.

⁵²³ "Moyne Commission Memorandum, Mr. S.J.S. Dillon."

⁵²⁴ "Moyne Commission Colonial Office Memorandum: Agriculture," 1939, CO 950/49, British National Archives.

⁵²⁵ William Battershill, "Note by William Battershill," July 15, 1942, CO 852/468/6, British National Archives.

large profits and smallholder-dominated sugar trade of the late 1910s now appeared a one-off event rather than a fundamental reconstitution of the island's political ecology.

5.5 The 1938 Labor Rebellion

On April 29th, 1938, workers at Frome Sugar Estate in Westmoreland launched a strike, calling for an increase in wages to “A Dollar a Day.” Within a few days, the island's police force sent over one hundred officers to Frome to quash the strike.⁵²⁶ A confrontation between the groups followed, with the officers killing four people and wounding fourteen others. News of the killings quickly spread throughout the island and within days, laborers across the island, across a multitude of industries, went on strike. Plantation laborers left their fields. Dockhands abandoned fruit on piers. Railwaymen blocked tracks and roads.⁵²⁷ The uprising continued into June, the days punctuated by clashes between strikers and police. As police turned more frequently to violence, the scale of the protests increased, with strikers blocking major roads and cutting communication wires, grinding much of the day-to-day operations of the island to a halt. On June 5th, the Acting Governor C.C. Woolley, who took over following Governor Denham's sudden death three days prior, announced a £500,000 land settlement scheme. Despite a few clashes in the days following, the announcement effectively ended the strikes, with the last demonstrations in Manchester on

⁵²⁶ Colin A. Palmer, *Freedom's Children: The 1938 Labor Rebellion and the Birth of Modern Jamaica* (Chapel Hill, University of North Carolina Press, 2014), 37.

⁵²⁷ Post, *Arise Ye Starvelings*, 281.

June 11th.⁵²⁸ Over the month and a half of protests, forty-six Jamaicans were killed, at least 429 injured, and thousands arrested. This period would come to be known as the 1938 Labor Rebellion.

On the whole, it is difficult to discern the level of smallholder participation in the rebellion. There is little evidence to suggest that smallholders as a united subsection of the working class left their holdings en masse to join up with the protests and strikes taking place around the island. However, the fact that economic conditions necessitated a dual role for many smallholders as both cultivators on their own land and as laborers on banana and sugar estates suggests that a number of these growers likely participated in the rebellion. Additionally, with Jamaica being such a small island, with households relying on large family networks to sustain their economies, most Jamaican smallholders were in some way or another connected to the causes of the rebellion.

Those that did participate in the rebellion likely did so from their position as estate laborers, demanding either higher wages or the ability to make enough from their own land that they did not need to work additionally as laborers. In a 1939 memorandum submitted to the Moyne Commission, Norman Manley argued that even on high quality land, a smallholder could not make enough money to subsist on less than five acres of land. On lower quality land, on which most smallholders had their holdings, at least 7.5 acres of land was needed. Of the 200,000 smallholders on the island at the time of the rebellion, 40% held less than 2.5 acres of land, meaning that the majority of smallholders were forced to supplement their income through additional labor. This, according to Manley, was the driving reason behind high unemployment on the island and only by taking these smallholders off of the labor market would unemployment decrease.⁵²⁹

⁵²⁸ Ibid., 284.

⁵²⁹ Norman Manley, "Memorandum on Rural Reconstruction," 1939, CO 950/86, British National Archives.

The trajectory of the rebellion, with protests in rural, interior areas not ending until the announcement of a land settlement scheme, several weeks after those in urban and more populated rural areas ceased with the promise of wage increases, further suggests the role of land demands in these specific protests.⁵³⁰ While it is likely that many of those protesting did not have any cultivable land, it is also likely that a number of those involved owned some land, but not enough to subsist or profit on. Memoranda submitted to the Moyne Commission by and on behalf of smallholders highlight the struggles of growers with only a few acres of land to make enough money to survive. E.E. Pryce, who owned a small plot in Oracabessa, spoke of how he went “to bed supperless many nights” and when he went to town to find work “I was rejected. The only thing to do was to cry.”⁵³¹ S.J.S. Dillon wrote that despite Jamaica’s booming banana business “we find that the laborers and small planters themselves have been living from hand to mouth.”⁵³² He also noted that sugar growers were completely subject to supply and demand, with no help coming from the government to protect their interests. A member of the Board of Conciliation on Labour Problems summed up the situation as:

“As a result of plant disease, low prices, and small demand for many of their products, a large number of peasant proprietors and small settlers have been unable to earn from their holdings sufficient to provide themselves with the necessitates of life, and the simple amenities which they crave, as well as to pay their taxes and other due.”⁵³³

⁵³⁰ Fernández, “Jamaica in the Age of Development,” 96-98.

⁵³¹ E.E. Pryce, “Moyne Commission Memorandum: Mr. E.E. Pryce,” 1939, CO 950/173, British National Archives.

⁵³² Moyne Commission Memorandum: Mr. S.J.S. Dillon.”

⁵³³ “Moyne Commission Memorandum: Board of Conciliation on Labour Problems,” 1939, CO 950/124, British National Archives.

Together, these statements revealed a Jamaica where many smallholders could barely, if at all, make a living through their agriculture alone.

Despite the likelihood that a number of smallholders, particularly in the island's interior, participated in the rebellion, there is no evidence of smallholders participating in the strikes. One of the reasons for this was that for many of the discontented growers, the demands of those protesting did not solve any of their particular needs. For those growers who had traditionally been able to subsist on their several acres or more of land, higher estate wages or land settlement promising five acres of land would not change their conditions in any material way. There is no evidence of members of the cane-farming subsector joining the protests, as their concerns were more with contracts and quotas than hourly wages. Most of these contracted growers also had more than the few acres of land that new land settlements would bring. For smallholding banana growers, the estate-focused nature of the banana-related protests meant little to their day-to-day struggles with disease and selling their crops.

Additionally, the geography of smallholdings and the lack of a representative body for smallholders made organizing a coordinated protest extremely challenging. Norman Manley noted in his memorandum to the Moyne Commission that there existed extreme challenges for promoting communal life in the island's rural districts. Smallholdings were often spaced far apart, often in hilly areas away from any major settlements or roads.⁵³⁴ As opposed to the populated estates and docks, there was little opportunity for inhabitants of these isolated holdings to consistently come together to discuss their concerns or interact with anyone to whom they wished to express their discontent.

⁵³⁴ Norman Manley, "Moyne Commission Memorandum: Jamaica Welfare Ltd.," 1939, CO 950/110, British National Archives.

Outside of geographic challenges, the lack of dedicated smallholder organizations presented a further challenge to organization. As discussed above and in previous chapters, organizations like the Jamaica Agricultural Society and Jamaican Banana Producers Association were created with stated claims of representing the small grower, but in each of these cases it became quickly apparent that they would be run by and for middle and large growers and plantation owners. While the JAS had over one hundred branch societies throughout the island, members of these branch groups still took a paternalistic attitude towards smallholders even when they did advocate on their behalf. By the time of the Labor Rebellion, the JBPA had ceased to act as a co-operative organization, removing any possibility of it being useful for smallholders. Without any sort of overarching organizational structure, combined with the geographic challenges, it was extremely difficult for smallholders to form any sort of united front to advocate for their specific set of needs.

5.6 Conclusion

As the previous sections have demonstrated, perhaps the two most important industries to the livelihoods of smallholders, bananas and sugar, saw opportunities for smallholder participation within them decline over the course of the 1930s and resulted in a political ecology further weighted against smallholders. Through a combination of microbes, plant physiology, and the decisions of people both locally and globally, sugar and bananas no longer offered the opportunities for profit that drew smallholders to these crops in the first place. Smallholders were left increasingly shouldering the risks associated with export agriculture in a global economy with minimal support from state-sponsored organizations ostensibly designed to assist with this risk.

By 1938, the Jamaican working class reached their breaking point and launched a series of strikes and protests that would become the 1938 Labor Rebellion. While the rebellion never turned into a full-fledged revolution, it did result in some meaningful change, including wage increases and the development of a land settlement scheme. It additionally strengthened a working-class leadership structure that would become key players in Jamaica's push for independence in 1962. However, it did not fundamentally change the unequal power structures baked into Jamaica's colonial system, nor did it result in full-scale changes within the banana or sugar industries. As the following chapter reveals, these industries, and Jamaican agriculture in general would soon undergo major alterations, that would push smallholders away from export agriculture altogether and towards cultivation for domestic use.

6.0 The Reorientation of Smallholder Agriculture, 1940-1960

Mother Brown, a smallholding woman from Manchester, described the crops she and her daughter were growing in 1972. “We plant yam and potato and we plant cassava and we see it and bake and sell, you know.”⁵³⁵ Mrs. J of Clarendon was cultivating similar crops, mentioning yams and cassavas.⁵³⁶ Miss Rita of Trelawny described her day to day planting peas and corn.⁵³⁷ According to Cou Meme of Manchester, her whole family “plant yam, coco, potato, cassava, pimento.”⁵³⁸ What stands out from each of these descriptions of current cultivations is what is absent. While many of the smallholders interviewed in the 1970s spoke of cultivating export crops in the past, few spoke of doing so in the present. By this point, smallholders by and large no longer cultivated for export, instead focusing almost exclusively on domestic food production.

In this chapter, I analyze how a series of flashpoints in the 1940s and 1950s, both local and global, created opportunities for government officials and company managers, with smallholder participation, to reorient smallholder agriculture away from export agriculture and towards local food production. I argue that the onset of World War II in 1939, the discovery of bauxite in 1942, and Hurricane Charlie in 1951 were watershed events for the island’s political ecology and created opportunities for tradeoffs where smallholders received theoretically greater security in land ownership and markets for domestic agriculture in place of greater opportunities for profit that drew smallholders to export agriculture in the first place.

⁵³⁵ “Mother Brown,” *Life in Jamaica in the Early Twentieth Century*, 4.

⁵³⁶ “Mrs. J.: A Highly Protected Mother,” *Life in Jamaica in the Early Twentieth Century*, 15.

⁵³⁷ “Miss Rita: A Very Secure Wife and Mother,” *Life in Jamaica in the Early Twentieth Century*, 19.

⁵³⁸ “Cou Meme,” *Life in Jamaica in the Early Twentieth Century*, 7.

Much like the previous chapters, it highlights how the interactions between smallholders, planters, and local officials with external and other-than-human forces shaped the island's political ecology in the 1940s and 1950s. But rather than showing how a slow buildup of everyday interactions and decisions resulted in change, it points to three ruptures that fundamentally restructured the agroecosystem of the island.⁵³⁹ Leaders in agricultural industries and colonial officials used these ruptures to push for changes to Jamaica's economic structures, pushing smallholders away from export agricultural production and towards the cultivation of domestically sold and consumed foodstuffs. This reorientation of smallholder agriculture essentially ended any vision of major smallholder contribution to export agriculture that many over the previous century had worked towards. In return, it offered the possibility of a more stable economic structure that most smallholders had been unable to attain within the banana and sugar industries. But instead of being tied to the fortunes of bananas and sugar, smallholders now became tied to a greater dependence on state investment and politics.⁵⁴⁰

The first section analyzes the impact of World War II on the Jamaican banana industry and smallholder agricultural production. It shows how the onset of the war resulted in the halting of banana exports from the island, with the fruit instead being purchased by the British government and distributed locally on the island. With exports ceasing, growers de-emphasized disease management, resulting in greater spread of Leaf Spot and Panama Disease. Additionally, the

⁵³⁹ For the theoretical underpinnings of this rupture-based structural change, see William H. Sewell Jr., "Historical Events as Transformations of Structures: Inventing Revolution at the Bastille," *Theory and Society* 25, no. 6 (1996): 841-881.

⁵⁴⁰ For more discussion of how political leaders and wealthy citizens use ruptures to undertake change that benefits them, see Naomi Klein, *The Shock Doctrine: The Rise of Disaster Capitalism* (Toronto: Alfred A. Knopf Canada, 2007).

government inaugurated food production campaigns to encourage growers, particularly smallholders, to grow more non-export food. This pushed smallholders even further away from the declining banana industry.

The second section moves to a discussion of Hurricane Charlie in 1951 which devastated Jamaica, destroying most of the island's crops. It reveals how the reconstruction schemes developed by the Colonial Office and in consultation with global institutions such as the World Bank resulted in more state-led agricultural programs. The stipulations within each of these programs, such as who could benefit from each aspect, acted as another push of smallholders away from bananas and towards crops like ground provisions and vegetables. It additionally shows how Hurricane Charlie brought an end to the Gros Michel era on the island, as the Colonial Office used the destruction caused by the storm to distribute Lacatan banana suckers, a variety of banana immune to Panama Disease.

The third section analyzes how the 1942 discovery of bauxite in Jamaica acted as the third major push towards smallholder local food production. It shows how many smallholders chose to sell their land to a mining company and in return received alternative company lands (either leased or owned depending on the company) to cultivate. With control over the lands, the mining companies stipulated the types of crops that cultivators could grow. This food was used for domestic consumption rather than export. The beginning of the bauxite era in Jamaica also resulted in a reduction in the overall importance of agriculture to the Jamaican economy, as bauxite, not bananas or sugar, became Jamaica's leading export by 1960. With less focus on export agriculture in general, cultivation for local consumption, encouraged by colonial officials, became a more appealing option for smallholders.

The final section examines the tradeoffs for smallholders that came with this new political ecology. While this new political ecology theoretically offered more stability for smallholders, as they were no longer subject to global market changes and restrictions, the dependence of smallholders shifted towards a middle class and elite-dominated Jamaican political system that still often privileged Jamaican elites, even with more government attention on smallholders than in previous decades. Additionally, the profit margins on local food production were significantly smaller than the potential offered by bananas and sugar, even if this potential was rarely met. But despite these drawbacks, the new system brought smallholders greater security in land ownership, which many Afro-Jamaican smallholders valued above profits.

6.1 World War II and Bananas

World War II proved to be a turning point in the history of smallholder agriculture and of Jamaica's banana industry, beginning a state-led push for smallholder production of locally consumed food, and bringing the banana industry rapidly down from its peak of nearly 27 million stems reached in 1937.⁵⁴¹ The specific catalyst for this change was the ending of banana exports from Jamaica during the war. In November 1940, the British Ministry of War requisitioned all ships used to transport bananas from Jamaica to the U.K. for the war effort.⁵⁴² A month later, the U.K. prohibited the import of all bananas, with the explanation that available ships needed to carry

⁵⁴¹ "Letter from Officer Administering the Government to the Secretary of State for the Colonies," January 19, 1943, CO 852/512/2, British National Archives.

⁵⁴² H.H. Croucher, "The Future of the Banana Industry in Jamaica," *The Journal of the Jamaica Agricultural Society* 46, no. 4 (1942): 119.

more valuable products and that bananas were not nutritious enough to be considered essential.⁵⁴³ Following this prohibition, growers hoped that U.S. and Canadian markets would be able to take in the previously Britain-bound fruit. However, even by late 1940, the U.S. was seeing an oversupply of bananas entering their markets. This led to U.S. merchants raising the minimum standard of fruit they would purchase. For many Jamaicans, whose lands had light levels of infection or were on less-than-ideal soil for banana cultivation, this meant full-scale rejection of their fruits.⁵⁴⁴ Upon entering the war in 1941, the U.S. military requisitioned many of the United Fruit Company's ships. Rather than use their remaining ships on their Jamaican fruit, UFCo instead chose to maintain its trade routes between its Central American holdings and the U.S.⁵⁴⁵ With both the UFCo and JBPA ships now used for the war effort, Jamaicans had few avenues to export their fruit.

To make up for the loss of exporting ships, the British government began paying for the entire Jamaican banana crop but left the fruit on the island for local consumption. Even before the closure of the U.S. market, the British government viewed banana purchasing as essential to preventing massive unemployment in Jamaica, especially on the heels of the 1938 Labor Rebellion, and to stabilize the industry to where it could quickly re-establish exporting following the war's end.⁵⁴⁶ In the first year of the purchase scheme, the British guaranteed 14,500,000 stems

⁵⁴³ "Draft Memorandum on Dried Bananas," 1941, CO 852/442/11, British National Archives.

⁵⁴⁴ "Banana Leaf Spot Control Board Quarterly Report for the Period Ending December 31, 1940," 1941, CO 852/442/12, British National Archives.

⁵⁴⁵ Arthur Richards, "Letter from the Governor to the Secretary of State for the Colonies," December 16, 1941, T 161/1413/9, British National Archives.

⁵⁴⁶ R.F. Williams, "Memorandum on the Banana Industry of Jamaica," September 7, 1943, CO 852/512/12, British National Archives.

and ended up purchasing 14,615,779 at pre-war rates.⁵⁴⁷ In 1942, the number dropped to around 12,000,000. The government additionally established a £500,000 grant to incentivize growers to produce crops that were more nutrient rich and therefore more valuable to the war effort.⁵⁴⁸ Through both the purchase scheme and grant, the colonial administration hoped that it would be enough to tide the banana industry over for a few years while simultaneously encouraging growers to produce more for the war.

Not everyone on the island felt that the structure of the purchasing plan was fair to growers, particularly smallholders. In 1943, R.F. Williams, a member of the JBPA Board, submitted a memorandum on the banana industry to the Colonial Office calling for an increase in the number of stems purchased as well as a reduction in the minimum standard required for the bananas to be bought. This advocacy was part of a shift begun in the late 1930s with groups like Jamaica Welfare Ltd. where advocacy groups more consistently advocated on smallholders' behalf. According to Williams, the 12,000,000 stems purchased in 1942 was not nearly enough to fund all of the island's growers, who so recently had been producing nearly 30,000,000 stems. He believed that 15,000,000 stems at minimum was required to prevent unemployment. Additionally, he argued that the colonial administration was being too strict in their quality requirements. The government was requiring bananas to be of a "uniform standard of excellence" beyond that of what were traditionally purchased for market in Great Britain. For the scheme to be fair, Williams argued, it should be buying bananas at the same quality as was required before the war. Without this, many smallholders were finding it impossible to sell their bananas, and with the cost of living raised by

⁵⁴⁷ "On First Year of Banana Purchase Scheme," January 9, 1942, CO 852/443/4, British National Archives.

⁵⁴⁸ Arthur Richards, "Letter from the Governor to the Secretary of State for the Colonies," June 20, 1942, T 161/1413/9, British National Archives.

the war, were struggling to make a living.⁵⁴⁹ Despite the call for alterations, the “Food Controller,” a London based official who oversaw the empire’s banana marketing and trade, rejected any changes. He believed it would lead to low quality fruit being accepted and stated that buyers were already being tolerant and adaptive based on local conditions. He allowed the purchase limit to increase to 15,000,000 stems, but with the quality requirement, this limit would not be reached and was little more than an empty gesture.⁵⁵⁰

Along with the high standards, the continued spread of banana diseases throughout the war further damaged smallholder banana cultivation. The turbulence of the war and a lack of banana exports resulted in a lessened focus on managing Panama Disease and Leaf Spot. In terms of Panama Disease, an agricultural officer noted that a general lack of interest in the banana industry resulted in growers becoming more careless in treating infected plants on their lands. And with the Department of Agriculture having given up authority on managing treatment in 1935, the tradeoff for this lack of attention was the unchecked spread of the disease.⁵⁵¹ With disease inspectors no longer quarantining infected land, growers began using this land for other crops, such as ground provisions like yams and potatoes. While they were not growing bananas on these lands, their use of these lands resulted in infected soil traveling via boots and cutlasses, reaching previously uninfected land.⁵⁵² It was a similar case with Leaf Spot. The Leaf Spot Control Board reported at the end of 1940 that the cessation of banana shipments to the U.K. led many growers to feel

⁵⁴⁹ R.F. Williams, “Memorandum on the Banana Industry of Jamaica.”

⁵⁵⁰ “Comments on Memorandum by Food Controller in Charge of Banana Marketing,” October 16, 1943, CO 852/512/12, British National Archives.

⁵⁵¹ Croucher, “The Future of the Banana Industry in Jamaica,” 119.

⁵⁵² “Letter from Officer Administering the Government to the Secretary of State for the Colonies,” January 19, 1943, CO 852/512/2, British National Archives.

uncertain about the future of banana cultivation on the island. As a result, they were unwilling to spend the necessary money for spraying equipment.⁵⁵³ Additionally, a hose shortage further stalled the gathering of the necessary equipment for spraying. The hoses were made of rubber, the vast majority of which was now being used for wartime purposes.⁵⁵⁴ By 1942, only around 900 growers were consistently spraying their lands for Leaf Spot, a number basically unchanged from before the war. By the end of the war, agricultural officials noted the impact the war years had on the spread of these diseases. Panama Disease had rendered what were considered the best banana lands on the island unusable for Gros Michel cultivation and many growers throughout the island feared planting new bananas because of concerns over starting an epidemic in the area. Leaf Spot was considered most responsible for the reduction in banana production, especially among smallholders, and had spread largely unchecked throughout the island.⁵⁵⁵ By this point, it seemed unlikely that the spread of either would be checked.

As an alternative to banana cultivation, the Jamaican government inaugurated a series of food production programs over the course of the war that encouraged smallholders to switch from export crops like bananas to foodstuffs to be bought and consumed locally. By July 1940, concerns over the availability of essential food on the island reached a point where agricultural officials were concerned that by the fall, food supplies would reach a critical low. In response, the government-established Food Production Board launched a campaign to put 13,000 acres of land under corn cultivation and 10,000 acres under peas, beans, and ground nuts. The board gave an

⁵⁵³ "Banana Leaf Spot Control Board Quarterly Report," 1941.

⁵⁵⁴ "Annual Report of the Banana Leaf Spot Control Board, 1941-1942," 1942, CO 852/442/13, British National Archives.

⁵⁵⁵ *Report of the Cattle, Banana, Coconut and Citrus Investigation Committee* (Kingston: Government Printing Office, 1947), 11.

initial deadline of September to reach this goal. To encourage small growers to participate, the Board promised a minimum price for all required crops and offered financing through local Agricultural Loan Banks where growers would be able to borrow up to £30 with a maximum of 6% interest.⁵⁵⁶

The most impactful aspect of the program was the government's encouragement of large landowners to lease land to small cultivators or landless rural villagers in order to amplify the island's cultivation.⁵⁵⁷ The board instructed large landowners to use a provided contract to offer disused land to small cultivators at a very low rate, known as a "pepper corn rental." The Board hoped that method of land use would allow them to quickly reach their requested acreage. The Board did not offer financial incentives to landowners for doing this, but both appealed to their patriotic duty and brought up the specter of Defense of the Realm Regulations. These regulations allowed for the government to claim unused land if deemed necessary for the war effort. By offering planters the option to lease to smallholders voluntarily, they claimed that they would not be forced to use the regulations.⁵⁵⁸ Through the combination of land leasing and smallholder loans, the island's growers were able to reach the targeted acreage in 1940.⁵⁵⁹

Despite the success of the initial program, by early 1942 food production was once more lagging, and complaints arose from smallholders about the guaranteed prices paid. Complaints reached the JAS from dissatisfied small growers who claimed they could not make a living from the fixed prices offered for food crops and that while the prices for the harvested food increased,

⁵⁵⁶ "Food Campaign in Island," *The Daily Gleaner*, July 19, 1940, 9.

⁵⁵⁷ Carl Stone, "Political Aspects of Postwar Agricultural Policies in Jamaica 1945-1970," *Social and Economic Studies* 23, no. 2 (1974): 165.

⁵⁵⁸ "Food Campaign in Island," *The Daily Gleaner*, July 19, 1940, 9.

⁵⁵⁹ "Food Production Announcement," *The Daily Gleaner*, September 7, 1940, 7.

the price paid for their cultivation had not.⁵⁶⁰ The Committee quickly responded, raising the price paid for corn, peas, and yams within a month of the complaint and guaranteeing the minimum price through 1944.⁵⁶¹ Additionally, frustrated by a tailing off of participation by large landowners, the Committee, with the governor's backing, issued a compulsory order whereby all landowners with over one hundred acres were required to turn at least 2% of their land over to the cultivation of peas, cassava, and yams. Rather than manage the land themselves, many of these landowners chose to participate in the land lease program, bringing even more small cultivators into the local food production effort.⁵⁶² The terms of the order would be slightly changed over the following few years based on specific crop needs, but by and large this system would remain in place until the end of the war in 1945.

The specific food production policies instituted during the war ceased with the war's end, placing many of the smallholders who participated in the program in a precarious position, especially those who participated in the plantation land lease program. Upon the ending of the Food Production Campaign, many of the plantation owners kicked the small leaseholders off of their land without warning.⁵⁶³ This unexpected ejection was particularly felt in St. Mary and Westmoreland, the most common areas of lease during the war. Agitation with the actions of these landholders reached the Legislative Council, who in July 1945 began debating an Agricultural Small Holders Bill that would reform tenancy laws and prevent landholders from kicking tenants off without several months of notice. However, the law did not become codified until the end of

⁵⁶⁰ "Price For Home-Grown Foodstuffs 'Unfairly Low,'" *The Daily Gleaner*, March 6, 1942, 11.

⁵⁶¹ "Food Production," *The Daily Gleaner*, March 21, 1942, 7.

⁵⁶² "Compulsory Planting of Food Crops: Order Issued by Governor," *The Daily Gleaner*, April 1, 1942, 10.

⁵⁶³ Stone, "Political Aspects," 165.

1945. Many landholders used these intervening months to kick more lessees off their land before the new law could go into effect. As a result, by the time the bill passed, most of those who had received leased land during the war had already been evicted.⁵⁶⁴

The net result of wartime food policies was not a wholesale transformation of the position of smallholders vis a vis their attaining of land. However, the push for a greater production of foodstuffs, combined with the five-year halt of banana exports and the continued spread of Panama and Leaf Spot Disease placed many smallholders on a track that would take them away from export agriculture and towards domestic food production. Additionally, this implementation of state-led programs that encouraged the cultivation of local foodstuffs, albeit brief, was the beginning of a reorientation of the relationship between smallholders and the state. Rather than relying on the contracts of export companies, smallholders would now begin to rely on state-driven investment for their food production.

6.2 The 1951 Hurricane and the Switch to Lacatan

On August 17, 1951, Hurricane Charlie struck Jamaica as a Category Four storm. The hurricane swept across the island, hitting the southeastern portion of the island hardest. In St. Thomas, Kingston, St. Catherine, and Clarendon, winds consistently topped 125 miles per hour throughout the day and peaked over 150. In Kingston, eighteen inches of rain fell over the course of the day, the majority within a five-hour period.⁵⁶⁵ This intense rain caused landslides throughout

⁵⁶⁴ “Big Agenda Before House Which Sat For Half Day Yesterday,” *The Daily Gleaner*, December 12, 1945, 12.

⁵⁶⁵ Ralph Cummings, “Report on Mission to Jamaica,” November 2, 1951, CO 1031/222, British National Archives.

the southern perishes. Through a combination of winds, flooding, and landslides, Hurricane Charlie left 154 dead and injured over 2,000 others. Roughly 10,000 Jamaicans, primarily smallholders, were left homeless. Most of Morant Bay was left in pieces, Spanish Town and Port Royal suffered major damages, and Kingston looked similar to when the 1907 earthquake and fires left the city in ruins. The storm resulted in nearly £20,000,000 in damages. In its first publication after the storm, *The Daily Gleaner* described Charlie as “the most staggering and devastating hurricane that Jamaica has suffered in its long weather-marked history.”⁵⁶⁶

Hurricane Charlie crippled the island’s agricultural output, especially bananas. With banana plants’ susceptibility to wind, the steady 125MPH in the southern parishes were more than enough to completely destroy the banana crops in these areas. Even in the northern parishes, which saw much lower sustained winds, the blow was enough to destroy the vast majority of plants, sparing only a few isolated plots.⁵⁶⁷ Prior to the storm, it was expected that roughly 500,000 banana stems would be shipped per month, but in the remainder of 1951, fewer than 100,000 total stems ended up exported. In addition to bananas, winds blew over roughly 600,000 coconut trees. While not a major export, coconuts were widely used locally and constituted a large portion of Jamaicans’ fats and oils, as well as its uses in soap production and livestock food. Many of the other minor crops used for local consumption were also destroyed, creating a need for a large uptick in food imports and driving up the cost of food. The Jamaican government had to import beans, peas, and corn, among other crops, to meet food demands in the months immediately following the storm.

⁵⁶⁶ “110 Dead as Hurricane Rips South Coast,” *The Daily Gleaner*, August 20, 1951, 1.

⁵⁶⁷ G.W. Nye, “Note on a Visit by Mr. G.W. Nye, Deputy Agricultural Advisor, to Jamaica,” September 17, 1951, CO 1031/220, British National Archives.

Of the major crops on the island, only sugar escaped without serious damage, and the cane harvest remained on schedule for the year.⁵⁶⁸

The Jamaican government, and many of its citizens, looked to Britain to finance the hurricane recovery and help smallholders and other working-class Jamaicans survive. Byron Ankle, a Jamaican smallholder who lived with his mother and seven siblings, wrote to the Colonial Secretary asking for help for his family. He wrote that his family was suffering since the storm, as it destroyed all of their crops and their home. “We are very poor and in need of financial aid, so if there is anything you can do to help this little family of ours it would be very much appreciated,” Ankle wrote. He then offered to use the funds, should they be given, to make himself “a useful citizen so that I can support my mother, brothers and sisters.”⁵⁶⁹ A Jamaican native who had moved to the U.S. but traveled back to the island following the storm to assist with recovery wrote to Foreign Secretary Eden that “The men, women, and children have no clothes to wear. The storm destroyed everything the poor had.” He noted that nearly all of the straw huts that working-class Jamaicans used as homes had blown down, leaving these people homeless.⁵⁷⁰ Governor Foot wrote to the Colonial Secretary in the days following the storm appealing for aid, particularly for funds for housing for the 25,000 left homeless by the storm.⁵⁷¹

In response to the hurricane and subsequent petitions, the Colonial Office constructed an agricultural recovery program for the island totaling £1.9 million. For the banana industry, the Colonial Office provided grants over £500,000 and offered additional loans specifically for the

⁵⁶⁸ Cummings, “Report on Mission to Jamaica.”

⁵⁶⁹ Byron Ankle, “Letter to Mr. King by Byron Ankle,” September 10, 1951, CO 137/899/12, British National Archives.

⁵⁷⁰ “Letter to Foreign Secretary Eden,” January 1952, CO 137/899/12, British National Archives.

⁵⁷¹ “Foot Sends Shelter ‘SOS’ To London,” *The Daily Gleaner*, August 22, 1951, 1.

industry's rehabilitation, but the stipulations of these grants made it so that by and large only plantation owners could benefit. As part of the grant, the Colonial Office promised that money would be allocated to growers who replanted their banana crops and would pay them £5 per acre of banana crop destroyed but mandated that "cultivations must be in first-class condition."⁵⁷² Inspectors from the Department of Agriculture were tasked with visiting these lands to determine the quality of the cultivations. The text of the grant itself did not spell out what "first-class condition" meant, but in a letter to a colleague one member of the Colonial Office described them as "planter like conditions."⁵⁷³ He specifically mentioned specific cultivation tactics such as terracing. These stipulations ruled out the vast majority of smallholders who could not meet the standards required to receive funds either because of cost or the quality and location of their land.

The only banana related benefit that smallholders received through the recovery was the ability to obtain new banana suckers, done as part of the All Island Banana Growers' Association's (AIBGA) efforts to use the destruction of the island's banana crop to expedite the island's switch from the Gros Michel banana to the Panama Disease immune Lacatan variety.⁵⁷⁴ The Department of Agriculture, in coordination with the Department of Scientific and Industrial Research in Britain had in 1946 begun sending experimental shipments of Lacatan bananas to Britain to see if the variety could be as economically viable as the Gros Michel.⁵⁷⁵ Members of these departments

⁵⁷² Ibid.

⁵⁷³ "Letter from Christopher to Hilton," February 10, 1952, CO 537/7713, British National Archives.

⁵⁷⁴ The AIBGA was formed in 1946 to "promote, foster, encourage, protect, and take steps to improve the cultivation, production, species, grade, and yield of bananas grown in Jamaica." *The Farmer's Handbook. With Directory* (Kingston: Government Printing Office, 1952), 185.

⁵⁷⁵ The team also tested the Cavendish banana but determined that it bruised too easily to make the trip from Jamaica to Britain in a condition appealing to consumers.

determined through six experimental shipments and a series of focus groups that the Lacatan trade had the potential to develop near the same levels as the Gros Michel.⁵⁷⁶

In the months following the storm, the AIBGA, with funding from the Colonial Office, ramped up their cultivation of Lacatan in nurseries and started distributing them across the island. As soon as three weeks after the storm, the AIBGA launched a Lacatan sucker distribution program, informing growers through *The Daily Gleaner* that anyone who wished to obtain Lacatan suckers could contact the AIBGA.⁵⁷⁷ As these nurseries were found throughout the island, the organization was able to establish multiple distribution points. The notice seemed to work, as within a month the AIBGA reported a shortage in available suckers.⁵⁷⁸ In March 1952, the organization began posting daily advertisements that Lacatan suckers would be distributed for spring planting. They noted that this distribution program was meant for smallholders, as suckers would only be given to growers requiring 500 suckers or less. Only once all smallholder needs were met would the program be opened up to larger growers.⁵⁷⁹ Members of both the Department of Agriculture and Colonial Office noted the opportunity the hurricane presented for the switch. Norman Wright, a Colonial Office employee, noted that “Rehabilitation from hurricane damage has provided a special opportunity” to switch from Gros Michel cultivation.⁵⁸⁰ W.D. Burrows, an

⁵⁷⁶ “Commonwealth Shipping Committee West Indies Inquiry,” March 18, 1948, BT 188/253, British National Archives.

⁵⁷⁷ Donald Whittle, “Notice To Banana Growers,” *The Daily Gleaner*, September 8, 1951, 4.

⁵⁷⁸ Carlyle Marsh, “Lacatan Suckers in Short Supply,” *The Daily Gleaner*, October 27, 1951, 6.

⁵⁷⁹ Donald Whittle, “All Island Banana Growers Association Limited Supply of Lacatan Suckers for Spring Planting,” *The Daily Gleaner*, March 10, 1952, 3.

⁵⁸⁰ Norman C. Wright, “Letter to John S. Wall,” April 29, 1952, CO 537/7713, British National Archives.

agricultural officer in Jamaica, agreed, writing in a 1952 survey of the island's agriculture that "the hurricane incidentally accelerated the transfer from Gros Michel to Lacatan production."⁵⁸¹

While smallholders could receive the Lacatan suckers, this did not to an influx of smallholder participation in the banana industry such as the Gros Michel boom of the 1870s and 1880s. Rather, it was a continuation of the twentieth century decline in their place in the industry. A main reason for this, apart from the lack of government support, was the reduced scope of the new Lacatan led Jamaican banana industry. The Lacatan banana was chosen by the Department of Agriculture over other immune bananas like the Cavendish because of its greater ability to withstand transatlantic travel without bruising.⁵⁸² While this was beneficial for the British market, it harmed Jamaica's standing in the global trade, as consumers in the United States and Canada preferred the Cavendish variety, which most plantations in Central and South America had shifted to by the 1960s.⁵⁸³ In the 1950s and 60s, Jamaica averaged roughly 11 million stems exported per year, less than a third of peak levels in the 1930s.⁵⁸⁴ With this drastically reduced scope, banana trading companies had enough supplies of bananas from large plantations without needing to engage smallholders. As a result, from the 1950s onward, if smallholders continued to grow bananas, they would be almost exclusively for at home consumption or local sale.

Further confirming the government's shift toward food-crop promotion, the largest allotment of hurricane relief funds, £650,000, went towards farm recovery grants specifically

⁵⁸¹ W.D. Burrowes, "Survey of Production of Selected Agricultural Products," in *The Farmer's Handbook* (Kingston: Government Printing Office, 1952).

⁵⁸² L.N.H. Larter, *Report on Banana Breeding* (Kingston: Government Printing Office, 1947), 9.

⁵⁸³ Soluri, *Banana Cultures* 183.

⁵⁸⁴ Owen Jefferson, *The Post-War Economic Development of Jamaica* (Jamaica: Institute of Social and Economic Research, University of the West Indies, 1972), 101.

designated for farmers who did not grow bananas or coconuts. The structure still largely favored large landowners but offered a few avenues for those with only a few acres of land to gain some benefits. The scheme focused on seven aspects of cultivation: land preparation, soil conservation, crop cultivation, fertilizer, farm buildings, water supplies, and fences. However, to receive a grant, the farm had to be large enough to support a farmer and his family, which the Colonial Office decided meant three acres or more and highlighted gendered assumptions about the primary cultivator in a family. For those under three acres, farmers would only be able to apply for soil conservation and farm cleanup grants and would receive free planting materials. Additionally, the Colonial Office stipulated that in all cases, to receive a grant the grower had to demonstrate that they had already begun the farm rehabilitation process and that they were willing to contribute labor, materials, or money towards the program once it began. This combination of stipulations and limitations on the full recovery program curtailed its scope.⁵⁸⁵ But by structuring the recovery scheme in a way that separated out banana and non-banana crops and making it so that most smallholders could only apply for general farm improvement grants, the Colonial Office made local food-crop production an appealing alternative to banana cultivation.

The months following the hurricane also inaugurated a new push for state-led investment in smallholder food production. Less than five months after the storm, Jamaican governor Hugh Foot invited the International Bank for Reconstruction and Development (IBRD) to survey the island and offer recommendations on how to address agricultural development and employment

⁵⁸⁵ “Agricultural Recovery Programs After the hurricane of August 1951,” 1952, CO 1031/213, British National Archives.

among other topics.⁵⁸⁶ Following the mission's investigations in 1952, the IBRD proposed a £22 million development program.⁵⁸⁷ In terms of smallholder agriculture, the report argued that not enough attention was being paid to smallholder production of food for local consumption, with yields far below what could possibly be achieved.⁵⁸⁸ They proposed, after consulting with the island's Department of Agriculture, a seven part agricultural development program. This included soil rehabilitation, particularly on hillside smallholding plots, irrigation, land reclamation, greater agricultural credit, and rural housing development. Through these programs, the IBRD hoped that the island's domestic food production would see a considerable jump.⁵⁸⁹ The implementation of these policies would be a major shift towards the official recognition of the importance of smallholder agriculture to Jamaica's people and economy, which to this point had been primarily limited to voices from members of advocacy groups like Jamaica Welfare Ltd. rather than enshrined in official policy.

Many of the recommendations of the IBRD report came to fruition through the 1955 Farm Development Scheme, designed to reduce Jamaica's dependence on food imports and further connect smallholder agriculture to state-led development programs. However, as with many of the island's agricultural programs of the twentieth century, most of the programs associated with the scheme did not reach smallholders with fewer than five acres of land.⁵⁹⁰ Overall, the impact of the

⁵⁸⁶ The IBRD is the lending arm of the World Bank that provides loans and advising to "middle-income and creditworthy low-income countries." <https://www.worldbank.org/en/who-we-are/ibrd>.

⁵⁸⁷ International Bank for Reconstruction and Development, *The Economic Development of Jamaica* (Baltimore: The Johns Hopkins Press, 1952), 6.

⁵⁸⁸ *Ibid.*, 12.

⁵⁸⁹ *Ibid.*, 49.

⁵⁹⁰ For more on the trajectory of the Farm Development Scheme, see Fernandez, "Jamaica in the Age of Development," 175-183.

program on domestic food production was negligible, with a reliance on foreign food imports rising over the 1950s. According to Economics professor and eventual Deputy Governor of the Bank of Jamaica Owen Jefferson's 1972 study of economic development in Jamaica, the Jamaican population grew 1.8% between 1950 and 1968. Combined with increases to per capita income and resultant increases in demand for food, Jefferson calculated that demand for food would have increased by 4% per year during this period. However, domestic production only grew at the rate of 2.1%, which the gap needing to be filled by imports.⁵⁹¹ With production not meeting demand during this period, government officials turned to company-led programs that they hoped would help with this production. These programs would also further incentivize smallholders to emphasize domestic food cultivation.

6.3 The Dawn of the Bauxite Era

In the summer of 1942, as much of Jamaica's agricultural focus had shifted towards food production, the Department of Agriculture was attempting to convince one of St. Ann's larger landowners, Mr. Robertson, to turn some of his land purely to food cultivation. The Department offered him an additional pasture at Lydford in the central portion of the parish. Robertson agreed, but after two successive plantings of foodstuffs, found that the crops were not growing well. The corn in particular was struggling, never reaching higher than two feet. Robertson replanted the lands with grass and returned it to the Department of Agriculture.⁵⁹² Another landowner in the

⁵⁹¹ Jefferson, *Post-War Economic Development*, 79.

⁵⁹² R.F. Williams, *R.F. Looks Back*, 94.

area, Charles D’Costa, heard about the struggles and spoke with Robertson about them, as he had experienced similar problems in his own land. Curious about the situation, D’Costa gathered soil samples from both his lands and Robertson’s Lydford pasture and sent them to the Department of Agriculture for examination. After chemical analysis, the Department’s chemists determined that the soil contained a high percentage of alumina.⁵⁹³ This ended up being the first discovery of bauxite on the island and would launch a transition of Jamaica from an agricultural export focused colony to a mining one and accelerate the process of transitioning smallholders from export to local producers.

Bauxite is the primary ore for aluminum production, consisting of a combination of alumina and iron oxides. The first reported discovery of the ore came in the French Alps in 1821 by geologist Pierre Berthier but it was not until 1888 that a chemist, Karl Josef Bayer, would successfully refine the bauxite into aluminum.⁵⁹⁴ Global production remained in the tens of thousands of tons for the following twenty-five years, but the onset of World War I established bauxite’s importance as a strategic resource. Over the course of the war, militaries increasingly used aluminum in place of tin, copper, and bronze as their primary source of metal for planes, weapons, and ships. British Guiana became the first site of the global race for bauxite. From there, mining companies established operations elsewhere in South America as well as in Hungary, the Gold Coast of Africa, and Southeast Asia. The importance of bauxite received a further boost with the beginning of World War II and as large portions of the world became cordoned off between

⁵⁹³ Mats Ingulstad, “National Security Business? The United States and the Creation of the Jamaican Bauxite Industry,” in *Aluminum Ore: The Political Economy of the Global Bauxite Industry*, ed. Robin S. Gendron, Mats Ingulstad, and Espen Storli (Vancouver: UBC Press, 2013), 111.

⁵⁹⁴ It is from Bayer that the refining operation would get its name: The Bayer Process. Bauxite refining is considered to be one of the most difficult refining processes. It takes roughly four tons of bauxite to make one ton of aluminum.

Axis and Allies, securing access to bauxite became a critical part of the war effort. By the time of bauxite's discovery in Jamaica, over two million tons of aluminum worldwide were being produced annually.⁵⁹⁵

Within weeks of D'Costa's samples testing positive for bauxite, the global aluminum industry had turned its attention to Jamaica. In July 1942, representatives from the Aluminum Company of Canada (Alcan) requested the assistance of the Canadian government in persuading Jamaican officials to allow the company to survey the entire island to ascertain the amount of bauxite present. Although the company viewed D'Costa's samples as poor quality due to their high oxide levels, they felt that Jamaica's geography was favorable to large amounts of quality bauxite being present.⁵⁹⁶ Governor Richards quickly agreed to the proposal, citing the need of bauxite for the war effort.⁵⁹⁷ Along with the Canada-based company, a Dutch company applied for an exclusive rights contract to extract bauxite from St. Ann, where Robertson and D'Costa's lands were located. Governor Richards also granted this application, as Alcan was uninterested in this land.⁵⁹⁸ The U.S. based Reynolds Metal Company also sent a surveyor, who estimated that Jamaica

⁵⁹⁵ In Jamaica, geologists first noted high alumina contents in an 1869 land survey, but no connection was made between this and the bauxite industry until D'Costa's 1942 inquiries; B.S. Young, "Jamaica's Bauxite and Alumina Industries," *Annals of the Association of American Geographers* 55, No. 3 (1965): 449; Matthew Evenden, "Aluminum, Commodity Chains, and the Environmental History of the Second World War," *Environmental History* 16, No. 1 (2011): 70.

⁵⁹⁶ Frederic Hudd, "Letter from Frederic Hudd to the Secretary of State for the Colonies," July 22, 1942, CO 852/453/7, British National Archives.

⁵⁹⁷ Arthur Richards, "Letter from the Governor to the Secretary of State for the Colonies," November 28, 1942, CO 852/453/7, British National Archives.

⁵⁹⁸ Arthur Richards, "Letter from the Governor to the Secretary of State for the Colonies," December 23, 1942, CO 852/453/7, British National Archives.

held over 100 million tons of bauxite, with over half found in Manchester and St. Ann alone.⁵⁹⁹ Britain's Ministry of Aircraft Productions, which was responsible for gathering bauxite for the war, was content to let these foreign companies develop Jamaica's bauxite, as, according to an employee of Britain Ministry of Aircraft Productions in 1942, the industry on the island was "undeveloped and on the wrong side of the Atlantic for us."⁶⁰⁰

Despite this initial flurry surrounding Jamaican bauxite, mining operations did not begin until after the war. Alcan hoped to begin producing and exporting hundreds of thousands of tons of bauxite by the end of 1943, but their tests on Jamaican bauxite revealed that iron in the bauxite clogged Alcan's filters.⁶⁰¹ As a result, a new plant would need to be constructed solely for Jamaican bauxite, which the Colonial Office would not pay for until after the war.⁶⁰² Reynolds similarly waited on production, having secured deposits in Haiti that allowed for a faster turnaround for the war effort than the Jamaican bauxite would have provided.⁶⁰³ These companies instead focused on understanding the layout of the island's deposits and how to secure the most lucrative land. Additional surveys undertaken during this period revealed that Reynolds' 100 million tons projection fell well short, with revised estimates placing the amount of bauxite well over 200 million tons.⁶⁰⁴

⁵⁹⁹ The bauxite deposits on the island were correlated with the presence of White Limestone, which was most common in northern St. Ann and Trelawney and southern Manchester and St.Elizabeth.; John Winant, "Letter by John Winant to the Secretary of State for the Colonies," July 16, 1943, CO 852/520/6, British National Archives; Young, "Jamaica's Bauxite," 453.

⁶⁰⁰ "Note from Ministry of Aircraft Productions," December 5, 1942, CO 852/453/7, British National Archives.

⁶⁰¹ John Huggins, "Letter from Huggins to the Secretary of State for the Colonies," January 5, 1943, CO 852/520/6, British National Archives.

⁶⁰² "Exploitation of Bauxite in Jamaica," 1943, CO 852/520/6, British National Archives.

⁶⁰³ "Principle of Equal Access Meeting," 1944, FO 371/38569, British National Archives.

⁶⁰⁴ Young, "Jamaica's Bauxite," 450.

The Jamaican government used this period between discovery and mining to establish control over bauxite's distribution. The Jamaican legislature passed the Bauxite Mining Law of 1945 to establish that the Jamaican government had property rights to all of the island's bauxite deposits.⁶⁰⁵ By the time production actually began in the 1950s, three companies had established footholds in Jamaica: Alcan, Reynolds, and Kaiser Bauxite, another U.S. company. Between 1952 and 1953, the three bauxite companies began exporting Jamaican ore. Reynolds was the first off the ground, starting production in 1950 and sending the first bauxite to its U.S. smelters. Kaiser and Alcan followed in 1953, with Jamaican ore now reaching multiple US smelters along with Alcan's in Norway and British Columbia.

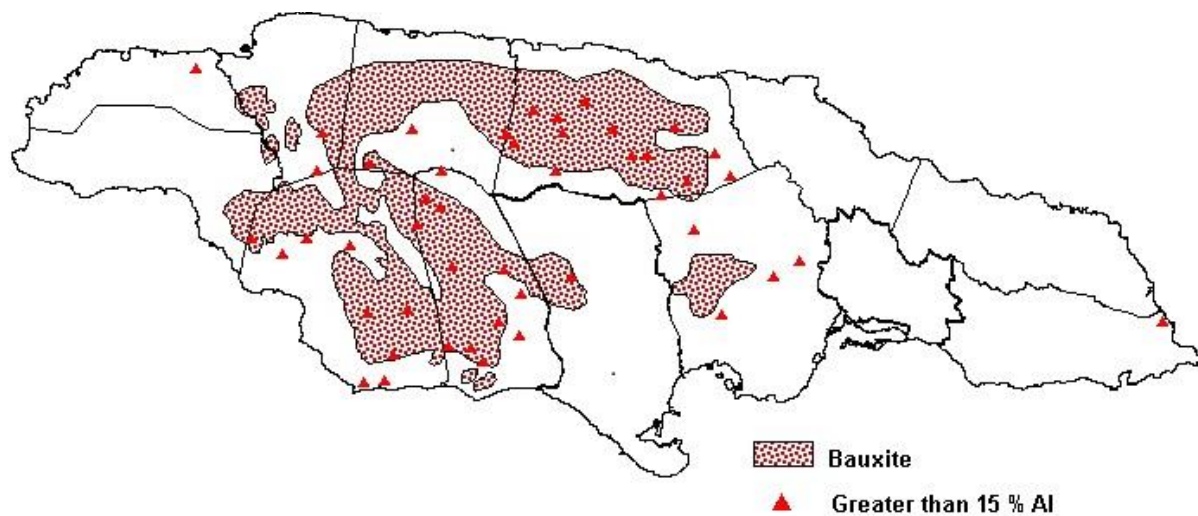


Figure 16: Bauxite Deposits in Jamaica⁶⁰⁶

⁶⁰⁵ Fernández, "Jamaica in the Age of Development," 185.

⁶⁰⁶ Gerald Lalor OJ, *Rare Earth Elements*, digital image, DigJamaica, 2018, http://digjamaica.com/m/new_this_month/rare_earth/.

To facilitate production, each company began buying up large tracts of land throughout the island. This process began in the 1940s in small amounts of primarily large landholdings. This accelerated in the 1950s once the Jamaican government's permit requirements meant that the company had to own the land it extracted ore from. These companies particularly targeted smallholdings as the available large holdings had been bought up almost instantaneously. As demand for land rose, so too did the price of land, thereby incentivizing smallholders to sell.⁶⁰⁷ Kaiser alone purchased over 5,000 smallholdings in the Essex Valley region of St. Elizabeth.⁶⁰⁸ By 1957, Kaiser owned 51,262 acres of Jamaican land, Reynolds 53,034, and Alcan 32,136.⁶⁰⁹ Altogether, these 136,432 acres accounted for roughly 5% of Jamaica's total acreage.⁶¹⁰

With the bauxite industry, the government mandated that companies had to put the land they owned to use rather than keeping it as mineral reserves. The Bauxite and Alumina (Encouragement) Law of 1950 described the companies as large landowners, a responsibility that came with a need to promote agriculture on the island.⁶¹¹ Each of the companies launched a series of cultivation campaigns in response, where the smallholders who sold their land would produce food on the now company owned land. Reynolds launched a program where anyone living within the immediate area of their mines could apply for a 2.5-year land grant, where they would grow

⁶⁰⁷ Smallholder selling of land received significant pushback from the JAS, who claimed that the selling of land would leave many smallholders displaced. Their stated concerns reached such a level that the government launched an inquiry in 1955 but found no signs of the JAS' stated concerns. For more on these debates, see Fernandez, "Jamaica in the Age of Development," 188-189..

⁶⁰⁸ Young, "Jamaica's Bauxite," 457.

⁶⁰⁹ Jamaica Agricultural Society, *Farming Operations of the Bauxite Companies in Jamaica* (Kingston: Government Printing Office, 1957), 9.

⁶¹⁰ Fernandez, "Jamaica in the Age of Development," 187.

⁶¹¹ *Ibid.*, 192.

cash-crops. Once the initial period was over, the company sent someone to survey the cultivations. If they decided that the tenant did an effective job, they would be given another piece of nearby land.⁶¹² Kaiser's model more closely modeled land settlement, as they resettled the farmers they purchased land from on specifically bauxite-free land within their territories and had a government development officer come in and assist with the creation of new farms and communities. Alcan also leased 17,000 acres of its land to 4,000 tenant farmers in the 1950s.⁶¹³

With control over the land, the bauxite companies were able to stipulate what crops smallholders would grow on their lands, further pushing smallholders towards production for local consumption. On smallholder land, the predominant crops became yams, sweet potatoes, corn, peas, and other vegetables, as root crops were central to Jamaicans' diets.⁶¹⁴ In cases where smallholders were resettled, oftentimes they were encouraged to work pastures for beef and dairy. Reynolds and Kaiser subdivided land into smaller pastures and planted a series of high yield grasses on the newly subdivided land.⁶¹⁵ Nearly all of the crops cultivated and the beef and dairy gathered were either used to feed bauxite company workers or was sold at local markets.

For those smallholders that remained connected to bauxite companies after selling their land, many received in return more fertile land to cultivate than they had been working on previously at the expense of giving up land that their families may have worked for generations. As much of the land that the companies bought up had been rendered infertile due to erosion or soil infertility from decades of cultivation, the three companies undertook soil fertility and

⁶¹² JAS, *Farming Operations of the Bauxite Companies in Jamaica*, 16.

⁶¹³ Young, "Jamaica's Bauxite," 457-459.

⁶¹⁴ "Farm Operations of Bauxite Companies in Jamaica," *The Daily Gleaner*, July 8, 1957, 8.

⁶¹⁵ Fernandez, "Jamaica in the Age of Development," 193.

reafforestation campaigns to restore some of the land to a workable state. With the Reynolds relocation campaign, smallholders who had previously been cultivating on low quality land now had the opportunity to cultivate higher quality land and would move every few years to allow the previously cultivated land to rehabilitate.⁶¹⁶ This allowed these growers to produce more, higher quality crops that would lead to higher returns upon sale. However, this also meant that these former landowners did not have a fixed piece of land to call their own. They were continuously moving based on the wants of the mining companies.

Aspects of smallholder-led cultivation on bauxite company owned land paralleled the goals of the government-led land settlement scheme begun in the 1940s. Mr. Wilfred S., a smallholder from Clarendon, likened the two systems through their goals of getting more from the island's land. According to Mr. Wilfred, both programs wanted to put the land to "better use" and found that "poor people" were the ones chosen to do it. However, he distinguished the two programs by the smallholders' ability to own land.⁶¹⁷ With the Land Settlement Scheme and the Kaiser model of settlement, where smallholders received permanent land, the growers were the owners of this new land. In the case of Reynolds, where growers moved every two to three years, the status of growers was much closer to that of tenants. It is likely that the majority of smallholders preferred the Kaiser model as it offered greater access to land ownership.

⁶¹⁶ JAS, *Farming Operations*, 16.

⁶¹⁷ "Mr. Wilfred S. – Journey of a Dispersed Child," *Life in Jamaica in the Early Twentieth Century*, 8.

6.4 Smallholders and Agriculture on the Eve of Independence

When looking at the impacts of the state and company-led push towards smallholder domestic food production, it is important to separate out the goals for each of the groups involved. For the Jamaican government, if the goal was to consolidate export agriculture into medium and large farms, then the programs were a resounding success. But if the goal was to increase food production to a level that would minimize the need for food imports, then the programs were left wanting. For the bauxite companies, their own programs were resounding successes, as they acquired the necessary land for mining while at the same time acquiring a labor force to grow food on company land. For the smallholding class, for whom all of these programs were ostensibly designed, it is necessary to divide the outcome between profits and land ownership. While these programs did not bring greater agricultural productivity, apart from the bauxite operations where smallholders were resettled, or profits, it did offer greater land security, which many valued over profits. These smallholder-focused tradeoffs will be explored in greater detail below.

In terms of smallholders and export agriculture, the push towards local food production combined with a decline in the importance of export agriculture to Jamaica's economy spelled an end to major smallholder participation in the enterprise. By the late 1950s Jamaica had become the world's leading bauxite producer. This expansion of bauxite in Jamaica sounded the final death knell for Jamaica's status as one of the world's leading banana exporters. Over the course of the 1950s, bauxite and alumina production came to dominate Jamaica's export economy at the expense of agricultural goods. In 1955, bauxite and alumina constituted 27.4% of the value of Jamaica's total exports. By 1957, the percentage rose to 43.3% and would remain near 50% for the following several years. Agriculture products in the same period fell considerably as a proportion of exports. Prior to World War II, agricultural products made up roughly 35% of the value of Jamaica's GDP.

In 1954, this number had fallen to 23% and reached 13.8% in 1957.⁶¹⁸ By this point, Jamaican bauxite was twice as valuable on the market as sugar and roughly eight times more valuable than bananas.

By the 1950s, smallholders were no longer major contributors to the production of either sugar or bananas for export. The decline in the banana industry's overall value to the island meant a decrease in the number of bananas purchased for export. Buyers focused almost exclusively on plantation bananas, leading many of those smallholders who continued to cultivate bananas to return to selling bananas locally or using them as food. For sugar, as described in the previous chapter, the expansion of the central factory system excluded most smallholders from being able to sell their crop. These changes in the export industries, and in the overall importance of agriculture, left smallholders on the outside of these enterprises.

One positive of the push of smallholders away from export production and toward domestic food was that local food production was a theoretically more stable enterprise. Gone were the days of smallholders being subjected to the whims of large estates or foreign fruit companies. With the banana industry, smallholders constantly feared spending a year cultivating a banana crop only to have them rejected upon taking them to a buying station. With sugar, especially in the 1930s and 1940s, the imposition of a new quota could lead to a complete rejection of smallholder produced sugar by factories. In the domestic food market, rejections were nonexistent. Jamaica spent the 1940s and 1950s attempting to reduce the reliance of food imports, and any domestic production that helped with this would be welcome at markets.

⁶¹⁸ Fernandez, "Jamaica in the Age of Development," 186; Young, "Jamaica's Bauxite," 451; Tony Weis, "The Rise, Fall and Future of the Jamaican Peasantry," *The Journal of Peasant Studies* 33, No. 1 (2006): 66.

No longer dependent on the whims of sugar and banana companies, smallholder economic stability instead became more dependent upon state investment and state collaboration with bauxite companies. While this seemed a more stable economic model, this system brought its own vulnerabilities, as smallholders became increasingly tied to the fortunes of political coalitions and their policies. This meant that smallholder agriculture only received support as long as political leaders saw it as advantageous to the island's economy or to their own political fortunes. This model seemed to work to smallholders' benefits in the 1950s, as the aforementioned policies aimed to boost smallholder agriculture. However, the downsides of this new dependency would reveal themselves in the 1960s as leaders from both of Jamaica's two major political parties, the Jamaica Labour Party (JLP) and People's National Party (PNP) turned to an emphasis on large commercial farms rather than a network of smallholdings.⁶¹⁹ During this period, smallholders had very little access to any of the government's development resources.

Another downside to this new model was diminished chances of making large profits from agricultural production. Despite the inherent risks, one of the key aspects of banana and sugar cultivation that drew smallholders was the chance to make significant money to be able to purchase even more land. With domestic food production, these opportunities for profit by and large did not exist. The scale of operation tended to be very small, as with minimal capital investment most growers only bought and sold enough that could be carried to market. While thousands of these small-scale operations took place across the island, the profit margin for each individual case remained extremely small.⁶²⁰

⁶¹⁹ Fernandez, *Jamaica in the Age of Development*, 196.

⁶²⁰ Sidney Mintz, "The Jamaican Internal Marketing Pattern: Some Notes and Hypotheses," *Social and Economic Studies* 4, No. 1 (1955): 98.

Additionally, a tradeoff to less reliance on shipping companies was the loss of access to the sales and marketing infrastructure developed by these companies. Despite greater state-led push for an increase in domestic food production, government officials did not develop a corresponding system to better facilitate the sale and marketing of smallholder products. According to a 1954 study of the Yallahs River Valley in St. Thomas, there was no nearby market for the majority smallholder community to sell their foodstuffs. To get goods to market, they had to be loaded and carried on trucks to markets outside of the region. This proved difficult for the majority of growers in the region as much of the Valley's plots were located on hillsides and steep slopes.⁶²¹ Unlike the marketing institutions established for export crops like bananas and sugar, no such program existed to more efficiently facilitate food marketing prior to independence. It was not until 1963 that the Jamaican government launched an Agricultural Marketing Corporation and it took until the 1970s for many of its effects to be felt by small growers. In the meantime, most smallholders relied on traditional methods of marketing with the assistance of higglers.⁶²²

A third barrier to profit for smallholders was both the size and quality of their land. Despite the sizeable investments in smallholder agriculture by the Jamaican government and bauxite companies in the 1950s, they did not provide opportunities for most growers to obtain more land, or higher quality land. As stated in the previous chapter, Norman Manley estimated in 1939 that a grower needed at a minimum of five acres of high-quality land, or over seven acres of secondary quality land, to be able to operate a profiting farm. But during the 1950s, the average acreage of

⁶²¹ David Edwards, *Report on an Economic Study of Small Farming in Jamaica* (Kingston: College of the West Indies, 1961), 28.

⁶²² Higglers are predominantly Afro-Jamaican women who travel and sell goods. Jefferson, *Post-War Development*, 89.

the smallest category of farms (those under 5 acres) decreased from 1.8 to 1.5 acres. Over the period from 1954 to 1968, the number of farms with fewer than five acres rose from 139,043 to 144,604, while the overall acreage of these farms decreased from 249,079 to 223,818 acres. The number of farms in the next category, from five to twenty-five acres, decreased from 53,024 to 36,881 over this same period, suggesting that very few smallholders made the jump to this next category.⁶²³

In terms of quality of land, smallholders saw few significant improvements, keeping agricultural yields low. As described above, most of the agricultural schemes developed in the 40s and 50s reserved most of their major benefits, such as soil revitalization campaigns, to medium and large-sized holdings. While smallholders saw some benefits from these, such as greater access to nursery crops, by and large they did not have the means to renovate their holdings enough to sizably increase their yields.⁶²⁴ Most smallholder land remained on steep slopes, with second class soil. Any increases in production were not even enough to offset the decline in acreage on small farms between 1950 and 1960. Overall output on small farms actually decreased during this period, while the reliance on food imports increased.⁶²⁵ For example, the output of root crops, which are grown almost exclusively by smallholders and which the government subsidized planting of in the 1950s, fell by 20%.⁶²⁶ Part of the reason for this decline was a migration of rural Jamaicans to the city, reducing the number of people actually cultivating food. Between the 1943 and 1960 census, the population of the Kingston metropolitan area increased by 86%, from 203,000 to 376,000

⁶²³ Jefferson, *Post-War Economic Development*, 80.

⁶²⁴ *Ibid.*, 82.

⁶²⁵ *Ibid.*, 85.

⁶²⁶ *Ibid.*, 114.

people. The national average increase during this period was only 30.1%.⁶²⁷ These statistics suggest that the food production schemes failed to keep pace with the changing population dynamics across Jamaica. Their main legacy would instead be to finalize the push of smallholders away from export agriculture.

Despite the shortcomings of the new models of smallholder agriculture, they seemed to succeed in the one thing most smallholders valued over all else: securing ownership of land. As Sidney Mintz described in a 1955 article on Jamaica's internal marketing system, "From the point of view of the small cultivator, it is sensible to maintain an "uneconomic" farm because to own land in Jamaica has a very special meaning, and being independent on the land is a value of deep significance."⁶²⁸ Mr. Wilfred adhered to this sentiment, stating that "if you live on the land and is not yours, you nuh happy."⁶²⁹ Land ownership statistics support the new schemes as a driver of greater access to one's own land. Between 1954 and 1961, the percentage of smallholder farms directly owned by a smallholder increased from 55% to 75%, though this increase was partly due to a 1955 law that enabled farmers to secure titles for their land.⁶³⁰ Even though the average size of farm decreased and overall profit margins remained minimal, the act of land ownership alone was enough to offset many of these challenges smallholders continued to face.

⁶²⁷ Ibid., 16.

⁶²⁸ Mintz, "The Jamaican Internal Marketing Pattern," 100.

⁶²⁹ "Mr. Wilfred S.: Journey of a Dispersed Child," *Life in Jamaica in the Early Twentieth Century*, 8.

⁶³⁰ Jefferson, *Post-War Development*, 86.

6.5 Conclusion

As this chapter revealed, state-led development and societal planning schemes aimed at keeping a rural population content and stable on self-owned land shaped responses to three ruptures over a twelve-year period: World War II from 1939-1945, the discovery of bauxite in 1942, and Hurricane Charlie in 1951. The cumulative effect of these responses, in conjunction with the decisions of small farmers focused on maintaining their land-based freedom, resulted in Jamaican smallholders shifting away from export agriculture and towards domestic food production. World War II pushed the Jamaican banana industry to its nadir and inaugurated a state-led push for domestic food production. Hurricane Charlie in 1951 expedited the end of the Gros Michel era on the island and through agricultural reconstruction schemes, furthered the state-led push for smallholder food cultivation by restricting banana revitalization funds to medium and large farmers. The discovery of bauxite in 1942 and the subsequent start of mining operations in the 1950s both reduced the importance of agriculture to Jamaica's economy and launched a company-led smallholder model of agriculture based around domestic food production on now company-owned land. By the time Jamaica achieved its independence in 1962, smallholders no longer played a major role in export agriculture, instead focusing the vast majority of their cultivations on local foodstuffs. This reorientation of Jamaica's political ecology brought a number of tradeoffs, as smallholders, while no longer dependent upon foreign agricultural companies, now became reliant upon a Jamaican political system that smallholders had little representation in. Additionally, the potential profits that drew smallholders to agricultural export industries in the first place no longer exist with the narrow profit margins, if profit at all, from domestic food production. However, these state and company-led policies did lead to greater stability in land ownership, a trade-off that, for many, outweighed any of the costs of this new model.

7.0 Conclusion

On October 8, 2019, *The Daily Gleaner* published an article entitled “Jamaica’s Banana and Plantain Industries on High Alert for TR4 Disease.”⁶³¹ TR4 is a new strain of Panama Disease, one that, unlike the original strain, infects and kills both Cavendish and Lacatan bananas. The strain emerged in Southeast Asia in the 1990s and over the following twenty-five years made its way westward across the globe. In August 2019, Colombian agricultural officials identified TR4 on one of the country’s banana plantations, prompting a declaration of a national state of emergency and leading Jamaican officials to survey the threat in relation to the island’s bananas.⁶³² Jamaican Agriculture Minister Audley Shaw addressed Jamaican parliament, describing how the disease spread through infected plant materials and soil particles attached to tools, clothes, and vehicles. While he noted that the disease was not yet in Jamaica, its identification in Colombia meant that the disease now threatened the island’s 68,612 farmers working within Jamaica’s banana industry, as well the overall food security of Jamaica, with the majority of bananas grown on the island now being used for local consumption. Shaw discussed two preventative measures that were being taken. The first was the placement of disinfection mats at international airports and cruise ship piers so that travelers could disinfect their shoes before stepping foot on Jamaican soil. The second was the operation of a diagnostic laboratory designed for early identification of

⁶³¹ “Jamaica’s banana and plantain industries on high alert for TR4 disease,” *The Daily Gleaner*, October 8, 2019, <https://jamaica-gleaner.com/article/news/20191008/jamaicas-banana-and-plantain-industries-high-alert-tr4-disease>

⁶³² Sabine Galvis, “Colombia confirms that dreaded fungus has hit its banana plantations,” *Science*, August 12, 2019, <https://www.science.org/content/article/colombia-confirms-dreaded-fungus-has-hit-its-banana-plantations#>

the disease.⁶³³ As of this writing, there are no indications that the disease has been identified in Jamaica, though, as with the original strain of Panama Disease, it is likely a matter of when, not if, the fungus reaches Jamaican soil.

As Jamaican officials prepared the island's defenses against TR4, in January 2020 the World Health Organization (WHO) identified a disease spreading in Chinese city of Wuhan as a novel coronavirus, which would be given the name COVID-19.⁶³⁴ Since this report, COVID-19 has resulted in over 450 million recorded cases and over 6 million recorded deaths.⁶³⁵ Few lives have been left untouched by the ravages of this pandemic, whether through themselves or family members becoming infected, and/or their jobs impacted by the disruptions to local and global economies. In Jamaica specifically, there have been 128,426 confirmed cases and 2,855 deaths as of March 18, 2022.⁶³⁶ The island's economy, today so dependent on tourism, has been severely damaged, with GDP falling by 9.9% in 2020, the steepest drop in the country's history, and unemployment spiking to 12.6% in July 2020.⁶³⁷ In response to the impact of COVID on the lives of Jamaican people, particularly those in the working class, the Jamaican government inaugurated a CARE Program that provided one-off grants to 130,000 of the most vulnerable Jamaicans.⁶³⁸

⁶³³ "High alert for TR4," *The Daily Gleaner*.

⁶³⁴ P.K. Sing, "Pneumonia of unknown cause – China," *Disease outbreak news – World Health Organization*, January 5, 2020, <https://www.who.int/csr/don/05-january-2020-pneumonia-of-unkown-cause-china/en/>

⁶³⁵ "WHO Coronavirus (COVID-19) Dashboard, March 17, 2022, *World Health Organization*, <https://covid19.who.int/>

⁶³⁶ Ibid.

⁶³⁷ "Jamaica," *Economic Survey of Latin American and the Caribbean*, 2021, accessed March 18, 2022, https://repositorio.cepal.org/bitstream/handle/11362/47193/82/EI2021_Jamaica_en.pdf

⁶³⁸ Alecia Smith, "350,000 Jamaicans to Benefit From New Grants Under CARE Programme," October 13, 2021, *Jamaica Information Service*, <https://jis.gov.jm/350000-jamaicans-to-benefit-from-new-grants-under-care-programme/>

Even with this aid, along with assistance from international organizations from the World Bank, it is likely that poverty rates in Jamaica have risen beyond their last recorded number of 11% in 2019.⁶³⁹

The spread of COVID-19 and the potential spread of the new strain of Panama Disease have both resulted in a new political ecology in Jamaica, a political ecology that will surely continue to change in the coming months and years. And as the Jamaican people and government look to manage and adapt to new political ecologies brought about by crises, my analysis of the late-colonial period highlights several key factors that shaped the trajectory of Jamaica during crises from this period and will continue to shape the present and future of Jamaica's political ecology.

My study highlights the importance of crisis responses that holistically account for the multispecies assemblages that shape these events. In the early years of the response to Panama Disease, agricultural officials focused nearly all their attention on smallholder agriculture and how the structure of smallholdings, and the smallholders themselves, contributed to the spread of the disease. Absent from nearly all discussion of the disease in the first decade of its spread was the plantation sector whose monoculture structure, and the labor required to work the plantation, were also key facilitators of the disease's spread. The ability of the Panama Disease fungus to move between these two structures at will highlights the inefficiency of basing management strategies around imposed classifications.

Additionally, I underscore that changes to political ecology are constant. In early to mid-nineteenth century Jamaica, it was likely difficult to envision a Jamaican economy and

⁶³⁹ "Poverty rate declined in 2019; data for 2020 still outstanding," *Radio Jamaica News*, June 29, 2021, <http://radiojamaicanewsonline.com/local/poverty-rate-declined-in-2019-data-for-2020-still-outstanding>

environment with anything besides sugar at its center. By the early twentieth century, it was hard to imagine a Jamaica without banana exports. By the 1950s, bauxite, not agriculture, drove Jamaica's economy. Today, even bauxite has taken a backseat to tourism. Change is constant. Recognizing this can help prevent overinvesting in one potential outcome at both the individual and governmental level.

Tied in with this recognition of change, I reveal importance of flexibility in crisis management. In the early stages of ecological crisis, especially regarding pathogens, there is often a great deal of uncertainty over the causes and best way to respond to the situation. In Jamaica's ecological crises in the late-colonial period, colonial officials, scientists, and growers were largely intransigent about their responses. At the official level, agricultural officials developed plans for Panama Disease prior to the discovery of the fungal cause of the disease and took years to adopt new policies grounded in the new scientific evidence. At the grower level, plantation owners continue to cultivate Gros Michel monocultures despite this method of cultivation providing easy pathways to fungal spread. Many smallholders continued to use co-cropping practices as well as banana trash despite both of these practices contributing to disease spread.

Developing responses that account for these factors does not mean that the responses will "solve" these crises or prevent them from happening. Even had Jamaican officials and growers immediately known the direct cause of Panama Disease, how it spread, and what its impact would be, it is almost certain that the disease would have eventually brought an end to Gros Michel cultivation on the island. No country or colony was able to stop the spread of Panama Disease. Farmers cannot predict when a hurricane will come, when a war will break out, or when and where the next disease will come from. But with greater preparation for crisis comes more opportunity and time for adaptation, adaptation that will be critical when the next crisis comes.

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