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0521521726 - The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989

Edited by William Gervase Clarence-Smith and Steven Topik

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Introduction

Coffee and Global Development

Steven Topik and William Gervase Clarence-Smith

That cup of coffee you sip at your breakfast table, desk, or café comes from far away.¹ It was grown in Brazil, Colombia, Vietnam, the Ivory Coast, or one of a hundred other coffee-producing lands on five continents. It is a palpable and long-standing manifestation of globalization. For 500 years coffee has been grown in tropical countries for consumption in temperate regions, linking peoples of different lands and continents by trade, investment, immigration, conquest, and cultural and religious diffusion. There is a world of history in your cup.²

An increasingly sophisticated study of world history is a means of understanding these processes. We have thus brought together scholars from nine countries, who cover coffee markets and societies over the last five centuries in fourteen countries on four continents and across the Indian and Pacific oceans, with a special emphasis on the nineteenth and early twentieth centuries. We analyze a wide variety of issues, related to economic, political, and cultural development, to see how they have played out over the last centuries in different parts of the globe, under different political arrangements: the creation and function of commodity, labor, and financial markets; the role of race, ethnicity, gender, and class in the formation of coffee societies; the interaction between technology and ecology; and the impact of colonial powers, nationalist regimes, and the forces of the world economy in the forging of economic development and

¹ Parts of Topik's contribution here were previously published in "Coffee Anyone? Recent Research on Latin American Coffee Societies," *Hispanic American Historical Review* (May 2000): 225–66.

² Steven C. Topik, "Coffee," in K. Kipple, ed., *The Cambridge History of Food and Nutrition* (New York: Cambridge University Press, 2000), pp. 641–53.

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political democracy. Our goal is that this volume should contribute not only to an understanding of global coffee economies, but also to world history and postcolonial perspectives.

Why Coffee?

Studying larger theoretical trends through the lens of coffee might seem to cloud the issue, but this is not an exercise in “coffee fetishism,” nor a trendy effort to cash in on the “Starbucks Revolution.” Coffee is a commodity worthy of serious attention because of the central and long-standing place it has held in the world economy and in the lives of millions of people. One of the few holdovers from the era of the spice trade and mercantilism, coffee has been a major traded good since the sixteenth century. Indeed, it is one of the most valuable internationally traded agricultural commodities in history. Spreading out from Sub-Saharan Africa, it is now produced in over a hundred countries, on five continents and many islands. Whereas sugar comes in part from temperate regions, derived from sugar beet, coffee-producing countries have always been in the tropics, while consumption has been concentrated in temperate areas. Essentially, poor countries have grown coffee for rich ones.

Coffee cultivation involved many colonial powers, and yet much of the literature has not treated it as a colonial product. From Yemen, fitfully and partially part of the Ottoman Empire, it spread to the overseas possessions of the Dutch (Java, Surinam), French (Réunion, Martinique, Guadeloupe, Saint Domingue, Madagascar, Côte d’Ivoire, Vietnam, New Caledonia), British (India, Ceylon, Jamaica, Kenya, Tanganyika, Uganda), Portuguese (Brazil, Angola, São Tomé), Spanish (New Spain, Cuba, Puerto Rico, Philippines), Italians (Eritrea), Belgians (Congo), Germans (Tanganyika, Cameroon, New Guinea), and North Americans (Puerto Rico, Hawai’i).³

Despite this colonial spread, most coffee has been grown in independent countries of Latin America since the middle of the nineteenth century, and the predominance of independent states, counterintuitively, allowed politicians in such countries to take partial control of the world coffee

³ Frédéric Mauro, *Histoire du café* (Paris: Editions Desjonquères, 1991); A. E. Haarer, *Modern Coffee Production* (London: Leonard Hill, 1956), ch. 1; G. Wrigley, *Coffee* (Harlow: Longman, 1988).

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market. World coffee output, which grew vertiginously in the nineteenth century, was transformed by Brazil's valorization program from 1906, which deeply affected the market up to the late 1930s, and gradually involved other Latin American states. The 1960s saw the emergence of the International Coffee Organization (ICO), a cartel of producing and consuming states from all over the globe, which attempted to influence the world price of coffee until 1989.⁴

Latin America continues to produce more than twice as much coffee as the rest of the world combined, but Africa and Asia are catching up. Even once its relative output had diminished by the mid-1980s, coffee was the principal export of seven Latin American countries, and the second export of another two, making it by far the most important agricultural export for the continent, and second overall in value to petroleum.⁵ However, Africa is now approaching Latin America in terms of acres planted in coffee, and many African countries are more dependent on coffee for their exports. Ethiopia is the world's fifth largest producer, and Côte d'Ivoire, Cameroon, Uganda, Kenya, Tanzania, Rwanda, Burundi, Congo, and Madagascar are among the largest producers. Parts of Asia are also rapidly gaining ground, notably, Vietnam, India, Thailand, Indonesia, and the Philippines. That said, African and Asian countries place a greater emphasis on *robusta* (*Coffea canephora*) varieties, less valuable than the *C. arabica* varieties typical of Latin American producers.⁶ This book reflects the extension of coffee production across the Southern Hemisphere by considering case studies from Latin America, Africa, and Asia, including the Indian and Pacific oceans.

But why compare coffee countries? Why should one assume that there would be any similarity between them? How might this provide valuable insights into world history? Following a new interest in "commodity chains," we have both recently argued for the utility of such an approach,

⁴ Robert H. Bates, *Open-Economy Politics: The Political Economy of the World Coffee Trade* (Princeton: Princeton University Press, 1997); V. D. Wickizer, *The World Coffee Economy, with Special Reference to Control Schemes* (Stanford: Food Research Center, 1943); Edmar Bacha and Robert Greenhill, *Marcellino Martins and E. Johnston, 150 anos de café* ([Rio de Janeiro]: Marcellino Martins and E. Johnston Exportadora Ltda., 1992); Topik Chapter 1.

⁵ Victor Bulmer-Thomas, *The Economic History of Latin America since Independence* (Cambridge: Cambridge University Press, 1994), p. 9.

⁶ Gregory Dicum and Nina Luttinger, *The Coffee Book: Anatomy of an Industry from Crop to the Last Drop* (New York: New Press, 1999), pp. 41, 42; J. de Graaff, *The Economics of Coffee* (Wageningen: Pudoc, 1986).

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as opposed to more common nation-centered perspectives.⁷ This stems from a central observation of Karl Marx:

[Man] begins to distinguish himself from the animal the moment he begins to *produce* his means of subsistence, a step required by his physical organization. By producing food, man indirectly produces his material life itself. . . . What they [individuals] are, therefore, coincides with *what* they produce and *how* they produce. The nature of individuals thus depends on the material conditions which determine their production.⁸

Rather than produced for just subsistence, coffee production soon became an activity of local and then international exchange. Export products became “social motors” that sucked peripheral areas into the world economy, especially beginning in the mid-nineteenth century.

Although modernization and dependency theorists both rightly stress that the nature of the export sector shaped the national systems that emerged, similar impulses did not dictate that all societies would come out the same. The motor was not driving a social steamroller, flattening all participants into homogeneous pieces of a puzzle. Local social relations, prior histories, cultural understandings, and political power all mediated the impact of coffee. Indeed, the comparative study of coffee societies is useful precisely because it allows us to understand the extent of the freedom of action enjoyed by local producers, and the diversity of institutions and social relations in play.

Early Views and Policies Concerning Coffee

The first literate agents involved in coffee considered it purely as a commodity for commercial exchange. Cultivation for a century and a half was restricted to small terraced gardens in the mountains of Yemen, rarely, if ever, visited by merchants. Systems of production were thus little considered by Arab, Jewish, Indian, or European traders. Coffee was simply

⁷ G. Gereffi and M. Korzeniewicz, eds., *Commodity Chains and Global Capitalism* (Westport: Greenwood Press, 1994); A. Appadurai, ed., *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge: Cambridge University Press, 1988); Steven Topik and Allen Wells, eds., *The Second Conquest of Latin America: Coffee, Henequen, and Oil during the Export Boom, 1850–1930* (Austin: University of Texas Press, 1998); William G. Clarence-Smith, *Cocoa and Chocolate, 1765–1914* (London: Routledge, 2000); William G. Clarence-Smith, *Cocoa Pioneer Fronts since 1800: The Role of Smallholders, Planters, and Merchants* (New York: St. Martin’s Press, 1996).

⁸ Karl Marx, “The German Ideology,” in Loyd D. Easton and Kurt H. Guddat, eds., *Writings of the Young Marx on Philosophy and Society* (Garden City, N.J.: Anchor Books, 1967), p. 409.

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a resource from which they could profit, and from which governments could extract taxes. To the extent that there was discussion about the social or political consequences of coffee, they were directed at consumption. Since Muslims played the largest part in diffusing coffee in its first three centuries, a burning issue was whether coffee drinking was permitted by the Sharia or whether it should be prohibited, like alcohol. The issue was resolved fairly quickly in favor of coffee. A related and more persistent question was whether coffeehouses, as centers of intrigue and subversion, should be closed down.⁹ The latter question also surfaced in Europe, but Western doubts about consumption were related more to concerns about health and politics than to religious issues.¹⁰

Despite the common assumption that European merchants and bureaucrats were the engine that powered the growth of the world coffee economy, they were not alone in spreading the crop. *Arabica* beans were planted in India by Muslim pilgrims in the seventeenth century, long before the British took any interest in the crop. Dutch imports of seedlings into Java in the 1690s have been much trumpeted as the “origins” of coffee cultivation in monsoon Asia, but the seedlings came from India via Muslim traders, not from Yemen. Moreover, Dutch efforts at growing coffee in Indonesia may well have been preceded by those of Muslim travelers, especially in Sumatra. An Islamic expertise in early coffee cultivation certainly ran parallel to that of Europeans. When Europeans did introduce the crop in Asia and the Pacific, they were often Roman Catholic missionaries, rather than personnel of the Dutch East Indies Company.¹¹

Sub-Saharan Africa was the original home of wild coffee, with a great diversity of species and subspecies, so that an intimate knowledge of the environment, transmitted orally, proved an advantage for indigenous peoples in the early phases of the exploitation of coffee. Indeed, well before the spread of the beverage made from roasted beans, wild green robusta beans were chewed as part of ceremonial rituals of alliance in what later

⁹ Tuchscherer, Chapter 2; Ralph Hattox, *Coffee and Coffeehouses: The Origins of a Social Beverage in the Medieval Near East* (Seattle: University of Washington Press, 1985); Antoinette Schnyder-von Waldkirch, *Wie Europa den Kaffee Entdeckte* (Zurich: Jacobs Suchard Museum, 1988).

¹⁰ Wolfgang Schivelbusch, *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants*, trans. by David Jacobsen (New York: Vintage Books, 1993); Andrew Barr, *Drink: A Social History* (London: Pimlico, 1998).

¹¹ William G. Clarence-Smith, “The Spread of Coffee Cultivation in Asia, from the Seventeenth to the Early Nineteenth Century,” in Michel Tuchscherer, ed., *Le Commerce du café avant l'ère des plantations coloniales* (Cairo: Institut Français d'Archéologie Orientale, 2001), pp. 371–84.

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became Uganda.¹² Angola's first robusta exports, in 1822, were picked from wild trees and brought to the coast by Africans.¹³ As the rush to coffee developed, Angolan Africans took part in clearing and ameliorating wild stands in the hinterland of Luanda.¹⁴

As Westerners gradually came to dominate international trade and consumption, coffee became an object of the mercantilist analyses and policies developed in Early Modern Europe. Heavy taxation of "luxuries" ensured that European and North American consumption levels remained quite limited until the end of the eighteenth century, but they were sufficient to nourish a lucrative trade. As coffee could not be cultivated in cold northern latitudes, it was a natural product for the colonial division of labor, entirely produced in tropical colonies, transported on metropolitan ships, reexported to countries without colonies of their own, and mainly consumed in the West.¹⁵ As Europeans spread coffee cultivation to their Caribbean possessions, and later to Portuguese and Spanish America, the French initially took the lion's share of the trade from the New World, even selling Caribbean beans in the Near East by the eighteenth century. However, the Dutch retained a near monopoly of imports from Asia.¹⁶

Once coffee cultivation had become established in their colonies, Europeans showed a growing interest in production, focused mainly on coercive methods of labor recruitment and control. The Dutch East Indies Company imposed forced coffee cultivation in West Java, combined with the occasional uprooting of trees if prices in Europe fell too low. They concluded delivery contracts with local "regents," who forced their subjects to produce the required amounts. The Dutch thus transferred seventeenth-century methods developed in the spice islands to the coffee "gardens" of West Java.¹⁷ In contrast, European settlers in the New World and the

¹² Haarer, *Modern Coffee Production*, p. 1.

¹³ Joaquim António de Carvalho e Menezes, *Memória geográfica e política das possessões portuguesas n'Africa occidental* (Lisbon, 1834), p. 20.

¹⁴ David Birmingham, "The Coffee Barons of Cazengo," *Journal of African History* 19, no. 4 (1978): 523–38, reprinted in David Birmingham, *Portugal and Africa* (Basingstoke: Macmillan, 1999).

¹⁵ Simon Smith, "Sugar's Poor Relation: Coffee Planting in the British West Indies, 1720–1833," *Slavery and Abolition* 19, no. 3 (1998): 68–9.

¹⁶ Tuchscherer, Chapter 2; Clarence-Smith, "The Spread of Coffee Cultivation."

¹⁷ M. R. Fernando and William O'Malley, "Peasants and Coffee Cultivation in Cirebon Residency," in Anne Booth et al., eds., *Indonesian Economic History in the Dutch Colonial Era* (New Haven: Yale University Press, 1990), pp. 171–86; Peter Boomgaard,

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Indian Ocean turned to African slaves, already tried and tested for sugar production. Most Africans who grew coffee thus did so in the Americas, at least until Brazil abolished slavery in 1888.¹⁸ This myopic duplication of earlier labor systems may well have hampered production, as coercion offered no real advantages in a system of cultivation without labor gangs, while the demoralization and resentment of workers probably lowered productivity.

The explosion of coffee cultivation beginning in the mid-nineteenth century reflected sharp tax reductions in the West, as free trade spread, and towns, industry, and population grew rapidly. This helped to make coffee a staple part of the diet of North America and much of Europe, especially France and the Germanic lands.¹⁹ Tea-drinking Britain and Russia and chocolate-drinking Spain were the main countries to resist the addictive allures of coffee, and that only partially. Moreover, coffee consumption made great strides in less developed countries, notably, in parts of Latin America, where it pushed aside chocolate, *guaraná*, *maté*, and other traditional local beverages.²⁰

Brazil was the greatest long-term beneficiary of this tremendous boom. The destruction of Haiti's *arabica* plantations after the slave insurrection of 1791 left a gaping hole in the market.²¹ Initially, there were other contenders for Haiti's position as the world's leading exporter. In Asia, Indonesia was at the fore, with Ceylon, India, and the Philippines showing great promise. However, the *Hemileia vastatrix* fungus epidemic in the 1870s played havoc across the Old World, compounding problems originating in shortages of well-placed forested land.²² Among Hispanic American producers, Puerto Rico's early success was limited by the small size of the island.²³ However, Venezuela's speedy reallocation of labor

Children of the Colonial State; Population Growth and Economic Development in Java, 1795-1880 (Amsterdam: Free University Press, 1989), pp. 19, 30-1; F. de Haan, *Priangan: De Preanger-Regentschappen onder het Nederlandsch bestuur tot 1811* (Batavia: Bataviaasch Genootschap van Kunsten en Wetenschappen, 1910-12).

¹⁸ Mauro, *Histoire*, chs. 5 and 10.

¹⁹ Topik, Chapter 1; Barr, *Drink*, pp. 5-6; John Burnett, *Liquid Pleasures, a Social History of Drinks in Modern Britain* (London: Routledge, 1999).

²⁰ Clarence-Smith, *Cocoa and Chocolate*, chs. 2-3.

²¹ Michel-Rolph Trouillot, "Motion in the System: Coffee, Color, and Slavery in Eighteenth-Century Saint-Domingue," *Review* 3 (Winter 1982): 331-88.

²² Clarence Smith, Chapter 4.

²³ L. W. Bergad, *Coffee and the Growth of Agrarian Capitalism in Nineteenth Century Puerto Rico* (Princeton: Princeton University Press, 1983).

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from cocoa to coffee was a taste of things to come, even if postindependence political chaos slowed the adoption of coffee in Colombia and Central America.²⁴

The prominence of Brazil's coffee exports, together with improvements in Western agronomy and the spread of free trade, provoked no more than a limited, and sometimes simplistic, interest in the crop's place in economic development. Labor was the main focus of analysis, with debates centering on the morality and efficacy of slavery.²⁵ Southern European immigrants replaced slaves after 1888, making questions of immigration central to the coffee economy, notably, the refusal to allow Africans or Chinese to enter the country.²⁶

The scientific analysis of Brazilian cultivation methods faced formidable obstacles. There was only one fairly reliable census in the nineteenth century, that of 1872, and planters often did not know how many hectares of land they owned, nor how many trees they had planted to the hectare. Although a few planters' manuals were published, there were no schools of agronomy, and the first experimental station was founded only in 1887. The success of coffee was evidence of the truth of the popular proverb, "God is Brazilian," demonstrated by the natural wealth of the country's soil and climate. There was little institutionalization of credit, land, or labor markets, and individual growers adapted to local conditions on an ad hoc basis, for the Brazilian elite was much more interested in modernizing the cities than in developing the countryside. Indeed, overwhelming the world coffee market was proof that their trial-and-error methods sufficed.²⁷

²⁴ R. Cartay, *Historia económica de Venezuela, 1830-1900* (Valencia: Vadell Hermanos, 1988); William Roseberry, *Coffee and Capitalism in the Venezuelan Andes* (Austin: University of Texas Press, 1983); Marco Palacios, *El Café en Colombia, 1850-1970* (Mexico City: El Colegio de Mexico, 1983); United States, *Cultivation of, and Trade in, Coffee in Central and South America* (Washington, D.C., 1888); 50th Congr., House of Representatives, 1st sess., *Consular Reports on Commerce etc.*, no. 98.

²⁵ Joaquim Nabuco, *O abolicionismo* (London: Kingdon, 1883).

²⁶ Thomas Holloway, *Immigrants on the Land: Coffee and Society in São Paulo, 1886-1934* (Chapel Hill: University of North Carolina Press, 1980); George Reid Andrews, *Blacks and Whites in São Paulo Brazil, 1888-1988* (Madison: University of Wisconsin Press, 1991).

²⁷ Franz W. Dafert, *Über die Gegenwartige Lage des Kaffeebaus in Brasilien* (Amsterdam: J. H. de Bussy, 1898), and *Principes de Culture Rationnelle du Café au Brésil* (Paris: Augustin Challand, 1900). See also Warren Dean, *Rio Claro: A Brazilian Plantation System, 1820-1920* (Stanford: Stanford University Press, 1976); Warren Dean, *With Broadax and Firebrand* (Berkeley: University of California Press, 1995); Stanley Stein, *Vassouras* (Cambridge, Mass.: Harvard University Press, 1958); Steven Topik, "Representações nacionais do cafeicultor: Ze Prado e Juan Valdez," *Revista Brasileira de História* 15, no. 29 (1995): 157-72.

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Hispanic America displayed a similar lack of agronomic enthusiasm, combined with a focus on labor issues. In the preface to a later edition of his manual on coffee production in Mexico, Matias Romero noted that when he first published it in 1878, he sold only two or three copies.²⁸ Indeed, such manuals were often published in Europe and exported to Latin America.²⁹ Central American governments participated in the coffee economy mainly by enforcing debt peonage, although local elites were most influential in shaping local labor systems. Mayans were forced into the coffee fields of Guatemala and Mexico, whereas in Nicaragua, market forces proved stronger than coercion in coaxing Amerindians and others to participate in the coffee economy.³⁰

Labor was again the main center of attention in colonial Asia and Africa, for coffee was the key to the Dutch “Cultivation System” of obligatory deliveries to the state in Indonesia from 1832, “the cork on which the Netherlands float.” Coffee alone provided 82 percent of government revenues from the iniquitous system up to 1860, whereas sugar was a loss-making crop to the mid-1840s.³¹ Debates about the morality and efficacy of this modernized and intensified system of forced cultivation raged until the 1870 decision to engender a gradual transition to European estates. Even then, the winding down of forced coffee cultivation lasted up to the First World War. By this time the devastation of *Hemileia vastatrix* had greatly reduced the economic significance of coffee, and smallholder success was raising awkward questions about the choice of estates to achieve economic growth.³²

Portuguese and French colonies relied more on coercing labor for European estates, although the Portuguese in Timor also copied the forced cultivation methods of their Dutch neighbors until the 1920s.³³ The problem of slavery was most acute in Angola, as late as the 1910s. Moreover,

²⁸ Matias Romero, *Coffee and India-Rubber Culture in Mexico* (New York: G. P. Putnam’s Sons, 1898), p. v.

²⁹ Mario Samper Kutschbach, “Modelos vs. practicas: Acercamiento inicial a la cuestión tecnológica en algunos manuales sobre cafcultura, 1774–1895,” *Revista de Historia* (Costa Rica) 30 (July–December 1994): 11–40; Carlos Naranjo G., “La Primera modernización de la cafcultura costarricense, 1890–1950,” *Revista de Historia* (Costa Rica) 36 (July–December 1997): 79–106.

³⁰ Rus, McCreery, Dore, and Charlip, Chapters 8–11.

³¹ Cornelis Fasseur, *The Politics of Colonial Exploitation: Java, the Dutch and the Cultivation System* (Ithaca: Cornell University, 1992), pp. 32–6, 151, and 221.

³² William G. Clarence-Smith, “The Impact of Forced Coffee Cultivation on Java, 1805–1917,” *Indonesia Circle* 64 (1994): 241–64.

³³ William G. Clarence-Smith, “Planters and Smallholders in Portuguese Timor in the Nineteenth and Twentieth Centuries,” *Indonesia Circle* 57 (1992): 15–30.

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the Portuguese replaced slavery with forced labor, causing major international scandals until the system was finally wound up as late as 1962.³⁴ French coffee planters in Madagascar and Côte d'Ivoire did not have the same recourse to slavery, but they depended on labor coerced by the state until 1946.³⁵

The British, the standard-bearers of liberal colonialism, were loath directly to coerce workers, even though they briefly applied forced coffee cultivation in Ceylon in the early nineteenth century. The main problem lay in persuading Tamils from southern India to migrate seasonally to Ceylon's coffee estates, and the authorities in both India and Ceylon long turned a blind eye on various abuses in this formally free labor system.³⁶ In Kenya, the British banned African cultivation of *arabica* to protect European settlers, although this was not extended to other territories.³⁷

For all their overriding concern with labor, some colonial elites in the Old World showed a greater interest in techniques of coffee cultivation than that displayed by their counterparts in independent Latin America. Nowhere was tropical agronomy more developed than in Indonesia, where the Dutch carried out research for indigenous smallholders, while European planters banded together to create their own institutes for each of the major crops.³⁸ This work revolutionized sugar cultivation around the world, through the development of new strains of cane.³⁹ However, there seems to have been no parallel breakthrough with coffee, despite some worthy publications.⁴⁰ Investigations into tropical agriculture were carried out by other colonial powers, with the results finding

³⁴ James Duffy, *A Question of Slavery* (Cambridge: Harvard University Press, 1967); Birmingham, "The Coffee Barons"; [William] G. Clarence-Smith, *The Third Portuguese Empire, 1825-1975, a Study in Economic Imperialism* (Manchester: Manchester University Press, 1985), pp. 107-8, 139-41, 183, 215.

³⁵ H. Fréchou, "Les Plantations européennes en Côte d'Ivoire," *Cahiers d'Outremer* 8, no. 29 (1955): 56-83; Campbell, Chapter 3.

³⁶ Kurian, Chapter 7.

³⁷ Paul Mosley, *The Settler Economies: Studies in the Economic History of Kenya and Southern Rhodesia, 1900-1963* (Cambridge: Cambridge University Press, 1983); C. C. Wrigley, *Crops and Wealth in Uganda: A Short Agrarian History* (London, 1959); Curtis and Eckert, Chapters 12 and 13.

³⁸ C. J. J. van Hall and C. van de Koppel, eds., *De Landbouw in de Indische archipel* (The Hague: W. van Hoeve, 1946-50).

³⁹ William K. Storey, *Science and Power in Colonial Mauritius* (Rochester, N.Y.: University of Rochester Press, 1997).

⁴⁰ J. Hagen, *De Koffiecultuur* (Haarlem: H. D. Tjeenk Willink and Zoon, 1932); A. J. Ultée, "Koffiecultuur der ondernemingen," in Hall and Koppel, eds., *De landbouw*, vol. 2b, pp. 7-88; B. H. Paerels, "Bevolkingskoffiecultuur," in Hall and Koppel, eds., *De Landbouw*, vol. 2b, pp. 89-119.