SUGAR and POWER
IN THE CARIBBEAN
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The South Porto Rico
Sugar Company in Puerto Rico and
the Dominican Republic
1900-1921
Humberto García Muñiz

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The South Porto Rico Sugar Company in Puerto Rico and the Dominican Republic
1900-1921

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<td>Archivo de Arquitectura y Construcción de la Universidad de Puerto Rico / Río Piedras, Puerto Rico</td>
</tr>
<tr>
<td>AGN</td>
<td>Archivo General de la Nación, Santo Domingo, Dominican Republic</td>
</tr>
<tr>
<td>AGPR</td>
<td>Archivo General de Puerto Rico, San Juan, Puerto Rico</td>
</tr>
<tr>
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<td>University of Florida, Gainesville</td>
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#### Symbols for Manuscript Collections

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</tr>
<tr>
<td>CCG</td>
<td>Colección Central Guánica</td>
</tr>
<tr>
<td>CMPB</td>
<td>Colección Máximo Pereyra Brea</td>
</tr>
<tr>
<td>CSM</td>
<td>Colección Santiago Michelena</td>
</tr>
<tr>
<td>CVAD</td>
<td>Colección Vetilio Alfau Durán, Santo Domingo, Dominican Republic</td>
</tr>
<tr>
<td>DE CDFL</td>
<td>Departamento de Estado, Corporaciones Domésticas con Fines de Lucro</td>
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<td>DE CFFL</td>
<td>Departamento de Estado, Corporaciones Foráneas con Fines de Lucro</td>
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<tr>
<td>MY</td>
<td>Fondo Municipal de Yauco</td>
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<tr>
<td>LAWC</td>
<td>Lewis A. Ware Collection</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<td>---------</td>
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<tr>
<td>BLA</td>
<td>Bureau of Insular Affairs</td>
</tr>
<tr>
<td>SD</td>
<td>Santo Domingo</td>
</tr>
<tr>
<td>WD</td>
<td>War Department</td>
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<td>Office of the Alien Property Custodian</td>
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<td>BS</td>
<td>Bureau of Sales</td>
</tr>
<tr>
<td>CS</td>
<td>Card Summaries of Intelligence Information Concerning Individuals and Companies</td>
</tr>
<tr>
<td>LSD</td>
<td>Liquidation Summary Dockett</td>
</tr>
<tr>
<td>P&amp;P</td>
<td>Archivo Peynadó &amp; Peynadó</td>
</tr>
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</tr>
<tr>
<td>TDBPP</td>
<td>T.D. Boyd Private Papers</td>
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<tr>
<td>TDBjrPPT.D.</td>
<td>Boyd Jr. Private Papers</td>
</tr>
<tr>
<td>TPP</td>
<td>Charles W. Taussig Private Papers</td>
</tr>
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**Descriptive Symbols**

- **C**: Caja (box)
- **Corr**: Correspondence
- **D**: Document
- **F**: Fondo
- **Fl**: Folder
- **fo**: Folio
- **E**: Entry
- **Exp**: Expediente (file)
- **L**: Legajo (bundle)
- **Le**: Letter
- **MS**: Manuscript
- **PC**: Private Correspondence
- **N**: Note
- **Sc**: Sección (section)
- **S**: Serie (series)
- **Ss**: Subsección (sub section)

**Abbreviation of Published Works**

- **LPSM**: Louisiana Planter and Sugar Manufacturer
No town is more deeply ingrained in the Puerto Rican psyche than Guánica. In 1898, General Nelson A. Miles led the U.S. military landing at Guánica, prompting a frenzied debate over the United States-Puerto Rico colonial relationship that continues unabated to this day. In 1900, Guanica Centrale was built near the invasion site, becoming immediately the largest sugar enterprise in Puerto Rico. Hence, U.S. military and economic expansionism converged in Guánica, and Guanica Centrale came to incarnate the United States political rule over Puerto Rico.

In 1916, Mary White Ovington, a founder of the National Association for the Advancement of Colored People, noted that not American soldiery but American capital occupies Guánica, and no military rule could be more powerful or more complete. In the center of the occupation is a great chimney, day and night blackening the air with its smoke; while beyond lie the fields of cane stretching for miles through the long valley; for Guanica is the largest sugar central in Porto Rico; and the second largest in the world.¹

In the 1920s, Pedro Albizu Campos, who in a few years would lead the most serious challenge ever to U.S. colonialism in Puerto Rico, was quoted as saying: "The American Governor is a puppet of the Administrator of Central Guánica. ...The one to kill is not the Governor but the Administrator of Guánica!"² In the 1930s, a popular song, a *plena,*

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2 Luis Muñoz Marín, *Memorias 1898-1940* (San Juan: Universidad Interamericana de Puerto Rico, 1982), pp. 63-64.
still known by every Puerto Rican, had the chorus “Sea shark, sea shark, she ate the American of Guanica Central” (Tintorera del mar, tintorera del mar, se comió al americano de la Guánica Central). Also in the 1930s, an American journalist wrote: “Guánica, where American troops first landed under General Miles. A sugar republic -with its own clubs, police, post office, movie theater, stores, hospital and railroad.”

Although Guanica Centrals’s prominence is unsurpassed in Puerto Rican history, it was only one of several corporations controlled by New York-based South Porto Rico Sugar Company of New Jersey [hereafter cited as SPRSCO/NJ] for the growing, manufacturing, and export of raw sugar in Puerto Rico in the 1900s, in the Dominican Republic in the 1910s, and, finally, in the United States itself in the 1950s. This work studies the early history of the South Porto Rico Sugar Company from 1900-1920. The corporation lasted until 1968 when it merged into an expanding multinational, Gulf + Western.

At the core of my analysis is that the SPRSCO/NJ succeeded because of its unique combination of capital, human resources, and technology during propitious times. The company began with German capital familiar with conditions in the U.S. market and in Puerto Rico. It mobilized specialized management and technicians, trained and educated in sugar processing in Louisiana, to oversee operations, first, in Puerto Rico and, secondly, in the Dominican Republic, staffed by Caribbean labor in both countries. It applied superior Barbadian biological technology in cane cultivation to Puerto Rico and the Dominican Republic. Plus, it brought together top-level managers and directors at its New York headquarters who recognized opportunities in nations dominated by the United States.

During the nineteenth century, Puerto Rico had attracted much less interest from U.S. capital than Cuba and the Dominican Republic. It came during a period of a forceful U.S. economic, military, and political offensive that also included other large United States-based investments and technology transfers in industry and agriculture to the Hispanic

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Caribbean. In 1898, the amount of U.S. capital invested in the Caribbean was less than in Mexico, Canada, or Europe. U.S. direct investment in the region (including Central America but excluding northern Colombia and Venezuela) has been estimated only at $60.5 million.\(^4\) SPRSCO/NJ’s investment in Puerto Rico forms part of the U.S. “...spillover to the Caribbean” –to use the phrase of business historian Mira Wilkins– that followed the Spanish Cuban American War.\(^5\) But beginning with the twentieth century, U.S. investments increased in Puerto Rico and the Dominican Republic, and it is with this new period that this book is concerned.

The object of this book is three-fold. First, it examines the incorporation of a U.S. multinational in New York and its growth in Puerto Rico, following U.S. annexation in 1898 and its inclusion within the U.S. tariff structure in 1900.\(^6\) Secondly, it analyzes the expansion of a U.S. sugar multinational from Puerto Rico to the Dominican Republic. Thus, several aspects of SPRSCO/NJ in both islands are examined. The evolution of a U.S. sugar multinational in two Caribbean countries is an original study in Caribbean historiography, particularly in two dissimilar societies, one a U.S. colony within the U.S. tariff system and the other an independent republic selling to the world market.

Thirdly, it probes several fundamental economic and social issues in the evolution of the Puerto Rican and the Dominican sugar industries that have not been adequately explored to date.\(^7\) The important role played by Puerto Rican-based sugar centralistas during the first two decades

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has been practically ignored, with most analysis centering on the alleged preponderance of U.S. corporations. These judgments are based mainly on studies conducted in the 1930s, after the 1921 fall in prices and the ensuing agricultural depression changed ownership patterns for sugar corporations active in Puerto Rico. Dominican and Puerto Rican sugar historiography of the twentieth century tends to treat most issues in general terms, including capital, land, labor, management and technology. Precisely these four issues are examined in detail in this study.

This book is divided into ten chapters. Chapter 1 presents a review of sugar industry in Puerto Rico and the United States during the nineteenth century, with particular emphasis on the development of the sugar industry in the Guánica region and the Sugar Trust in eastern United States. Chapter 2 provides the context for the formative period of SPRSCO/NJ by analyzing the growth of the sugar industry in Puerto Rico from 1898 to mid-1914. Chapter 3 deals with SPRSCO/NJ’s establishment and expansion in southwestern Puerto Rico. Chapter 4 studies specific aspects of the corporation, namely, capital origins, as well as management and technical expertise as related to the factory and field.

Chapters 5 to 7 discuss SPRSCO/NJ’s expansion to La Romana area in the Dominican Republic. Starting with the development of the sugar industry in the eastern part of the country in the 1870s, Chapter 5 covers the socio-economic and political context of La Romana before SPRSCO/NJ’s establishment in 1910. Chapter 6 examines SPRSCO/NJ’s growth from a sugar plantation to a land-and-factory complex between 1910 and the early 1920s. Chapter 7 considers the relationship between land titles and rural bandits (gavillero) warfare in La Romana area. Chapter 8 looks at the impact of war prosperity in the sugar industry, the boom period, and the 1921 bust. It also analyzes SPRSCO/NJ’s corporate reorganization following World War I and the 1917 Jones Act. Chapter 9 analyzes SPRSCO/NJ’s experience with labor. Here I also treat in detail the rise of organized labor in the two islands. The tenth and last chapter compares SPRSCO/NJ’s development in the Puerto Rican and Dominican contexts, examining differences and similarities from both a national and a corporate perspective.
Methodologically, this study has proceeded at various levels. On the macro-level, I collected general data on the growth of the sugar industry in Puerto Rico, the Dominican Republic and the United States during the nineteenth century and early 1900s. I gathered information from numerous government archives, official publications, and national and local newspapers in the three countries. At the company level, I located important data in the remaining records of SPRSCO/NJ’s Puerto Rican operations and in questionnaires and interviews with persons whose lives had been touched by SPRSCO/NJ. Of particular importance for capital and management/technology issues were the archives of the New York Stock Exchange, the records of the Office of the Alien Property Custodian, the *Louisiana Planter and Sugar Manufacturer*, and the private papers of Louisiana’s Boyd’s and the Barbados’ Barrow families. In the Dominican Republic, I consulted the private papers of Francisco Aníbal Roldán, the “Registro de La Romana” of Francisco Richiez Dicoudray and part of the archive of the Peynado & Peynado corporate law firm. Many of the above mentioned sources had not been previously consulted by any historian. The complexity of the themes required that the research sources and methodologies utilized were numerous and varied.

Because of this complexity, I was forced also to travel extensively within and outside the Caribbean region. Research was carried out in Adjuntas, Ensenada, Guánica, Ponce, San Germán, and San Juan in Puerto Rico; Higüey, La Romana, San Pedro de Macorís, Santiago and Santo Domingo in the Dominican Republic; Bridgetown, Barbados; Baton Rouge, Gainesville, New Haven, New Orleans, New York, Poughkeepsie, Philadelphia and Washington, D.C., in the United States; and Glasgow, in Scotland, and London, in the United Kingdom.

Several archivists, librarians, and fellow scholars in all these places provided an abundance of materials and insights about the various themes discussed in this work. At its origins, when it was a doctoral dissertation at Columbia University, Professor Herbert S. Klein, as advisor, provided support and guidance. As the first appraiser of the Braga Brothers Collection, Professor Klein pointed out the richness of that source, which, with the assistance of archivist Carl Van Ness, I consulted.
at the University of Florida, Gainesville. Also of assistance were Deborah Gardner, at the Archives of the New York Stock Exchange; Faye Phillips, at Special Collections, Hill Memorial Library, Louisiana State University Archives; James W. Campbell, at the New Haven Museum and Historical Society; and Irene Cuffy, at the Franklin Institute at Philadelphia.

My research in the Dominican Republic took place during dire economic times—constant blackouts and lack of water—for that country. Yet, archivists, scholars and many other persons assisted in many ways, making it an unforgettable positive experience. Vetilio Alfau del Valle offered his warm friendship, his ample knowledge and love of La Romana’s and Higüey’s histories, and guidance in identifying and locating many of the people interviewed. Furthermore, he and his brother Salvador provided access to the private collection of his father, the noted historiador del Este, Vetilio Alfau Durán. Notary-lawyer Domingo Luis Creales, of La Romana, kindly permitted me to examine at candlelight the town’s early notarial records in his home-office, in front of the town’s parque. Also in La Romana, Rafael L. Roldán allowed my intrusion into his printing press to examine his family records, with the clatter of the original machinery alongside. Historians and sociologists Roberto Cassá, Emilio Cordero Michel, Walter Cordero, Jaime de Jesús Domínguez, Rafael Jarvis Luis, Wilfredo Lozano, Antonio Lluveras, Frank Moya Pons and Rubén Silié Valdez referred me to valuable sources, sometimes providing even their own notes and copies. Dr. Bolivar Kunhardt kindly sent me documents on the Dominican labor movement, and journalist-historian Angela Peña shared with me her own personal contacts on the Puerto Rican and coco-lo migrations.

From the English-speaking Caribbean, research support came from Mrs. Joyce Gale in Barbados. She helped in finding white Barbadians who had been employed by SPRSCO/NJ either in Puerto Rico or in the

8 The finding aid of the Braga Brothers Collection can be examined at: http://web.uflib.ufl.edu/spec/manuscript/Braga/Braga.htm, 9 February 2008.
9 The Franklin Institute houses what is perhaps the richest source in the United States for sugar trade journals, the Lewis C. Ware Collection, but it can only be visited by prior appointment.
10 The finding aid of the Francisco Aníbal and Ramón Aníbal Roldán Collection can be found at: http://web.uflib.ufl.edu/spec/manuscript/guides/Roldan.htm, 8 February 2008.
Dominican Republic. As a result of these contacts, interviews were conducted and personal papers and photographs collected. Of the University of the West Indies, two historians – Glenn Richards, of the Mona campus, Jamaica, and Kusha Haraksingh, of St. Augustine, Trinidad and Tobago– provided assistance; the first in locating information on SPRSCO/NJ’s white managerial personnel from Antigua and the second by taking me to the West Indies Central Cane Breeding in Barbados Station, where I came to understand the importance of the breeding of cane varieties.

In Puerto Rico, where of course it all started, my thanks go to my institution, the Institute of Caribbean Studies at the University of Puerto Rico, for giving me time to research and to write this work. I discussed almost every aspect of it with a close friend and colleague, Professor Juan José Baldrich, who also read and commented the manuscript. I also benefited from critical readings by Antonio Díaz Royo, Carlos Buitrago, and Amílcar Tirado, and many conversations with Juan Giusti Cordero. Axel Santana, head of UPR’s General Library Photography, kindly provided invaluable assistance in the selection of photographs and their preparation for publication, and Dr. Tania del Mar López assisted in the drafting of the maps. My heartfelt thanks to all.

I am grateful to Manuel Sandoval Báez, executive director of La Editorial, and Ian Randle, president of Ian Randle Publishers Ltd., for their interest in co-publishing this work, not a common feat of Caribbean cooperation. My special thanks to Sonya Canetti and Gloria Madrazo for editing and preparing the manuscript for publication.

The origins of my curiosity in this topic go deep into my childhood when my family beach summer vacations in Salinas de Guánica, now known as Playa Santa, took us driving through the racially and ethnically-segregated Ensenada, many degrees out of context of Puerto Rican social reality.11 Years later, numerous trips to several sugar factories with my friend and Puerto Rico’s leading sugar historian, Andrés (Tony) Ramos Mattei, rekindled my interest on the early history of the corporate owner

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11 See Arleen Pabón Charneco and Eduardo A. Regis, Guánica: el origen de la memoria (San Juan: Oficina Estatal de Preservación Histórica, Oficina del Gobernador, 1997), and María Esther Ramos Rosado, La muerte de un gigante: historia de la Central Guánica y el poblado de Ensenada (San Juan: Editorial Plaza Mayor, 1999).
of that sugar town and its expansion to La Romana in the Dominican Republic. It is to Tony, who regretfully left us too early, and to Betsaida Vélez Natal, who has been lovingly with me since the beginning to its completion, that I dedicate this book.
INTRODUCTION

The Sugar Industry in Puerto Rico and the United States during the Nineteenth Century—the Guánica Region

This introductory chapter offers background information on three different themes converging in the development of the SPRSCO/NJ in Puerto Rico and the Dominican Republic in the early twentieth century. These are the evolution of U.S. sugar refining and production, the parallel history of sugar in Puerto Rico, and a micro history of the Guánica region.

As Puerto Rican historian Francisco Scarano aptly notes, the development of sugar industry in Puerto Rico and Cuba, deviated from the classic colonial pattern because it “depended on interaction with a foreign nation—the United States—and not on its metropolis, Spain.”1 Spain closed its market to sugar from both Caribbean islands to limit competition with production in its own southern provinces. Additionally, Spanish fiscal policy based on customs duties hampered the production and export of sugar.

Puerto Rico traditionally played second fiddle to Cuba in exporting sugar to the United States. Cuba began to depend on U.S. sales in the 1790s, when it replaced Haiti and the British Caribbean colonies as the

prime U.S. supplier. Cuba maintained that ranking until the mid-1880s. Until the 1840s, Cuba sold an average of nearly three-fourths of its higher grades in Europe, with its lowest grades sold to the United States.²

For most of the nineteenth century, the United States also was the major importer of Puerto Rico's low-grade muscovado. Puerto Rican sugar accounted for about one-fifth of U.S. sugar imports from 1836 to 1850. (See Table 1.1) By the mid-century, Puerto Rico became the second largest Caribbean supplier and second largest foreign supplier to the United States. Sugar and molasses accounted for more than 75 percent of Puerto Rico's total exports, with coffee in a distant second place with approximately 12 percent.³

Table 1.1
U.S. Production of Raw Sugar and Imports from Caribbean Region: 1821-1850
(thousands of tons, five-year annual averages)

<table>
<thead>
<tr>
<th>Years</th>
<th>U.S. Production*</th>
<th>Imports</th>
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<tr>
<td></td>
<td></td>
<td>Cuba</td>
</tr>
<tr>
<td>1821-25</td>
<td>14.2</td>
<td>17.1</td>
</tr>
<tr>
<td>1826-30</td>
<td>32.3</td>
<td>13.6</td>
</tr>
<tr>
<td>1831-35</td>
<td>35</td>
<td>19.7</td>
</tr>
<tr>
<td>1836-40</td>
<td>40.8</td>
<td>27.6</td>
</tr>
<tr>
<td>1841-45</td>
<td>83.0</td>
<td>35.6</td>
</tr>
<tr>
<td>1846-50</td>
<td>106.2</td>
<td>71.5</td>
</tr>
</tbody>
</table>

*U.S. production statistics are for Louisiana only.


² Scarano, Sugar and Slavery, p. 12.
³ Scarano, Sugar and Slavery, p. 8.
Still, Puerto Rico’s ranking in the U.S. market hinged on Cuba’s production and marketing. The United States sought Puerto Rican products only when Cuba could not meet U.S. demand. Puerto Rico would have a chance to sell more in the United States only when Cuba opted to sell more in Europe.

John Dymond, a leading Louisiana planter and editor of the *Louisiana Planter and Sugar Manufacturer*, said the U.S. market welcomed Puerto Rican products:

In the old days, when all the world consumed plantation sugars except for sweetening tea, Porto Rico sugars and molasses were very popular because of their light color and fine flavor and competed evenly with Louisiana sugars of the same style in the American markets.4

U.S. consumption grew over the nineteenth century and various sugar interests clashed trying to control the U.S. market. I use the term “sugar interests” purposely, because it conveys participation by several groups with dissimilar concerns and often conflicting views. These interests, in different geographical regions, had distinct functions within the sugar making process. During the early nineteenth century, U.S. sugar interests included sugar cane planters in Louisiana, merchants who directly imported higher-grade Caribbean sugar, and refiners of Caribbean muscovadoes in the east coast cities.

The U.S. government, though not directly involved in sugar making, also played a key role in the industry since U.S. independence. The federal government depended on import duties, with domestic excise taxes, as its major source of revenue from 1789 until the 1900s.5 About


5 In the nineteenth century, the federal government did not draw upon individual or corporate incomes as a source of tax revenue. Duties were either specific or *ad valorem*. A specific duty is a charge in cents and dollars on a unit weight or quantity of the import. An *ad valorem* duty is a percentage charge on the value of the goods imported. See Philip G. Wright, *Sugar in Relation to the Tariff* (New York: McGraw-Hill Book Co., 1924), p. 90.
20 percent of total revenues came from sugar duties: as of 4 July 1789, the
government charged one cent a pound on imported raw (unrefined) sugar
and three cents a pound on refined sugar.  

Starting in 1816, the sugar tariff served to protect and foment a
small, unstable sugar cane industry in the southeast quarter of Louisiana,
although soil and climate conditions were not entirely favorable for sugar
production there. (See Figure 1.1) The largest Louisiana planters used
vacuum pans or multiple effects in evaporation and animal charcoal to
process syrup and produce higher grade sugars. In 1842, the U.S. govern-
ment retained its 2.5 cents' duty on raw sugar but increased the fee from
three and one eighth cents to six cents on the higher grade clayed, white
and powdered sugars. This higher level of protection and a desire to cut
Louisiana's high production costs prompted capital investment in new
technology.  

Chart 1.1
Simplified Flow Diagram of Raw Sugar and Molasses Production

| clearing the field |
| planting |
| cutting |
| transport |
| extraction |
| raw juice |
| purification |
| clearer juice |
| evaporation |
| syrup |
| crystallization |
| raw sugar | molasses |

---

6 Raw sugar is "any grade of sugar from which the impurities have not been com-
pletely removed, whether it be 75 per cent or 99 per cent pure sucrose, and whether
it be black or almost white." Refined sugar is "a sugar from which all the impurities or
substances other than sucrose, have been removed." For the United States, raw sugar
is 96 degrees centrifugal and refined is granulated. Truman G. Palmer, Questions and

7 John Alfred Heitmann, The Modernization of the Louisiana Sugar Industry 1830-
From 1821 until 1850, Louisiana was the most important producer for the U.S. market. (See Table 1.1) While per capita U.S. consumption rose nearly thrice—from 8.8 pounds in 1823 to 23.1 pounds in 1850—production in Louisiana grew even faster: from 17,000 short tons in 1823 to 120,000 short tons in 1850.\textsuperscript{8} Indeed, by the 1850s, the southern sugar industry, with an annual crop topping 150,000 tons, produced more than half of the sugar consumed in the United States.\textsuperscript{9}

Competition also rose in the world market in the nineteenth century. Cuba and Brazil boosted output and new Pacific territories began production, including Mauritius and Java. Supply exceeded world demand and prices tumbled for raw and refined sugar. Europe also developed its sugar beet industry to reduce dependence on cane imports. France and Germany established a system of subsidies and exemptions known as bounties to protect their incipient industries, and promoted beet sugar exports.\textsuperscript{10}

Europeans even developed mechanized factories, starting in France's beet sugar industry in the 1840s to modernize manufacturing and ensure a uniform, superior sugar. Such innovations for making sugar as the vacuum pan, centrifugals, and chemical control originated in the beet industry. The share of beet sugar sold in the world market increased from 5.1 percent in the 1840s to a majority 51.2 percent in the 1880s.\textsuperscript{11}

With their output swelling in the 1840s and 1850s, the United States and Europe slowly began to exclude Cuba's higher grades of sugar from their markets. When Puerto Rico's muscavado failed to compete with higher grade beet sugars, it too lost its markets in Europe. Puerto Rico also faced competition in the U.S. market from Cuban sugars.

\textsuperscript{10} Although derived from different plants, all sugars are identical in chemical composition and reaction, dietetic effect and uses, sweetening power, food value, taste or appearance.
Puerto Rico's sales to the United States remained "a residual import market where the Puerto Rican muscavadoes supplied was determined by the volume of Cuban sales of a specific (lower) quality of sugar."  

Simultaneously, U.S. refiners and merchants gained importance in the growing U.S. market, as Cuban production and sales rose. Yet merchants and refiners had different niches and policy positions: Merchants imported Cuban higher grades to sell for direct consumption, whereas refiners imported lower grades for processing before selling for consumption.\(^13\) Cuban sugar historian Manuel Moreno Fraginals concludes: "This complicated picture of contradictory economic-political forces acting simultaneously gave the decades of the 1840s and 1850s the idyllic appearance of 'golden free competition'."\(^14\) However, the U.S. Civil War (1861-1865) was a turning point that tipped the balance in the refiners' favor.

The U.S. Civil War precipitated momentous changes in the U.S. sugar industry and market. It destroyed the Louisiana sugar industry, already struck by disease since 1854. East coast refiners moved swiftly to keep merchants from filling the gap with direct imports of Cuba's and Puerto Rico's higher grades.\(^15\) They succeeded in influencing an 1861 tariff structure that favored imports of lower grades. The tariff set duties on raw, muscavado or brown sugar not above No. 12 Dutch Standard (Tipo Holandés) at 2.5 cents per pound, for No. 12 through No. 15 sugars at 3

\(^{12}\) Scarano, Sugar and Slavery, p. 12. (Italics in the original).
\(^{15}\) Ricardo Nadal, a Puerto Rican planter naturalized as a US citizen, recalled that his family in Mayagüez operated a sugar refinery from 1858 to 1867, but "work stopped because we found it did not pay to refine sugar here, and we could not export it to the United States, owing to the duty on refined sugar there." Henry K. Carroll, "Appendix," Report on the Island of Porto Rico (Washington, D.C.: Government Printing Office, 1899), p. 67.
cents, and for refined sugars at 5 cents per pound.\textsuperscript{16} For the next two decades, imports of sugar not fit for direct consumption, but that required further refining, soared.\textsuperscript{17}

Yet, Louisiana’s sugar industry recovered quickly. Production rose from 84,439 short tons in 1870 to 342,720 short tons in 1910.\textsuperscript{18} Large producers in Louisiana generally represented by the Louisiana Sugar Planters’ Association, manufactured high grade sugar. As a result, they benefited from tariff revisions in the 1880s which allowed east coast refiners to set the duties for high grade sugar, while they decided the rates for lower grade products.\textsuperscript{19}

Then, Hawaii became the first site outside the continental United States to receive duty-free entry for sugar sales to the U.S. customs zone. The 1876 treaty between the United States and Hawaii gave reciprocal trade privileges for several commodities, including raw sugar. Foretelling events in other warm latitudes, the duty-free entry led to an enormous increase in Hawaiian sugar production. Output soared from 11,640 tons in 1876 to 204,000 tons in 1898, the year that Hawaii was incorporated as a U.S. territory.\textsuperscript{20}

\textsuperscript{16} This system of sugar classification was accepted widely. The Dutch began the system to classify products coming from their dependency, Java. The system assumes that color is a criterion of quality. No. 12 is considered the dividing line between the raw and refined product. See Vogt, \textit{The Sugar Refining Industry}, p. 27, and Palmer, \textit{Questions and Answers}, p. 32.

\textsuperscript{17} The Dutch Standard system failed to accurately test the quality of imported low grade sugars, so in 1874, traders began using the polariscope test for sugars below No. 13 Dutch Standard. The polariscope determines the exact proportion of sucrose in a solution. See Moreno Fragninals, \textit{El ingenio}, vol. 2, pp. 194-195; Palmer, \textit{Questions and Answers}, p. 32; and Vogt, \textit{The Sugar Refining Industry}, p. 29.


\textsuperscript{19} Heitmann, \textit{The Modernization}, p. 95.

In the mid-1880s, Spanish-born author José Ramón Abad expounded his view of U.S. policy for sugar supply. He said that the United States recognized its dependence on Cuban sugar during Cuba's Ten Years' War (1868-1878) and began a two-pronged policy to diversify supply: buying raw sugar mainly from other Caribbean islands and Mexico, and promoting self-sufficiency by encouraging cane, beet, sorghum and corn sugar industries in Louisiana, Ohio, Illinois and California.

Abad linked the U.S. attempt to annex the Dominican Republic between 1868 and 1871 to “the desire to be free of the need to buy sugar supplies in Cuba” and he saw sugar behind the 1883 reciprocity treaty between the United States and Mexico. With foresight, Abad argued that the United States,

concludes diplomatic negotiations to organize the production of cane sugar in countries that will become its tributaries and if not in fact, then by law, they will become American property.

U.S. trade with Puerto Rico in the late nineteenth century also must be analyzed in this light. The U.S. Civil War disrupted U.S. commerce with

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21 Born in Catalonia, Abad, a long-time resident of Puerto Rico, was a well-known author and journalist who specialized in economic topics. He also was a prominent member of the Autonomist Party. See “Abad, José Ramón,” La gran enciclopedia de Puerto Rico, vol. 14 Diccionario histórico-biográfico (San Juan: La Gran Enciclopedia de Puerto Rico, 1976), p. 12.
23 Abad, Puerto Rico, p. 253. The commission sent by President Ulysses S. Grant reported that “the extension and degree of fertility of the soils for this purpose is not exceeded by other soils in the Antilles.” Informe de la comisión de investigación de los E.U.A. en Santo Domingo en 1871 (Ciudad Trujillo: Editora Montalvo, 1960), p. 77 (My translation). The U.S. Congress did not ratify the reciprocity treaty with Mexico, but sugar was one of the products to be included in the free list. See Jorge Espinosa de los Reyes, Relaciones económicas entre México y Estados Unidos, 1870-1910 (México: Nacional Financiera, 1951), pp. 72-86.
Cuba and Puerto Rico. While the United States imported 63 percent of Puerto Rico’s sugar exports during 1856-1860, it received only 45 percent of the island’s production during the war years from 1861-1865.\textsuperscript{25} Great Britain became Puerto Rico’s main trading partner in 1861, 1863 and 1864.\textsuperscript{26} Yet, Britain disappeared as a market for Puerto Rican and other Caribbean territories in 1876, when the United States allowed duty-free entry for all colonial and foreign cane sugar. Subsidized European beet sugar promptly came to monopolize the British market.

In 1866, one year after the U.S. Civil War, Puerto Rican liberal, scientist and educator, José Julián Acosta, proclaimed: “Without the consumer and producer market of the United States, it can be assured that Puerto Rican agriculture would have not developed.”\textsuperscript{27} In 1870, Puerto Rico was second only to Cuba in sugar production in the Western Hemisphere, producing 105,000 tons compared to Cuba’s 726,000 tons. It exported almost seven percent of world sugar cane production or 1,662,000 tons.\textsuperscript{28} That year, the United States bought the largest quantity of Puerto Rican sugar during the century, 131,000 tons or 69 percent of the island’s production. (See Table 1.2) The United States again became the top importer of Puerto Rican muscovado and its by-products of rum and molasses.

\textsuperscript{26} Report of the Commissioners from British North America Appointed to Inquire into the Trade of the West Indies, Mexico and Brazil (Ottawa: G. E. Desbarats, 1866), p. 148.
\textsuperscript{27} José Julián Acosta, “Notas” to Fray Inigo Abad, *Historia geográfica, civil y natural de la isla de San Juan Bautista de Puerto Rico* (Puerto Rico: Imprenta y librería Acosta, 1866), p. 323.
Table 1.2
Puerto Rico’s Total Sugar Production and U.S. Purchases, 1860-1897
(in pounds)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Production (000)</th>
<th>Purchases by the United States (000)</th>
<th>Percentage of US Purchases %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1860</td>
<td>116</td>
<td>81</td>
<td>70</td>
</tr>
<tr>
<td>1865</td>
<td>121</td>
<td>67</td>
<td>55</td>
</tr>
<tr>
<td>1870</td>
<td>191</td>
<td>131</td>
<td>69</td>
</tr>
<tr>
<td>1875</td>
<td>162</td>
<td>94</td>
<td>58</td>
</tr>
<tr>
<td>1880</td>
<td>221</td>
<td>56</td>
<td>25</td>
</tr>
<tr>
<td>1885</td>
<td>195</td>
<td>63</td>
<td>32</td>
</tr>
<tr>
<td>1890</td>
<td>128</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td>1895</td>
<td>131</td>
<td>39</td>
<td>30</td>
</tr>
<tr>
<td>1897</td>
<td>126</td>
<td>34</td>
<td>27</td>
</tr>
</tbody>
</table>


The United States then pressured Spain to change its trade policies. It noted that Spain's duties raised the price of U.S. imports and of Puerto Rican products. In 1875, U.S. Congress increased the duty on sugar imported from Cuba and Puerto Rico to 25 percent. In 1883, it raised the prevailing duty rate on Spanish colonial trade by 10 percent more. Spain reacted quickly. In 1884, it lowered duties on importing U.S. products by 20 percent. In response, the United States rescinded the 10 percent raise.29

In 1890, U.S. Congress approved the McKinley tariff, which it used to extract further preferential trade treatment from Spain. Later, Cuban and Puerto Rican lower grade sugar entered the United States duty free, while refined sugar paid a duty of half a cent. Nevertheless, in mid-1894,

the trade war resurfaced when Washington enacted the Wilson-Gorman tariff law. This time Spain was unable to prompt a change in the *ad valorem* rate of 40 percent on imported raw sugar and even higher duties for refined sugar.\(^30\)

In 1897, however, the United States again revised its sugar tariffs. The Dingley tariff law capped duties on raw sugar at a maximum of 1.65 cents a pound, while imports of refined sugar remained effectively banned because of its exorbitant duties.\(^31\) The tariff wreaked havoc on Puerto Rico’s already weakened sugar industry. Yet, Spain could not influence Washington. Engaged since 1895 in a guerrilla-type war with Cuban *independientes*, Spain watched the United States with wary eyes. Indeed, the next stage of U.S.-Spanish relations was armed confrontation.

Other factors also influenced the decline in Puerto Rico sugar sales to the United States, including superior quality of raw sugar sold from Cuba and later from Germany.\(^32\) The U.S. sugar refiners’ imports set the standard for imports of raw sugar at 96 degrees centrifugal with a uniform quality. When the Cuban independence war started, Germany took over as the U.S. major supplier. In fact, Germany displaced Cuba as the world’s major producer in 1880.

José Ramón Abad rightly judged that U.S. self-sufficiency in sugar production was a popular goal. In 1876, a Louisiana planter wrote “it is beyond a doubt that the United States could produce all the sugar needed for their consumption.”\(^33\) President Rutherford Hayes predicted that by 1884, the United States would not longer need sugar from abroad.\(^34\) Dr. Harvey W. Wiley, chief chemist of the U.S. Department of Agriculture (1883-1912), also advocated self-sufficiency. In an 1884 address to the Louisiana Sugar Planters’ Association, Wiley said: “What this country can produce shall

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be produced here. I should like to see the duty on sugar increased, or some system of bounty inaugurated by which, in a few years, we would make all the sugar we consume.”35

In large part, development of U.S. cane and beet sugar industries is traceable to Wiley’s work. Beginning in the 1880s, Wiley pursued a three-prong policy of promoting sugar production on the U.S. mainland, specifically sugar cane in Louisiana, sugar beet in the West, and sorghum, mainly in Kansas.36 Sorghum experiments failed, but those with sugar beets and sugar cane succeeded. The beet sugar industry really took off during the 1890s, thanks to the tariff protection against lower-cost Caribbean and Pacific imports.37 H. C. Prinsen Geerligs, a Dutch premier sugar specialist of the early twentieth century, confirmed U.S. efforts toward self-sufficiency noting “nothing was left undone to improve the beet sugar cultivation and to obtain sugar from sorghum and maple, as well as from cane.”38

U.S. government protection and promotion of cane and beet sugar succeeded only partially. Refiners continued to need imported raw sugar to meet U.S. market demand. U.S cane and beet sugar production averaged just 11 percent of U.S. demand from 1881-1885 and 12.3 percent from 1896-1900.39 In 1900, U.S. per capita consumption reached 43.33 pounds and total consumption 2.2 million tons.40

35 Quoted in Heitmann, The Modernization, p. 135.
40 Palmer, Questions, p. 27.
Sugar refining predated by a century raw sugar production in the continental United States. New York City was the capital for sugar refining in the Western Hemisphere. Because of its better transportation access to the Midwestern market, New York outraced other cities including Boston, Philadelphia, and Charleston on the east coast, and San Francisco in the west and, later, New Orleans in Louisiana and Galveston in Texas. Those cities became major refining centers because they had the "necessary combination of direct ocean access to raw materials, ample credit facilities, and sufficient skilled labor." With the coming of the railroad, New York, Boston and Philadelphia became one market area. The rail networks presented the refiners with a potential market of national proportions.

The leading New York-based sugar refiners were a group of German immigrants, who arrived in the first 60 years of the century. They included William Dick, John W. Booraem, J. O. Donner, Claus Doscher, John Mollenhauer, Gustav Moller, and Frederick and William Havemeyer. Unlike the others, the Havemeyer brothers rapidly assimilated into the U.S. society by marrying women of English and Irish background. In 1828, both brothers retired and sold the business to their respective sons, Frederick C. and William F. The elder Frederick C. Havemeyer interrupted his studies at Columbia College to enter the business. Later, William F. Havemeyer switched to a career in politics and was elected mayor of New York City in 1845, 1848 and 1872.

The Havemeyers built the largest U.S. refining complex in the United States along New York’s East River in the Williamsburg section of Brooklyn. The Havemeyer, Townsend & Co. sugar refinery opened in 1857, with a capacity to refine 300,000 pounds per day. In 1863, when company partner Dwight Townsend retired and Frederick C. Havemeyer Jr.’s son-in-law, J. Lawrence Elder, joined the business, the firm changed its name to Havemeyer & Elder. By 1868, Elder died and Havemeyer Jr. brought in his sons, Henry O. and Theodore J., along with nephew Charles H. Senff. Frederick C. Havemeyer Jr. retired soon after, so Theodore J. Havemeyer took charge of technical refinery operations and Henry O. Havemeyer handled merchandising and financial management.

![Havemeyer's Refinery in Brooklyn](LPSM, 9 June 1900, 369)
The Havemeyers faced an extremely competitive sugar market, with supply outracing demand and driving down prices. The brothers, unintentionally, contributed to firming up the market, however, when a fire on 2 January 1882 burned their refinery to the ground. A year and half later, Havemeyer & Elder completed a new refinery; the world’s largest and most efficient, with a capacity to melt more than 3 million pounds of raw sugar daily. Low costs at the plant allowed the Havemeyers to earn a profit despite world weak prices. Still, the firm preferred to see even higher sugar prices, so Henry O. and Theodore J. Havemeyer agreed to organize all major refineries across the country. They established the Sugar Refineries Co., popularly known as the Sugar Trust, on 6 August 1887 under the presidency of Henry O. Havemeyer. It brought together 17 of the 23 U.S.-based sugar refineries into one corporation, achieving a virtual monopoly that controlled 98 percent of U.S. refined sugar output.45

On 10 January 1891, to contest litigation for violations of the Sherman Anti-Trust Act, the Sugar Trust changed form and incorporated in New Jersey as a holding company named the American Sugar Refining Company [hereafter referred to as ASRCO or the Sugar Trust]. It was a new corporate name for the same industrial organization. With his penchant for coining the right phrase, Henry O. Havemeyer said: “Well, from being illegal as we were, we are now legal as we are; change enough, isn’t so?”46

The price of raw sugar obviously was crucial to production costs for sugar refiners, being the major input into the refining process. Refiners’ profitability depended largely on maintaining a hefty supply of low cost raw sugars. Accordingly, the Sugar Trust aimed “to keep supply within demand and thus insure a comfortable margin for the refining industry.”47

46 Quoted in Mullins, “The Sugar Trust...,” p. 73.
None other than Havemeyer declared that, due “to the advantages granted in the way of protection...the mother of all trusts is the customs tariff bill.” Havemeyer claimed the tariff provided “an inordinate protection to all the interests of the country, sugar refining excepted.” 48 Yet, Havemeyer sought a higher tariff on refined sugar imports than raw sugar, noting

without the tariff I doubt we would have taken the risk of forming the trust. It could have been done but I certainly should not have risked all I had, which was then embarked in the sugar business, in a trust unless the business had been protected as it was by the tariff. 49

Following the organization of the Sugar Trust, the first change in the sugar tariff was the McKinley Act of 1890. It underscored the Sugar Trust’s immense power by allowing for duty-free entry for all raw sugars. During the free raw sugar period, the Trust earned about $28.8 million annually. 50 The subsequent Wilson-Gorman and Dingley tariffs also favored the Sugar Trust by keeping duties on refined sugar far higher than those on raw, duty-free sugars. In his thesis on the Trust, Jack Simpson Mullins concluded: “The American Sugar Refining Company influenced tariff legislation to such an extent that it usually secured more or less what it wanted and was consequently able to reap occasional windfalls from tariffs.” 51

In reaction to these transformations in the U.S. sugar industry, Puerto Rico’s production structure changed dramatically over the nineteenth century as well. 52 In the 1820s, the Puerto Rican sugar hacienda, the

50 Mullins, “The Sugar Trust...,” p. 158.
51 Mullins, “The Sugar Trust...,” p. 149.
52 For an in-depth research of the technological changes in the sugar industry see Lizette Cabrera Salcedo, “De los bueyes al vapor: caminos sinuosos de la tecnología en Puerto Rico y el Caribe, 1778-1873,” (Ph.D. diss.: University of Puerto Rico, 2005. To be published by the University of Puerto Rico Press).
basic unit of production, combined four main components: family-owned estates, integrated growing and milling operations, simple, unmechanized technology, and coerced labor. A key technology was the vertical three-roller steam mill, the battery of cauldrons known as the Jamaica train, and damp clay used in whitening sugar. Slaves were the main labor force until the abolition of slavery in 1873. Muscovado sugars dark, moist, sticky and full of impurities—were the major end products, mainly for export.

Municipal statistics for the 1827-28 crop season show Puerto Rico’s sugar industry concentrated in the northern, southern and western districts. The industry was almost nonexistent in the eastern and interior districts. (See Appendix 1.1) Output from the southern and western districts accounted for 69 percent of total sugar and molasses production. The two districts contained also half of the island’s sugar estates. Just 7 percent of the island population lived in the two districts: 46 percent free labor and 54 percent in bondage. Ponce, Mayagüez and Guayama were the leading sugar municipalities in these districts.

The northern district, meanwhile, accounted for 24 percent of the island’s sugar output, 17 percent of molasses’ production, and about 20 percent of the free and slave populations. It had 31 percent of the island’s total cane acreage. In this district, the municipality of Toa Baja held Puerto Rico’s highest percentage of cultivated acreage, 82.9 percent.

The municipality of San Germán is part of the western district. Its capital, also known as San Germán, retreated to its present interior hilly site after successful corsair attacks, and became known as the “city of the hills” (ciudad de las lomas). San Germán’s municipal territory included 17 wards. Its topography combined rugged highlands suited for coffee cultivation and flat, coastal lowlands suited for sugar cultivation. The flat coastal alluvial plains included the wards of Guánica, Benavento,

54 For an analysis of the evolution of the sugar plantation and various labor systems in Guayama over the nineteenth century see Luis A. Figueroa, Sugar, Slavery and Freedom in Nineteenth Century Puerto Rico (Chapel Hill, San Juan: The University of North Carolina Press; University of Puerto Rico Press, 2005).
Guanajibo, Hormigueros, Lajas and Sabana Grande. In 1788, Fray Iñigo Abad noted that there were enough people to establish a township near Guánica Bay. He also observed a substantial contraband trade with foreigners in timber, agricultural products, and other commodities.\textsuperscript{55}

The local Creole elite, which benefited from the illicit trade with the non-Hispanic Caribbean, was well poised when Puerto Rico’s subsistence economy shifted more toward exports. In the early nineteenth century, many wooden sugar mills (trapiches or ingenios) began to produce molasses and rum for the local market and for contraband. As sugar and coffee began to develop, cattle raising, tobacco and cotton production also occupied an important position in the regional economy. Sugar haciendas grew up initially in the fertile lands bordering the Guanajibo River. Coffee cultivation started instead in the highland wards of Montoso and Caín Alto. Cattle, horse and mule ranching developed in the outlying wards of Guánica, Lajas and Sabana Grande.

Pedro Tomás de Córdova’s 1827-28 census of San Germán found only five haciendas with iron-roll sugar mills, 325 tons in sugar production, and 582 acres under cultivation, or a mere 9 percent of the municipality’s cultivated acreage. Island-wide, San Germán ranked sixth in cane acreage, 22nd in percentage of cultivated acreage, eighth in production, and fourth in the number of slaves. The municipality lagged far behind top-ranking Ponce and Mayagüez. Ponce was first in number of estates, with 49, and in cane acreage, with 1,634 acres. It was second in sugar production and number of slaves. Mayagüez ranked first in sugar production, with 3,467.5 tons, and in number of slaves, with 3,860 slaves. (See Appendix 1.1)

Puerto Rican historian Juan González-Mendoza noted that plantation development and growth in San Germán did not fall “within the same time frame nor, it seems, at the same rhythm” as Ponce or Mayagüez in the 1820s.\textsuperscript{56} Instead, the boom of the 1830s propelled San Germán’s

\textsuperscript{55} Fray Iñigo Abad y Lasierra, Historia geográfica, civil y natural de la isla de San Juan B. de Puerto Rico (1788; Río Piedras: Editorial Edil, 1975), p. 158.
sugar industry forward, with the number of haciendas rising to 34 in 1839 and production climbing to 3,608 tons, 11 times the levels of 1828. The area cultivated in cane in San Germán rose from 291 acres in 1821 to 2,105 acres in 1842. By 1842, the number of sugar haciendas reached 53, only to fall to 43 in 1853. In short, San Germán’s sugar hacienda system finally matured in the mid-nineteenth century, precisely when sugar prices began to fall.

As exports of sugar and molasses increased after 1821, San Germán witnessed the dismantling of cattle ranches (hatos) in Guánica and Lajas wards both by their proprietors and by royal land grants, starting in 1821. In the 1840s, Creole ranchers and immigrants received large land grants. Guánica (and its components Hato Arenas, Hato Pastillo and Las Marias) received 94 percent of all grants and 96 percent of the amount of acreage granted. (See Table 1.3) Ranchers in Guánica came both from San Germán and adjacent Yauco.

Table 1.3

<table>
<thead>
<tr>
<th>Place of Concession</th>
<th>Number of Grants</th>
<th>Acreage Size</th>
<th>Average size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guánica</td>
<td>10</td>
<td>2,845</td>
<td>284.5</td>
</tr>
<tr>
<td>Hato Pastillo</td>
<td>3</td>
<td>1,327</td>
<td>442.3</td>
</tr>
<tr>
<td>Hato Arenas</td>
<td>1</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Las Marias</td>
<td>3</td>
<td>649</td>
<td>216.3</td>
</tr>
<tr>
<td>Cain Alto</td>
<td>1</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>


60 Juana Gil Bermejo, Panorama histórico de la agricultura en Puerto Rico (Sevilla: Instituto de Cultura Puertorriqueña, 1970), p. 344.
The sugar *hacendados* in Guánica and Lajas included both traditional Creole elite and immigrant families. The Quiñones and the Ramírez de Arellanos, two traditional elite Creole families from San Germán, owned large sugar plantations in Guánica, developed on lands granted in the 1840s.62 González-Mendoza noted that the status of the Quiñones clan "as landholders and knowledgeable persons had allowed them to control municipal life through the cabildo."63 Puerto Rico's second Official Historian (*Historiador de Puerto Rico*) Dr. Cayetano Coll y Toste said the Quiñones were "outstanding eminent persons, which united to their talent, an illustrious birth, proven honesty, and the powerful charm of influence, that rests on the solid foundation of considerable wealth."64

The Quiñones family made major contributions to the history of Guánica. Vicente Mariano Quiñones, Ramón de Quiñones and other signatories, owners and proprietors of *Hato de Guánica arriya y Pastillo* and heirs of Miguel and Andrés Quiñones of San Germán, donated 49 acres for the church, the square (*plaza*), and other lots for mechanical and industrial trades in a town to be named *Pueblo de Nuestra Señora del Socorro y San Vicente Ferrer de Guánica*65 Buenaventura Quiñones Vizcarrondo was the first to build a sugar mill in Guánica, probably in the 1830s.66

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In 1835, Quiñones Vizarrondo asked permission to introduce 50 slaves from Curaçao for "the sugar establishment he has started in Guánica." He alleged that on 25 December 1834 "ten of the hacienda slaves escaped through the Port of Guánica toward the island of Santo Domingo, where they are now."\(^{67}\) In 1856, Jose María Quiñones' hacienda was valued at 90,000 pesos and its production at 9,740 pesos.\(^{68}\) The sugar plantation of Tomás J. Ramírez de Arellano was appraised at 80,000 pesos and its production priced at 9,800 pesos.\(^{69}\) In 1873, José María Quiñones' Hacienda Santa Rita and Tomás Ramírez de Arellano's hacienda each had a capital estimated at 70,000 pesos.\(^{70}\)

Several Corsican immigrants from San Germán owned haciendas in Guánica. Antonio Arenas, a member of San German's early Corsican families, received a grant of 386 acres in Las Marias, Guánica, in 1840.\(^{71}\) In 1853, his estate was valued at 80,000 pesos. In 1860, Arenas' widow owned 1,796 acres, the largest plantation in Guánica, amounting to 19 percent of the ward's area of 9,503 acres. In 1873, Arenas' output was the largest of Guánica's plantations: 771,500 pounds and 38,294 gallons of molasses, or 28 percent of the sugar production and 44 percent of all the molasses from the ward.\(^{72}\)

San Germán's Antonio Grimaldi is an example of a Corsican immigrant who received a land grant in the 1840s in Guánica. He received 151 acres in Las Marias. By 1856, the Grimaldi brothers owned one of the five plantations in Guánica. That year, their plantation was valued at

\(^{67}\) Quoted in González-Mendoza, "The Parish...," p. 161.

\(^{68}\) In 1856, the sugar hacienda in Guánica with the highest appraisal, 100,000 pesos, was owned by Antonio Stremer y Sucs. Production was valued at 8,480 pesos. No further information was found on Antonio Stremer y Sucs. See Ángel de Barrios Román, "Apéndices: Documento V Estructura financiera de la propiedad en la Villa de San Germán," Antropología socioeconómica en el Caribe. Puerto Rico-Mayagüez 1840-1875 (Santo Domingo: Editora C. Quisqueyana, 1974), p. 359.

\(^{69}\) de Barrios Román, "Apéndices: Documento V...," p. 359.


\(^{71}\) The Arenas also had interests in St. Thomas. See María Dolores Luque de Sánchez, La presencia corsa en Puerto Rico durante el siglo XIX (San Juan: Alianza Francesa, 1982), p. 9.

30,000 pesos, and its production at 4,500 pesos. Luis Dominicci, another Corsican, owned a plantation valued at 20,000 pesos, with 10,620 pesos worth of production. In 1847, Domingo Mariani, a Corsican who immigrated via St. Thomas and lived in Yauco, also owned a general store (pulpería) in Guánica ward.

The concentration of property was extremely high in Guánica, with sugar haciendas growing at the expense of small holders and village lands. In 1860, farms of 1-19 acres each accounted for 52 percent of land in the ward and about 3 percent of the ward’s surface acreage. In contrast, seven sugar plantations topping 485 acres each, accounted for 61 percent of Guánica’s surface. The average farm in the ward spanned about 153 acres.

In the 1860s, Eduardo Quiñones Vizcarondo, Guánica’s largest taxpayer and son of Buenaventura Quiñones Vizcarondo, petitioned San Germán’s municipal government to demarcate the town’s boundaries, alleging illegal land appropriations by using fences. Quiñones Vizcarondo denounced the sugar planters. He cautioned: “If things continue the way they’re going, it would not be long until these despilers will make all the ranches of the poor disappear and establish sugar plantations in village lands and in the saltpeter works.”

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Like San Germán, Yauco contained highland and coastal lowland zones. In the 1840s, land already showed signs of concentration in the lowland ward of Pueblo, “where the sugar hacendados resided” and “4 of the 53 total farms registered were larger than 388 acres, but they controlled 51.3 percent of total landed resources.”\footnote{Bergad, Coffee, p. 38.} In 1846, the sugar wards of Pueblo and Barinas held almost 15 percent of all households and accounted for about 30 percent of Yauco’s total gross income. The four sugar haciendas registered incomes exceeding 1,000 pesos, with 0.5 percent of the ward landowners, but approximately 12 percent of the ward’s total agrarian wealth.\footnote{Bergad, Coffee, p. 38.} At mid-century, Yauco’s agrarian income distribution was skewed favorably toward the sugar wards.

Corsicans emerged as important merchants and coffee planters in Yauco. They also dominated sugar production in Barinas, which bordered Guánica. The Antongiorgis, a Corsican family from San Germán, owned Haciendas María and Florida in the mid-1860s, each boasting steam-driven mills.\footnote{For a description of Pascual Antongiorgi’s business life see González-Mendoza, “The Parish....,” pp. 541-542.} Their total production was nearly 650,000 pounds of third-class muscovado sugar. Hacienda San Rafael, run by the heirs of Corsican immigrant Antonio Mattei, was a steam-driven mill producing sugar of a better quality: 117,000 pounds of second-class muscovado sugar. Francisco Blasini, another Corsican, purchased Hacienda San Rafael in the 1870s. Francisco Lluyeras, a Spaniard, was the only non-Corsican with a large sugar hacienda in Yauco. A resident of Guayanilla, Lluyeras, owned Hacienda Restaurada.\footnote{Bergad, Coffee, p. 112.} In 1864, Yauco produced a total 1.6 million pounds of muscavado sugar. (See Table 1.4)
After 1850, the municipality of San Germán faced a period of crisis. In 1888, sugar planter, politician and historian Francisco Mariano Quiñones lamented that of San Germán's "immense territorial jurisdiction" the town "still carries the ludicrous title of city." He wrote: "The old and picturesque 'city of the hills' long ago lost all its political importance and has none in the commercial, industrial and agricultural fields."


83 Francisco Mariano Quiñones, *Apuntes para la historia de Puerto Rico*, 3ra ed. rev. (1888; reprint, Ediciones del Instituto de Literatura Puertorriqueña, Universidad de Puerto Rico, 1957), p. 138. He blamed "the decadence of my town" on the economic downturn affecting the whole island and the arbitrary actions of the local government, "main cause of the bankruptcy we found ourselves today." (p. 139).
Yauco grew at the expense of San Germán. It annexed two of San Germán’s richest wards—Guánica and Río Prieto—in 1875. Both wards were nearer to Yauco and suffered neglect by the San Germán municipal administration for many years. An early example of this neglect is evident in 1829 when the Spanish government agreed to a petition by 33 Guánica residents to hold religious services and last rites in Yauco rather than in San Germán. The petitioners noted that San Germán was six leagues away, with access by bad and hilly roads, while Yauco was only one league away, connected by well-kept, level roads. In the 1860s, Eduardo Quiñones Vizcarrondo noted that “San Germán has virtually abandoned Guánica.”

Sugar planters in Guánica probably preferred Yauco to San Germán not only for its proximity, but also because some had other businesses in Yauco. A prominent Guánica sugar hacendado, José Arenas Lucca, member of an old Yauco family of Corsican origins, led the move to annex Guánica to Yauco.

In 1872, a year before the abolition of slavery and three years before its annexation to Yauco, Guánica held a population of 1,928 residents. The “colored” group was the most numerous, accounting for 63 percent of the population. Whites ranked second, representing nearly a quarter of the population, with black slaves another 13 percent. The male to female ratio was a little more than 2:1 for all three groups. (See Appendix 1.2)

The development of sugar also brought construction and other activities to Guánica. The first stone for Guánica’s church was placed in 1876. In 1877, 290 families lived in 239 houses and 33 thatched huts (bohíos). The village included one fabric shop, 11 retail stores, and five roadhouses (ventorrillos). Schools for young people still were under

86 Guánica’s annexation was opposed by some residents. For details see Rubén Collado Salazar, Guánica: un barrio y dos pueblos (Guánica: Centro Cultural Isabel Santiago, 1981), pp. 23-53.
construction, but classes took place. With nearly 10 percent of Yauco's families, Guánica was probably the most populous ward in the municipality. (See Appendix 1.3)

Still, Guánica's annexation to Yauco did not bring total satisfaction for residents. On 18 October 1880, several residents complained to the colonial administration that Yauco had failed to honor its promise to make physical improvements in the ward and to suspend taxes for two years. The complaint also demanded the formulation of plans for the development of Guánica's port, considered by many as the ward's main asset. Instead, in 1882, Spain's Overseas Ministry (Ministerio de Ultramar) closed Guánica's port. By 1892, considering the future opening of the Panama Canal, Yauco's mayor Jaime Catalá Ibáñez requested the declaration of Guánica as a free port and the building of a depot. The Overseas Ministry ignored the petition.

Guánica's port had been long recognized as one of the best in Puerto Rico and the Caribbean. Perhaps the best description came from George D. Flinter, an Irishman who for 21 years served in the British Army in the Caribbean and visited Puerto Rico from 1829 to 1832. Flinter extolled the site's military qualities that also are of great value for a sugar port: its ample basin, adequate depth, land on three sides, and anchorage near the coast:

In the Guanica port, vessels drawing thirty-one feet of water may enter with perfect safety. The entrance is about a hundred yards wide, and it forms a spacious basin, completely landlocked: the vessels may anchor close to the shore. It has, in the whole extent, from six fathoms and a half to three fathoms, the latter depth being found in the exterior of the port. The entrance is commanded by two small hills in either side, which, if mounted with a few pieces of artillery, could defy a squadron to force it.

87 AGPR, FMY, "Libro de actas del Ayuntamiento, 6 de octubre de 1882," C 2.
In 1847, a Spanish official, Darío de Ormaechea, said the port had a spacious and protected bay, but only small ships conducted coastal traffic because of the “small population and the lack of export crops.”

Both San Germán and Yauco underutilized the port for different reasons. San Germán’s residents had closer ports at Mayagüez and Cabo Rojo. In 1864, Mayagüez exported more muscavado sugar and coffee than any other port in Puerto Rico. (See Table 1.5) That year, the muscavado sugar exports of both Guánica and Guayanilla amounted only to 6.9 million pounds, less than any other port in the island. Thirteen years later, the situation was only worse. In 1877, Guánica port exported just 1.5 million pounds of muscavado sugar and 568 hogsheads of molasses.

Meanwhile, Yauco’s merchants and planters used Ponce’s shipping facilities. In 1890, Spain’s Overseas Ministry ignored a proposal to build a railroad line from Ponce to Mayagüez, with a branch line to Guánica. Yet, the railroad from Yauco to Ponce started operations in 1893.

The annexation of Río Prieto to Yauco parallels the story of Guánica. Yauco’s large coffee planters purchased large land tracts in Río Prieto in the years before the annexation. Planter-merchant Domingo Mariani, head of the Corsican Pietri-Mariani family clan and the largest coffee landowner in Río Prieto, led the annexionist movement. Río Prieto’s coffee planters argued that the five-leagues separating Río Prieto from San Germán entailed a three-day trip, while the trip to Yauco took only one day. In the 1880s, Río Prieto became Yauco’s leading coffee-growing ward, with its coffee planters cashing in on Yauco’s acclaimed trademark in the world market.

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91 Collado Salazar, Guánica: notas, p. 28.
93 For the growth of Yauco’s coffee export economy see Guillermo A. Baralt, Yauco o las minas de oro cafetaleras (San Juan: n.p., 1984), pp. 25-26.
Table 1.5
Puerto Rico's Exports by their Ports of Origin, 1864

<table>
<thead>
<tr>
<th>From the port of</th>
<th>Sugar pounds</th>
<th>Molasses gallons</th>
<th>Coffee pounds</th>
<th>Tobacco pounds</th>
<th>Hides pounds</th>
<th>Cotton pounds</th>
<th>Rum gallons*</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Johns</td>
<td>17,149,994</td>
<td>370,273</td>
<td>3,467,383</td>
<td>886,356</td>
<td>328,145</td>
<td>250,780</td>
<td>1,779</td>
</tr>
<tr>
<td>Arecibo</td>
<td>7,036,205</td>
<td>216,712</td>
<td></td>
<td>3,370,828</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aguadilla</td>
<td>6,325,800</td>
<td>64,310</td>
<td>2,858,000</td>
<td></td>
<td>50,800</td>
<td>376,000</td>
<td>1,169</td>
</tr>
<tr>
<td>Mayagüez</td>
<td>22,362,005</td>
<td>809,289</td>
<td>5,783,686</td>
<td>13,362</td>
<td>176,318</td>
<td>231,937</td>
<td></td>
</tr>
<tr>
<td>Ponce</td>
<td>21,476,382</td>
<td>889,488</td>
<td>1,780,926</td>
<td>211,528</td>
<td>6,264</td>
<td>472,250</td>
<td></td>
</tr>
<tr>
<td>Arroyo</td>
<td>11,944,356</td>
<td>620,709</td>
<td>72,956</td>
<td>119,933</td>
<td></td>
<td>62,935</td>
<td>3,463</td>
</tr>
<tr>
<td></td>
<td>18,576,782</td>
<td>734,110</td>
<td></td>
<td>29,865</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Guayanilla & Guánica

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1864</td>
<td>111,175,022</td>
<td>3,820,076</td>
<td>14,993,836</td>
<td>4,078,333</td>
<td>569,665</td>
<td>1,575,187</td>
</tr>
<tr>
<td>1863</td>
<td>141,058,103</td>
<td>4,747,054</td>
<td>21,540,492</td>
<td>5,270,210</td>
<td>606,722</td>
<td>203,760</td>
</tr>
<tr>
<td>1862</td>
<td>150,804,153</td>
<td>4,933,608</td>
<td>13,229,633</td>
<td>9,646,700</td>
<td>473,715</td>
<td>234,782</td>
</tr>
</tbody>
</table>

Source: Report of the Commissioners from British North America Appointed to Inquire into the Trade of the West Indies, Mexico and Brazil (Ottawa: G.E. Desbarats, 1866), 148.

The rise of coffee as Puerto Rico's main export crop and the decline of sugar were shown in Rio Prieto's predominance over Guánica. In 1880, Rio Prieto accounted for 26.7 percent of Yauco's total agrarian income, compared with the 15.1 percent for Guánica and 4.9 percent for Barinas.94 In 1888, seven coffee plantations in Rio Prieto controlled 1,628 acres of the 4,344 acres planted in coffee in Yauco. In Rio Prieto, they cultivated 28.7 percent of the total land area, while Guánica had only 10.5 percent of all its acreage cultivated.95 As the century ended, Yauco's agrarian income distribution was skewed favorably toward the coffee wards.

94 Bergad, Coffee, p. 113.
In Guánica, meanwhile, land concentration prevailed. In 1880-1881, of a total 35 farms, 17 or 48.6 percent spanned more than 388 acres each, controlling 83.4 percent of Guánica’s surface.\(^96\) Families from San Germán-like the Arenas, Grimaldis, Quiñones, and Ramirez de Arellanos-still controlled the larger plantations.\(^97\)

<table>
<thead>
<tr>
<th>Name of Hacienda</th>
<th>Type of Land</th>
<th>Type of Agriculture</th>
<th>Total Cuerdas</th>
<th>Owner or Possessor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sugar Canc</td>
<td>Minor Crops</td>
<td>Pastures</td>
</tr>
<tr>
<td>Guánica Ward</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinco Hermanos</td>
<td>Irrigated Land</td>
<td>50</td>
<td>-</td>
<td>350</td>
</tr>
<tr>
<td>Santa Desideria (Later</td>
<td>Irrigated and</td>
<td>150</td>
<td>-</td>
<td>1,930</td>
</tr>
<tr>
<td>Santa Rita)</td>
<td>Dry Land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Igualdad</td>
<td>Irrigated and</td>
<td>250</td>
<td>-</td>
<td>850</td>
</tr>
<tr>
<td></td>
<td>Dry Land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maria Antonia</td>
<td>Irrigated and</td>
<td>150</td>
<td>-</td>
<td>1,450</td>
</tr>
<tr>
<td></td>
<td>Dry Land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fraternidad</td>
<td>Irrigated and</td>
<td>210</td>
<td>20</td>
<td>616</td>
</tr>
<tr>
<td></td>
<td>Dry Land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barinas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td>Irrigated Land</td>
<td>200</td>
<td>100</td>
<td>900</td>
</tr>
<tr>
<td>Maria</td>
<td>Irrigated Land</td>
<td>180</td>
<td>-</td>
<td>399</td>
</tr>
<tr>
<td>San Rafael</td>
<td>Irrigated and</td>
<td>247</td>
<td>14</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>Dry Land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n.a.</td>
<td>Irrigated Land</td>
<td>16</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: AGPR, FDY, "Catastro de fincas rústicas, 1891."

\(^96\) Bergad, *Coffee*, p. 111.
\(^97\) Bergad, *Coffee*, p. 112.
Extreme concentration of land continued a decade later. In 1891, of 78 farms, 23 (29.5 percent) held more than 194 acres, controlling 85.7 percent of all land in Guánica. (See Table 1.6) Barinas also exhibited significant concentration, with seven farms controlling 70.6 percent of the ward’s land. (See Table 1.7) Yauco’s sugar acreage of 1,386 acres produced 1.76 million pounds of muscavado sugar in 1891.98

Table 1.7
Barinas Ward Land Tenure Structure, 1891

<table>
<thead>
<tr>
<th>Category</th>
<th>Cuerdas</th>
<th>No. of Farms</th>
<th>% of Farms</th>
<th>% of Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minifundia</td>
<td>1-20</td>
<td>26</td>
<td>33.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Small Farms</td>
<td>21-50</td>
<td>8</td>
<td>10.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Middle Farms</td>
<td>51-200</td>
<td>21</td>
<td>26.9</td>
<td>12.6</td>
</tr>
<tr>
<td>Large Farms</td>
<td>201-500</td>
<td>11</td>
<td>14.1</td>
<td>17.2</td>
</tr>
<tr>
<td>Estates</td>
<td>501+</td>
<td>12</td>
<td>15.4</td>
<td>68.0</td>
</tr>
<tr>
<td>Total</td>
<td>78</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: AGPR, FDY, “Catálogo de fincas rústicas, 1891.”

In 1891, Guánica and Barinas continued to dominate Yauco’s sugar economy. Yet, only five haciendas in Guánica and four haciendas in Barinas cultivated cane. (See Table 1.8) Guánica’s sugar haciendas’ acreage totaled 6,597 acres, while Barinas’ sugar haciendas’ acreage totaled 2,715 acres. They planted merely 3.8 percent of Guánica’s total acreage in cane. Pastures and “other uses” (otros aprovechamientos) retained more than 75 percent of the surface of both wards.99

In 1891, Eduardo Quiñones Vizcarrondo was Guánica’s largest landowner with 3,120 acres. His estate, Ensenada, was Guánica’s largest, with 2,978 acres, 39 acres in pastures and provisions, and another 2,938 acres assigned to “other uses.”100 Quiñones Vizcarrondo’s business had

98 Baralt, Yauco, pp. 14-15. Baralt records Yauco’s increase in sugar lands from 515 acres in 1864 to 1,452 acres in 1891, but fails to note that it came about by the annexation of Guánica in 1874.
99 AGPR, FMY, “Catálogo de fincas rústicas, 1891.”
100 AGPR, FMY, “Catálogo de fincas rústicas, 1891.”
taken a turn for the worse. In 1888, he lost his coffee plantation, Hacienda Asunción, in the Yauco highlands to the Pietri-Mariani clan, and 196 acres "of the best land" in Adjuntas to Mallorcan coffee planter-factor-merchant Juan Castañer.101 That same year, Quiñones Vizcarondo wrote Santiago Pietri, deploring his lack of cash flow:

It is a fact that when a man owes, it is more than a yoke that he carries; it's like having one's neck in a noose; or worse, having a bulldog stuck in the neck... What is the use of having capital in the form of land, without anything to exploit it?102

Table 1.8
Sugar Haciendas in Guánica and Barinas Wards, Yauco, 1891

<table>
<thead>
<tr>
<th>Category</th>
<th>Cuerdas</th>
<th>No. of Farms</th>
<th>% of Farms</th>
<th>% of Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minifundia</td>
<td>1-20</td>
<td>61</td>
<td>67</td>
<td>5.9</td>
</tr>
<tr>
<td>Small Farms</td>
<td>21-50</td>
<td>16</td>
<td>17.6</td>
<td>9.6</td>
</tr>
<tr>
<td>Middle Farms</td>
<td>51-200</td>
<td>7</td>
<td>7.7</td>
<td>13.9</td>
</tr>
<tr>
<td>Large Farms</td>
<td>201-500</td>
<td>4</td>
<td>4.4</td>
<td>22.4</td>
</tr>
<tr>
<td>Estates</td>
<td>501+</td>
<td>3</td>
<td>3.3</td>
<td>48.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>91</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: AGPR, FDY, "Catastro de fincas rústicas, 1891."

Badly indebted, he fell from the position of a rich hacendado to one of "quasi-vassal" to the Pietri-Marianis.103 Still facing financial duress, he mortgaged his farm Ensenada to the Banco Territorial y Agrícola for 18,732 pesos.104

102 Quoted in Carlos Buitrago Ortiz, Los orígenes históricos de la sociedad precapitalista en Puerto Rico (Rio Piedras: Ediciones Huracán, 1976), p. 34.
103 Buitrago Ortiz, Los orígenes históricos, p. 93.
104 "Finca 1392," vol. 26 Yauco, fo 185-186, RP/SG.
Guánica’s next largest landowner was the Pietri-Mariani clan with 2,705 acres. By 1891, coffee planter-factor-merchant Domingo Mariani, acquired Hacienda Santa Desideria, “the most important that there was in Yauco’s jurisdiction,” from the Sucesión Quiñones. In 1899-1900, Domingo Mariani owned three haciendas in Río Prieto totaling 1,708 acres or 45.8 percent of the ward’s total land. The reach of the Pietri-Mariani clan stretched from the town of Yauco to the highlands and the lowlands of the municipality. The Corsican family clan of the Pietri-Mariani displaced the Creole elite family of the Quiñones Vizcarondo. Families of Corsican origin owned the most important sugar haciendas in Guánica.

The land tenure structure in Yauco’s sugar wards had been skewed for more than half a century. Ownership changed with Corsicans acquiring estates from traditional Creole elite, but land concentration remained constant. In the 1890s, cane cultivation in Yauco fell. Land planted in cane dropped 1,600 acres in 1891 to 1,386 acres in eight small sugar haciendas in operation in 1898. The sugar crisis affecting the island took its toll on the number of haciendas: 553 in 1870, 446 in 1883, and 249 in 1898. Of those operating in 1898, more than a 100 had incorporated a steam mill in their factories, 50 even added a vacuum pan, while the rest continued to make

107 For details see Buitrago, Haciendas, pp. 67-68, 136-13.
108 AGPR, FMY, “Catastro de fincas rústicas, 1891,” and AGPR, FMY, “Libro de Actas del Ayuntamiento de Yauco, 4 de mayo de 1898,” AGPR.
109 American, British and French consular reports on the crisis can be found in Gervasio Luis García and Emma Dávila Cox, eds., Puerto Rico en la mirada extranjera: la correspondencia de los cónsules norteamericanos, franceses e ingleses, 1869-1900 (Rio Piedras: Centro de Investigaciones Históricas y Decanato de Estudios Graduados e Investigación, 2005).
sugar with ox-driven mills. Still, sugar planters did not remain idle amid the crisis. Faced with low sugar prices, the industry was in a state of flux and many saw the establishment of centrales as their salvation:

People have already arrived at the conviction, by seeing the satisfactory work done by vacuum and triple effect in some dozen works (out of 200 establishments, large and small), that nothing but the speedy introduction of modern apparatus can save them from final ruin.

Mechanization of the sugar-making process and production of centrifugal sugars characterized the "central" system of sugar production. They based centralization presumably on a division of labor. Centrales milled cane from adjacent estates that cultivated cane but did not process it into sugar.

The spread of the central system in the Caribbean region was a diachronic process, contingent on metropolitan government policy and natural conditions, as well as availability of land, capital, specialized personnel and labor, technology, and markets. The central experience did not produce the expected outcome in most Caribbean territories,

111 In 1847, Dario de Ormaechea was the first to propose the adoption of the central system of production. Other proposals were soon forthcoming. See "Memoria..." in Coll y Toste, ed., Boletín histórico, vol. 2, pp. 253-255, and Ramos Mattei, "The Influence...", Chapter 3.
113 Centrifugal sugar is a high grade raw sugar. After being boiled into crystals, it is run through a centrifugal machine which swiftly and effectively separates most of the molasses from the sugar. The color of the sugar depends on the thoroughness of the clarification process even before the crystals and molasses reach the centrifugal. See Palmer, Questions and Answers, p. 17.
including Puerto Rico, because the anticipated division of labor never fully occurred. The central generally acquired land to guarantee its cane supply. In Puerto Rico, the introduction of movable tracks in 1869 and the railroad in 1888 extended the reach of the central and revolutionized the transport system. Many haciendas became part of the agricultural property of the central itself. Centralization sped land consolidation, that is, latifundium.

Several haciendas remaining in the hands of their owners abandoned sugar processing and devoted themselves to cane cultivation for the centrales. Yet, they gradually lost much of their nominal independence because of the nature of sugar production itself. Factory management necessarily intervened in cultivation practices, cane cutting, and the timely transportation to the mills. Such estates lost their status as true haciendas and became known, fittingly, as “colonies” (colonias). Therefore, centralization also contributed to the decline in the number of haciendas. Businessperson Albert Lee reminisced about the process in which centrales absorbed haciendas:

There is some sentiment attached to the small estates of the past, each now marked merely by a smokeless black chimney and perhaps some old masonry ruins and broken down machinery which is rapidly disappearing as junk. Now mere colonias of the larger plantations, in days gone they provided for trips to Europe and for what then was considered gay living. Eight or nine such mills now form “Mercedita” in Ponce, “Potola,” the largest producer of muscavado on the Island, is now a small unit of “Aguirre”; “Carmen” absorbed “Carmelita,” “San Antonio,” “Monserrat,” and the Otero estate. “Constancia” took over “Río Nuevo,” “Media Luna,” “San Pedro,” “Julita,” “Esperanza,” and others. Every large Central now represents a number of those early, small, picturesque plantations.115

The traditional Puerto Rican sugar hacienda continued to operate with significant changes. It remained generally family-owned and integrated the growing and milling of cane. Yet technology became partially mechanized, although low grade raw sugar and molasses continued to be their final product. Several haciendas achieved a degree of mechanization sufficient to become known as “muscavado factories” (factorías de mascabado), perhaps a mid-stage between the sugar hacienda’s mill and the central. Others became more fully mechanized and produced centrifugal sugar. The muscavado and centrifugal factories relied more on the colonato system.

In northern Arecibo, the sugar crisis starting in the 1870s provoked the transfer of haciendas to local property owners, including merchants or individuals linked to the industry.116 Such was the case with Carlos Westphaling, an overseer, who purchased Hacienda San Gabriel and converted it into a factory producing centrifugal sugar, Central Oriente.117

Cultivation practices remained traditional and credited with contributing to the “ruin” of the industry: “the system of culture in Puerto Rico consists in exacting from the land all that it can give, without ever returning to it by manures or by rational cultivation that which it has lost.”118 Reportedly, planters cultivated only Cuban crystalline cane, with the other varieties abandoned after attacks by disease.

Not all haciendas remained in operation or became colonias, however. Some were simply abandoned. Many haciendas turned their land to pasture for grazing cattle and to raising minor crops: “Owing to low prices and heavy taxation under the Spanish domination, the sugar industry of Porto Rico had gradually gone down, and many plantations turned to cattle farms.”119

117 Westphaling’s partners were merchant Bernardo Huicy Marin and David Wilson, a Scottish mechanic and Arecibo resident for several years. See Cubano, “Sugar Trade and Economic Elites in Puerto Rico.,” p. 84.
Puerto Rico’s first central—San Vicente in the northern district—opened in 1873, the same year of the abolition of slavery.\footnote{120} Sugar historian Andrés Ramos Mattei noted that while abolition disrupted the traditional labor regime for sugar production, planters found several mechanisms to keep their former slaves from moving away. Many gave former slaves land to live and to raise crops; others offered credit in the hacienda or central store, and some gave payment in tokens (fichas) that could only be used in the hacienda or central store.\footnote{121} Some hacendados in the northern and eastern districts also employed black workers from British Caribbean colonies during the 1871-1882 period. Information is scanty, but apparently about 120 workers from Antigua, St. Kitts, and Nevis were hired.\footnote{122}

Labor migration—both internal and external—became commonplace after abolition.\footnote{123} The expansion of the coffee economy in the highlands had transformed landless peasants “into an embryonic rural proletariat dependent on wages for survival.”\footnote{124} The workers, especially field hands, took advantage of the consecutive cum complementary seasons for harvesting coffee and cane. In 1888, Francisco Mariano Quiñones, owner of Hacienda Filial Amor, lamenting the crisis in the sugar industry, saw God’s hand in this seasonal internal migration:

\footnote{120} For a history of San Vicente from hacienda to central see Pedro San Miguel, *El mundo que creó el azúcar. Las haciendas en Vega Baja (1800-1873)* (Río Piedras: Ediciones Huracán, 1989) and Teresita Martínez-Vergne, *Capitalism in Colonial Puerto Rico: Central San Vicente in Late Nineteenth Century* (Gainesville: The University of Florida Press, 1992). A description of the early years of Central San Vicente in the late 1870s, hitherto passed unnoticed, is found in Carlos Peñaranda, *Cartas puertorriqueñas 1878-1880* (San Juan: Editorial El Cemi, 1967), pp. 63-95.

\footnote{121} Ramos Mattei, “The Influence....,” p. 238.

\footnote{122} In the 1890s, a Mr. Mouriel imported to Vieques about 100 workers from the Windward Islands, paying them from 60 cents to 75 cents daily. See Ramos Mattei, “The Influence....,” pp. 248-250, and Carroll, “Appendix,” Report, p. 80.


Providence seems to want sugar and coffee united in Puerto Rican soil in an indissoluble manner for the good of the working class. In the Lowlands, sugar cane, and in the mountain sections, the coffee farm. Cane engages the laborer approximately the first months of the year, and the remaining three the coffee hacendado, who needs them with great want for the picking of the grain, as does the one in the Lowlands at the time of sugar manufacturing, and other labors. Unusual, but admirable harmony that exists between the two principal sources of our past prosperity, today interrupted by the setback that one of them has suffered.125

From 1873 to June 1898, 26 *centrales* were built in Puerto Rico.126 (See Appendix 1.4) No comparative study has been carried out of their experience, but Sidney W. Mintz, Andrés Ramos Mattei and Teresita Martínez-Vergne indicate that a recurring problem was shortage of capital.127 In 1895, a report appearing in a French sugar periodical, *Le Journal des Fabricants de Sucre*, pointed to the lack of “essential elements” such as “good roads or means of communication by railway, institutions of credit,” and “a normal monetary regime.”128 Another French journal, *La Sucrière Indigène*, describing the undeveloped state of the sugar industry, reported

scarcely as many as eight or ten sugar houses with triple effect apparatus and vacuum pans. The others concentrate in the open air at high temperature, some factories even employing still the primitive vertical mill driven by mill or cattle. With such machinery the sugar industry can only obtain defective results.129

125 Quiñones, *Conflictos económicos*, pp. 62-63. (My translation)
126 For an analysis of the development of centrales in Puerto Rico see Ramos Mattei, “The Influence...,” Chapters 4 and 5.
129 “The Sugar Industry in Porto Rico,” *LPSM* (31 August 1895), p. 37. (Translated from *La Sucrière Indigène*)
The Sugar Industry in Porto Rico.

Although now occupying a secondary place in the sugar world, this Island could quickly acquire great importance. Nothing would be more easy than for it to double or triple its sugar production, which is at present but 50,000 tons. There is need for this only that those who already possess the bulk of the lands in cane should have better machinery for its manufacture.

With excellent topographical conditions, good soil and good labor, the Porto Rico sugar industry still lacks two essential elements, which are good roads or means of communication by railway, and institutions of credit; and without these two agricultural and industrial progress would seem impossible. One might also regard as a serious obstacle to progress here the existing monetary regime, which is founded upon the official value of 95 cents given to the Mexican dollar in 1879, with prohibition since 1885 of all importation of it; this prohibition, however, being evaded by active and constant smuggling. This regime, against which the Island has protested in vain at Madrid, has within a few years carried foreign exchange from 60 down to 40 per cent. and derailed all values. The evil has attained such gravity that the local government has itself decided to apply the remedy that the nation should have applied, but how to impose a crushing debt on a single province and one which would be felt but little, or not at all, by the nation, is a problem.

The monetary situation as it exists depresses business in every direction and leaves the country without banks, without credit, without tranquility, without confidence in the future, and without strength for any enterprise.

The producers of muscovado sugar, who have been susteined thus far by the high price of foreign exchange, combat the withdrawal of the Mexican dollar, which would ruin them. The old establishments may run some time yet, but their days are counted. As the planters of the French Antilles have sought their salvation by using diffusion, and if evaporation and crystallization in vacuo are there insufficient, how can the people sustain themselves with the old Lahe battery?

A return to a normal monetary regime would force our sugar producers to carry their cane to modern establishments that they would have at their doors, which in turn would have all interest on their side to abandon cane culture and to occupy themselves only with the manufacturer, and to increase their capacity. Thus there would be soon established a division of the industry into its two branches, agricultural and manufacturing, which is regarded as essential in sugar production.

One might judge of the possible development of sugar production in Porto Rico by seeing that in a single district, with railways and central factories, 200,000 tons of cane would be produced on land which is now occupied in brush and pasture. With such elements it is astonishing that progress is so retarded. —Le Journal des Fabricants de Sucre.

Centrales in Puerto Rico tended to be built in the northern district, while haciendas lasted longer in the southwestern districts. Though there is need for further research on this disparity, topography and rainfall certainly contributed to the difference. A range of mountains extends across the center of Puerto Rico, dividing the island's northern and southern regions. In the northern lowlands, precipitation is abundant. Yet, the south gets comparatively little rain, with wide differences in precipitation from month to month and frequent long droughts.\footnote{130 Hacienda Vieja in Cañameral faced a similar situation. See Mintz, "The History...", pp. 104, 107, 108.} The southern lowlands...
were largely devoted to growing sugar cane. They had small streams to provide water, but the streams could not supply enough water to meet the needs of the sugar plantations. As a result, property owners in the south obtained concessions to use water from nearly all the rivers in the southern district. Even so, the rivers failed to carry all the water needed or the volumes approved in the concessions.

Guánica is found in southwestern Puerto Rico, the driest section in the entire island. The paucity of available moisture, unreliability of precipitation, and high evaporation rates made irrigation mandatory to produce high cane yields. Yauco’s irrigation system started in the 1850s, but did not develop largely then.131 In 1891, 70 of Guánica’s 78 farms were on unirrigated, dry barren land (secano), unfit for sugar cane. Hacienda Cinco Hermanos was the only one on fully irrigated lands (regadio). Haciendas Santa Desideria (later known as Santa Rita), Igualdad, Maria Antonia and Fraternidad were irrigated partially, with most of their terrain on dry lands. Like Guánica, Barinas ward also had 86 of its 91 farms on unwatered land. The only irrigated estates were Florida, María, and a small 19-acre plot in irrigated lands. Hacienda San Rafael was partly irrigated.132

Of the 26 centrales built in Puerto Rico during the nineteenth century, at least 18 were a family business, which is, belonging to an individual, a group of relatives, or a firm comprised by relatives.133 Foreign-owned corporations owned five centrales: three controlled by British interests, one by French, and one by Spanish shareholders. These five centrales accounted for 32 percent of the island’s total production capacity before the U.S. invasion in 1898.134

Puerto Rico’s high-grade sugars were not sold in the U.S. market. Ramos Mattei suggests, without providing evidence, that the more technologically advanced haciendas and centrales consigned their better sugars to Europe as a way to pay for machinery acquired there. He also found

132 Méndez, El pueblo de Yauco, p. 9.
133 Ramos Mattei, “The Influence...,” p. 211.
that Mercedita sold part of its output in the local market, thereby avoiding
the high costs of export duties.135

Unlike Cuba and the Dominican Republic, Puerto Rico was not an
attractive market for U.S., sugar capital in the nineteenth century. U.S.-
owned sugar haciendas were only a small minority during the first half of
the nineteenth century. In that period, Ponce was the island’s most highly
developed sugar plantation area. Still, U.S. sugar planters owned only two
haciendas in 1827, or 2.1 percent, and three haciendas in 1845, account-
ing for 6.1 percent of estates there. One owner throughout the period
came from Louisiana.136 In 1839, none of San Germán’s 34 hacendados
was a U.S. national.137 The only other U.S. owner in the 1830s may have
been U.S.-born Charles Walker, who owned a hacienda in Guayama, and
a Mr. Rogers, who owned a hacienda in Ponce.138

In the 1860s, an important sugar hacienda in the northern district
passed into German-American hands. A merchant firm in Arecibo, Ulanga
& Co., had mortgaged Hacienda Los Caños to Edmund Pavenstedt Sr., of
New York and later of Bremen. In 1866, C. F. Storer & Co. acquired all
of Ulanga & Co.’s assets and properties and sold Los Caños to Pavenstedt
for 230,000 pesos.139 In 1892, Pavenstedt established business relations
with the Arecibo merchant firm of Roses y Co. This firm took charge of
the sugar shipments of Los Caños to Gossler & Co. in Boston. That year,

136 Information taken from Scarano, “Table 4.1: National Origins of the
Hacendados of Ponce in 1827 and 1845,” Sugar and Slavery, p. 82. Percentages
differ from Scarano because I have included Louisiana hacendados among those
from the United States, rather than from France.
138 “Charles Walker’s Letters from Puerto Rico,” Caribbean Studies 5, no. 1
139 The transaction included a sale on reversion clause for a 12-year period.
During this 12-year period, Storer & Co. was to pay a six percent annual rent
based on the selling price and 21,105 pesos in a two-year period out of crop
financing. See Astrid Cubano, “Economía y sociedad en Arecibo en el siglo
XIX: los grandes productores y la inmigración de comerciantes,” in Francisco A.
Scarano, ed., Inmigración y clases sociales en el Puerto Rico del siglo XIX (Río Piedras:
Pavenstedt imported new machinery, changing Los Caños' sugar processing methods to allow the production of centrifugal sugar. As it will be seen in Chapter 4, Pavenstedt's venture is the only direct link to the establishment of the South Porto Rico Sugar Company in Puerto Rico.

Jorge Latimer was probably the U.S. citizen with the biggest sugar interest in Puerto Rico in the nineteenth century. Born in Philadelphia, he settled in Puerto Rico in 1833 and became the most important merchant-banker-planter of his time. He established an import-export business in San Juan and branched out to other important ports. In 1853, Latimer purchased two adjoining haciendas in Loíza, San Isidro and Punta, the latter from H. H. Berg, governor of the Danish Virgin Islands. He also operated a copper mine, coffee haciendas, and a bakery in San Juan.

Haciendas San Isidro and Punta became the nucleus of Central Canóvanas, built in 1880 by the surviving partners of Latimer y Compañía – Guillermo Látimer, Charles Hoard and José Ramón Fernández – and managed by the Sucesión Jorge Latimer. In 1882, a cash crunch prompted them to join with a British firm, the Colonial Company Limited, to form the Canóvanas Sugar Company Limited. The British firm took over management. In an 1892 letter to the Hawaiian Planters Monthly, R. A. Macfie Jr., manager of Central Canóvanas, decried the absence of English or American compatriots:

It is a desolate place, as there are no other English people near, and even in San Juan, the capital of the island, there are no English or Americans to speak of.

140 Cubano, "Sugar Trade and Economic Elites...", pp. 82-84.
141 Ramos Mattei, "The Influence...", pp. 138-141.
142 During the last third of the nineteenth century, the Colonial Company Ltd. became the largest producer of raw sugar in the Caribbean, with central factories in Trinidad and Tobago and British Guiana and semi-mechanized factories in Barbados. See Ramos Mattei, "The Influence...", pp. 126, 138, and "Colonial Company Ltd., Seventeenth Annual Report of the Directors, 1884", Guildhall Library, Ms 18000/5B 250, City of London.
No U.S.-based company was sole owner of a central in Puerto Rico before 1898. Instead they had joint ventures with British capital. The only important nonresident U.S. investor was Lorenzo D. Armstrong, of the New York commercial and banking house L. W. & P. Armstrong, originally of New Haven, Connecticut. Armstrong and Great Britain’s Frederick Barnes became the principal shareholders of The Puerto Rico Sugar Factory Limited in 1888, when they took over Central Progreso. As Chapter 2 will show, L. W. & P. Armstrong’s stake in northern Puerto Rico increased significantly during the twentieth century.

No investments have been found by the Havemeyers in Puerto Rico before 1898. In fact, a 1880 line of credit from the Havemeyer Sugar Refinery & Co. to the San Juan branch of the Arecibo merchant firm of Fernando Fernández is their only known business transaction before the U.S. military invasion. Yet, Fernández, also a sugar planter, canceled the arrangement and dissolved the firm when it failed to produce, in the words of Santiago McCormick, “those abundant and immediately profitable results” to which the wealthy merchants were accustomed.

The growth and decline of the Puerto Rican sugar industry in the nineteenth century are closely linked to the development of the sugar refining and production interests in the United States. In the early part of the century, Puerto Rico’s sugar industry boomed in the wake of the great surge of the Cuban sugar industry, and always remained in its tail. Both

144 L. W. & P. Armstrong, a firm founded in New Haven about 1836, “has continuously done business with the island of Porto Rico.” The firm moved to New York when the building of sugar refineries in that city made it no longer possible to import brown sugar and molasses for local distribution. Statement concerning a Bill to Provide Civil Government for Porto Rico: The Provisions thereof Affecting the Sugar Industry in the Island, p. 36. See also Letter, Lorenzo D. Armstrong, to Charles Dana, 5 March 1942, in The Dana Collection Scrapbook, vol. 129, p. 33, LNHMHS.

145 Central Progreso was built in Carolina by Lamb y Compañía, a British firm with offices in St. Thomas. Crósas & Finlay managed the central until the formation of The Puerto Rico Sugar Factory Limited. A U.S.-born merchant-banker, Andrés Crósas, was American vice-consul in San Juan. He broke with George Finlay because of the latter’s interest in acquiring Hacienda Carmen. See Ramos Mattei, “The Influence…, pp. 146-147, and Lee, An Island Grows, p. 46.

Spanish Caribbean colonies sold mainly to the U.S. market, but Puerto Rico’s sugar products entered only when not in competition with Cuban low-grades, semi-refined or refined products.

By mid-century, the Puerto Rican sugar industry started to decline because of competition from beet and other cane sugar producers, low sugar prices, and Spain’s fiscal and trade policies. These conditions remained steadfast until 1898. During the last decades of the century, U.S. sugar refining interests, incorporated in the ASRCO and with the Havemeyers in charge, controlled the U.S. sugar market. The ASRCO invariably secured favorable tariff rates. High duties on refined sugar kept out competing sugars, while low or no duties for 96 degrees raw sugar underscored its power to obtain its major input at lower prices.

Then, ingenios dominated Puerto Rico’s structure of sugar production and muscovado sugar remained the leading export product. Efforts to modernize Puerto Rico’s industry by building central factories fell short. Puerto Rico could not supply the raw sugar at 96 degrees centrifugal with uniform quality required by U.S. refiners.

The sugar industry in Puerto Rico’s Guánica area started late in the boom, with landed interests including traditional elite Creole and immigrant families from the San Germán municipality. Land ownership in Guánica became increasingly concentrated over the course of the century. Guánica abandoned San Germán and joined instead with Yauco municipality in 1875, reflecting San Germán’s decline and Yauco’s growth by merchant-cum-coffee hacendado interests. Immigrant families of European descent (Corsican Pietri-Mariani family clan) displaced traditional Creole elite families in Guanica (e.g., Quiñones Vizcarondo). Guánica lacked the irrigation works needed to expand output through centrales significantly, and low prices for sugar meant tough times to raise capital for irrigation systems or other technologies. As a result, Guánica’s sugar industry declined, stagnation set in, with production levels and lands in cane cultivation decreasing until the end of the century.
As part of the U.S. military campaign against Spain in 1898, General Nelson A. Miles and 3,415 men departed Guantánamo, Cuba, in 21 July to attack Puerto Rico. Miles had orders to land at Point Fajardo in the east, but “so much publicity had been given to the enterprise that I decided to do what was on the least expected... go direct to Guánica” on the south coast. Miles changed his mind, because intelligence sources said “there existed considerable disaffection among the people of the southern portion of the island.” In 25 July, U.S. military forces landed in Guánica and “after a short skirmish... the flag of the United States was raised in the island by my staff officers.”

That day, Spanish troops took position in Domingo Marián’s Hacienda Santa Desideria, close to a U.S. company stationed in an adjacent hill where the house of Ventura Quiñones was found. In 26 July, both

forces clashed in the so-called "battle of Yauco" (la batalla de Yauco), which ended with the retreat of the Spanish soldiery. Yauco became the first major Puerto Rican city occupied by the U.S. military.\(^3\) No one doubted the outcome of the war -Cuba and the Philippines had already fallen-, but even so, Spanish and U.S. troops were still fighting in Puerto Rico when they signed the peace protocol in Washington, DC on 12 August 1898.

Strategic and economic reasons usually explain the U.S. military invasion and Spain's resulting cession of Puerto Rico to the United States. Strategically, it is argued that Puerto Rico occupied a crucial geopolitical position in the Caribbean Sea and Gulf of Mexico. Such outstanding U.S. strategic thinkers, as Capt. Alfred T. Mahan, conceived military and commercial aspects as two sides of the same coin: the security and prosperity of the United States.

Little substantive evidence exists to support the claim that the prime incentive for Puerto Rico's annexation was economic interest.\(^4\) In contrast with Cuba and the Dominican Republic before 1898, Puerto Rico had no important American investments nor did it occupy a privileged position as a U.S. trading partner. Yet, from the Puerto Rican side, an influential, if not numerous, propertyed class (including sugar planters) favored annexation. They anticipated the duty-free entry of their products into the U.S. market. In 1898, sugar planter Ricardo Nadal expressed it better than anyone:

Referring again to the sugar industry... this has been the determining point in favor of annexation. That is the certainty in the minds of Porto Ricans that their sugar will not have to pay any duty going into the United States, knowing that such a duty would amount to a bounty of their product, and

\(^3\) Ángel Rivero, Crónica de la Guerra Hispanoamericana en Puerto Rico (1922; reprint, Rio Piedras: Editorial Edil, 1972), pp. 196-205.

\(^4\) British author Raymond Carr says: "Unlike Cuba, where the safety of the very considerable American direct investments in sugar centrales encouraged intervention, economic interest in Puerto Rico was a result of a successful war, not its cause." Puerto Rico: A Colonial Experiment (New York: Vintage Books, 1984), p. 25. (Italics in the original)
this view of the matter has done much to arouse interest in favor of annexation. The same thing may be said of all other articles of production which are imported into the United States.\(^5\)

Nonetheless, it would be a mistake to dismiss a U.S. economic motive. Once the United States took possession of the island, economic considerations rose in importance, soon equaling security concerns as Mahan’s view suggested.\(^6\) The same sugar interests that lobbied and campaigned for U.S. intervention in Cuba noticed Puerto Rico’s potential to produce sugar within the U.S. customs zone. In 1899, again in contrast with Cuba, U.S. southern sugar growers belittled Puerto Rico’s production capability. John Dymond, spokesperson of Louisiana’s sugar planters and central factory owners, wrote:

The acquisition of Porto Rico may be looked upon largely from the military point of view. The island is a mountainous one and while it produces a considerable amount of sugar... as compared to the United States these quantities are but insignificant, and their competition with similar products within the limits of the old Union cannot have any very injurious effect.\(^7\)

The Sugar Trust did have a position, however. At the turn of the century, scholar Paul Vogt noted “the undoubted policy of the Trust to acquire as great a control as possible of the sources of sugar.”\(^8\) Then, the Trust began a process of vertical integration, that is, an expansion into

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6. For a strategic-military analysis, see Maria Estades Font, La presencia militar de los Estados Unidos en Puerto Rico 1898-1918: intereses estratégicos y dominación colonial (Rio Piedras: Ediciones Huracán, 1988) and for a study of U.S. investments in all sectors during this period see Andrés A. Ramos Mattei, “Las inversiones norteamericanas en Puerto Rico y la Ley Foraker, 1898-1900,” Caribbean Studies, 14, no. 3 (October, 1974), pp. 53-69.
raw sugar production to control the value chain of the industry directly. Domestic production was divided between cane and beet growers. Within the continental States, many states provided beet sugar and Louisiana provided cane. Outside the mainland, the Trust bought cane from Hawaii, Puerto Rico, and the Philippines, all tropical island nations with different political-juridical-economic colonial relationships with the United States.

While nominally independent, Cuba also had a special role within the U.S. sugar complex. It had a reciprocal treaty with the United States that provided a 20 percent tariff preference for U.S. entry over other countries. The accord helped make Cuba the largest foreign raw sugar supplier to the United States. From 1901 to 1905, Cuba provided 50 percent of U.S. sugar imports and from 1906 to 1910, its share rose to 73 percent.

In 1901, Henry O. Havemeyer—with Wallace Willet, editor of the Weekly Statistical Sugar Trade Journal acting as middleman—set out to get a controlling interest in the U.S. sugar beet industry. By 1907, he and his ASRCo together held “a commanding interest in almost every important sugar beet company in the United States.” Havemeyer-controlled enterprises handled about 70 percent of all beet sugar processed in the country.

10 The treaty, which went into effect in 1903, granted in turn to U.S. shippers a reduction fluctuating between 20 and 40 percent. See Frank W. Taussig, Some Aspects of the Tariff Question (1931; reprint, Clifton: Augustus M. Kelley Publishers, 1972), p. 75.
12 Eichner, The Emergence of Oligopoly, p. 248.
Between 1890 and 1910, the Sugar Trust had no direct properties or interests in the tropical areas that produced raw sugar for the U.S. market. Yet, a few of the Trust's officials and stockholders held shares and served as officials in sugar companies based in Cuba and Puerto Rico. A notable example was the Atkins family of Boston, which sold its Bay State refinery to the Sugar Trust in 1892. Edwin F. Atkins took an active role in the Sugar Trust and eventually became president. Throughout the period, he held Cuban interests. Indeed, Atkins persuaded Henry O. Havemeyer to invest in a sugar-producing company in Cuba:

In 1892 H. O. Havemeyer, then the most powerful man in the sugar business, his cousin, Charles H. Senff, and I became interested in the Trinidad Sugar Company. I had only a minority interest, but to oblige Havemeyer, I became president.

In 1906, at the urging of James Howell Post, Havemeyer again invested in Cuba, this time in the newly organized Cuban-American Sugar Company. That firm brought together five raw sugar factories. In 1908, the ASRCO acquired control of the Colonial Sugars Company, which owned plantations in Louisiana and the Gramercy refinery near New Orleans. By 1910, directors and stockholders in the Sugar Trust controlled an estimated 528,800 acres of Cuban cane land, producing 297,000 tons of raw sugar or about 20 percent of Cuban annual sugar production.

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Cuba took on an enormous importance for the Trust. Replying to a question on the number of stockholders, Havemeyer candidly answered: "Eleven thousand; almost enough to take Cuba, and they would take it if they could." Later, he added:

Cuba is a country that can supply the United States with their sugar in 3 years, and it is a great pity that we do not have it and have sugar at 2 cents a pound instead of 5, which we are paying now. That is, if we could have raw sugar coming from Cuba free, without tariff, we could sell it at 3, and have the raw sugar at 2; it would have to be refined.17

Yet, full U.S. annexation of Cuba would have been the deathblow for both the Sugar Trust and for domestic cane and beet sugar producers. To the Sugar Trust, it would have meant the possible growth of Cuba's sugar refining industry, reducing the Trust's market hold. For most domestic sugar producers, it meant competition from lower-cost producers and likely displacement from the U.S. market. Still, tariffs on refined and raw sugar clearly responded to different interests. The Trust backed a tariff on refined sugar and a ban on any sugar that would directly compete with its output. Because of its strong clout, the Trust obtained its way in Congress. Domestic raw sugar producers, unable to supply the entire U.S. market, were forced to negotiate with the Trust and other interests, including the U.S. government, to set the tariff on raw sugar.

By 1906, the Sugar Trust supplied about 90 percent of the refined sugar consumed in the United States.18 When Henry O. Havemeyer died on 4 December 1907, the Trust had already repelled challenges against its control of domestic sugar prices, and made important inroads into raw sugar producing areas. Nevertheless, legal problems remained. The U.S. government intensified pressures for anti-trust violations. In November 1907, the government found evidence of widespread fraud in

18 This percentage includes the refinery production in which the ASRCo had interests, namely, the National Sugar Refining Co. of New Jersey, the McCahan Sugar Refining Co., and Western Sugar Refining Co. Eichner, The Emergence of Oligopoly, p. 259.
the collection of sugar duties. They deemed the ASRCO a “bad Trust,” and linked the name Havemeyer with its bad practices.

The decoupling of the Havemeyer’s interests from the Sugar Trust and other sugar refining companies, such as the National Sugar Refining Company of New Jersey, is a fascinating story already told elsewhere in rich detail. Suffice it here to say that Henry O. Havemeyer’s only son, Horace Havemeyer, only 21 years old in 1907, took charge of the remaining family interests in sugar and embarked on his own career in sugar. As we will see, Horace Havemeyer’s new sugar investments would include Puerto Rico and the Dominican Republic, two tropical areas unexplored by his father.

For decades, the Sugar Trust maintained control of the refining industry by either ruining its competitors or bringing them into line with its own policies, particularly the fixing of sugar prices. The ASRCO waged its two most important battles to maintain its hold on the U.S. market against two new refiners, Hawaiian sugar king Claus Spreckels (1888-1891) and the U.S. leading coffee roasters, Arbuckle Brothers (1896-1900).

The Trust also battled smaller independent refineries, and they too fell into line. A case in point is the Trust’s relations with the National Sugar Refining Co. of New Jersey, which combined Claus Doscher’s New York Sugar Refining Co., Mollenhauer Sugar Refining Co., George Bunker’s National Sugar Refining Co., and part of the McCahan Sugar Refining Co. James Howell Post organized the group in 1900, officially the dominant partner of B. H. Howell & Co. sugar brokers, but covertly an agent for the Trust’s Havemeyer. The new company boasted a ranking as second largest refinery in the United States. However, it was “secretly controlled and largely owned by H. O. Havemeyer, but overtly competing, in a friendly way, with the ASRCO of which Havemeyer was president.” By 1901, as Alfred S. Eichner concludes, the sugar refining

19 Catlin Jr., Good Work Well Done, pp. 37-93.
20 In the sugar business since 1874, B. H. Howell & Co. bought raw sugar and sold refined sugar for many refineries. It was second to the ASRCO in the selling and buying of sugar in the United States. Catlin Jr., Good Work Well Done, pp. 27-33; Simpson, “The Sugar Trust...,” pp. 100-105; and Ayala, American Sugar Kingdom, pp. 79-85.
21 Catlin Jr., Good Work Well Done, p. 33.
industry evolved from monopoly to oligopoly, with the ASRCO clearly dominant.\textsuperscript{22} The ASRCO was at the zenith of its power at the dawn of the new century.

In contrast, at the twilight of the nineteenth century, the Puerto Rican sugar industry was in its worst condition ever. Commissioner Carroll described the situation as “deplorable.” He blamed the lack of capital, which, in turn, was caused by several factors: (a) decrease in prices with no corresponding decrease in production or transport costs, (b) waste in manufacturing methods, (c) heavy interest rates, (d) onerous direct taxes (amounting to 12.5 percent or more of the net profits), (e) high customs duties on machinery and heavy tax on imports, and (f) withdrawal of capital by Spaniards returning to their homeland after the war.\textsuperscript{23} According to one account, Puerto Rico had some 249 ingenios and 22 factorías centrales in 1898.\textsuperscript{24} The factorías centrales included 14 on the north coast, three in the east, three in the west, and one on the south side. A final central was in Vieques, an island off the eastern coast of Puerto Rico.\textsuperscript{25} Yet, because of the sugar crisis in 1898, not all the centrales operated or produced raw sugar. Some made only muscavado sugar, molasses or rum. Answering Commissioner Henry Carroll’s query on the number of “modern sugar-making plants,” Puerto Rican central owner Antonio Roig said 13, probably referring to those in operation.\textsuperscript{26} (See Table 2.1) To

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{22} Eichner, The Emergence of Oligopoly, p. 228.
\item \textsuperscript{23} Carroll, “Report on Porto Rico,” Report, p. 46.
\item \textsuperscript{24} Cayetano Coll y Toste, Reseña del estado social, económico e industrial de la isla de Puerto Rico al tomar posesión de ella los Estados Unidos (San Juan, Puerto Rico: Imprenta de “La Correspondencia”, 1899), p. 10.
\item \textsuperscript{25} Unfortunately, the 1899 census did not distinguish between central and ingenio, including both under the heading of sugar mills. The census noted the number of mills in Puerto Rico was greater than in Cuba - 345 to 207 - but that “their average capacity was little more than one-fifteenth that of Cuban centrals. The crushing of cane and manufacture of sugar and molasses were carried on in Porto Rico in a retail way in small mills.” U.S. War Department, Office Director Census of Porto Rico, Report of the Census of Porto Rico 1899 (Washington, D.C.: Government Printing Office, 1900), p. 155.
\item \textsuperscript{26} Carroll, “Appendix,” Report, p. 122. Roig said he did “not raise the cane [but] buy it from neighboring estates.” In an 1898 business directory, the centrales found were Progreso in Carolina, San Vicente in Vega Baja, Coloso in Aguadilla, and Corsica in Rincón. The municipalities of Añasco and Loiza each had one and Guayama and Yabucoa each had two, for a total of 11 centrales in Puerto Rico. See Miguel de Magalhães, Colonial Business Directory of the Island of Porto Rico (New York: n.p., 1898).
\end{itemize}
\end{footnotesize}
the same question, Ricardo Nadal responded: “There are only about two factories in the island.”

### Table 2.1

<table>
<thead>
<tr>
<th>District</th>
<th>Central</th>
<th>Owner</th>
<th>Town</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>Ejemplo</td>
<td>Antonio Roig</td>
<td>Humacao</td>
</tr>
<tr>
<td></td>
<td>Ingenio</td>
<td>Manuel Argueso</td>
<td>Yabucoa</td>
</tr>
<tr>
<td></td>
<td>Laura</td>
<td>Cintron Hnos.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yabucoa</td>
</tr>
<tr>
<td>Northern</td>
<td>Carmen</td>
<td>Jorge Finlay</td>
<td>Vega Alta</td>
</tr>
<tr>
<td></td>
<td>Esperanza</td>
<td>Bernardo Huicy</td>
<td>Arecibo</td>
</tr>
<tr>
<td></td>
<td>Progreso</td>
<td>Mayrn, Armstrong y Finlay Bros.</td>
<td>Carolina</td>
</tr>
<tr>
<td>Western</td>
<td>Altagracia</td>
<td>Nadal &amp; Co.</td>
<td>Mayaguez</td>
</tr>
<tr>
<td></td>
<td>Coloso</td>
<td>J. Amell Maso</td>
<td>Aguadilla</td>
</tr>
<tr>
<td></td>
<td>Pagán</td>
<td>Juan Pagán</td>
<td>Añasco</td>
</tr>
<tr>
<td>Southern</td>
<td>Reparada</td>
<td>J. Gallart</td>
<td>Ponce</td>
</tr>
<tr>
<td></td>
<td>Restaurada</td>
<td>Hortensia Arribas de Canals</td>
<td>Ponce</td>
</tr>
</tbody>
</table>


Note: Antonio Roig enumerated the centrales, but failed to give all the names of the owners. I have completed them by consulting Ferreras Pagán.

Following the U.S. invasion of Puerto Rico, a U.S. Military Government administered the island for two years (25 July 1898-30 April 1900). Its early measures included a census, which they published in 1899. The census counted the island’s population at 953,243 people. Its labor supply consisted almost entirely of native Puerto Ricans. Foreign-born residents numbered only 13,872, or 1.5 percent of the population. The census noted “there are few regions in the Western Hemisphere in which the proportion of natives is so high and that of the foreign born is so
low."27 Spaniards represented a little more than the foreign born. Their numbers dwindled more when many left because they could not "reconcile themselves to their loss of prestige and power" and advertised in the newspapers the sale of their "farms on the coast plain and summerhouses in the uplands at very low prices."28

People from other Hispanic Caribbean islands followed in a distant second place, with 8.5 percent. U.S. born residents accounted to just 8 percent of the small foreign-born community. Poverty, combined with Spain's restrictive policy, had limited immigration to Puerto Rico. By age, about 500,000 people were in their working years, with 197,500 engaged in agriculture, 117,500 in other sectors, and 185,000 unemployed. Five-eighths of those working toiled in agriculture.

The census also found only 477,987 cultivated acres of the island's total area of 2,347,520 acres. Those lands planted were dedicated 57 percent to export crops, including coffee, 197,031 acres; sugar cane, 72,146 acres; and tobacco, 4,779 acres. In 1899, sugar cane was second in importance to coffee. Sugar cane was grown on only about 15 percent of lands under cultivation, compared to 41 percent in coffee. The process of concentrating land in sugar and developing centrales for sugar was an ongoing and slow process that began under Spanish rule. By 1899, the old methods of large-scale cane cultivation and simple manufacturing still dominated on the island:

As in Cuba the tendency is toward large plantations, with central mills for grinding. Comparatively few of the sugar estates are provided with steam vacuum machinery for making sugar, and nearly one-half of the cane-grinding machines are worked by oxen... Large plantations or colonias, improved methods of cultivation, and central mills with improved machinery will in time no doubt add enormously to the output of sugar.29

29 U.S. War Department, Office Director..., Report, p. 141.
Although Puerto Rico was economically depressed during U.S. military rule, the “American prospector” came to see the terrain of this “tropical Klondike” for himself. Many books and articles in popular magazines, trade journals and newspapers offered both optimistic and pessimistic views of business and investment opportunities. In 1898, author A. D. Hall advised Louisiana cane producers not to worry about potential competition from Puerto Rico. Hall claimed that because of high population density and land scarcity, “it is by no means probable that it will increase materially its sugar production.”

Yet, another author, informed Frederick A. Ober, rightly predicted that, due to the “simplest processes” prevailing in the sugar industry, “it is in the establishment of great central factories...that American capital may find a profitable venture.” Puerto Rican merchant and muscavado sugar exporter Jorge Bird y León also voiced confidence in the power of U.S. capital for the island’s sugar industry: “I think the production of this island can be doubled in 5 years at a rate of 20% annually if American capital would come to develop the industry.”

Three key events -two manmade and the other an act of nature- had immediate negative repercussions on Puerto Rico’s economic and social conditions under military rule. First, on 12 February 1899, the administration suspended the mortgage law trying to protect indebted planters from foreclosures. Yet contrary to the government’s objectives, the measure did not “place business...in the state of suspended animation.” Without land to serve as guarantees for credit, farmers could not obtain traditional short-term agricultural loans and were forced to sell their properties to raise capital to continue more limited operations. The government then worsened the situation in 1901 by approving new tax laws that

31 Frederick A. Ober, Puerto Rico and Its Resources (New York: D. Appleton and Company, 1899), pp. 57-58. Ober was acquainted with Puerto Rico since 1880, “when he visited every port of importance.” Later, as West Indian Commissioner of the Columbian exposition, he revisited the island. (p. v)
imposed taxes on production earnings rather than property values. The policies appeared to hit hardest at farmers and planters.

On 8 August 1899, hurricane San Ciriaco devastated Puerto Rico, causing 3,000 deaths and about $20 million in damages. The impact on the coffee economy was catastrophic, reaching $18.3 million in losses. The island's coffee industry was already weak before the hurricane, suffering from the loss of Cuban and Spanish markets, declining prices, and world competition.

The hurricane also caused about $3.2 million in damages to the sugar industry. Many haciendas were destroyed, most with oxen and steam-driven mills that produced muscavado sugar. The storm also destroyed about two-thirds of the 1899-1900 crop. Nonetheless, the cane field floods proved beneficial:

most of the sugar-planters, instead of having been ruined by the hurricane, as was pathetically reported, had actually benefited by it, owing to the sedimentation from the hill-washings, which was spread like a fertile blanket over the lowland acres, enriching their exhausted soils beyond belief.37

The hurricane affected individual planters differently. Yauco's sugar planters, producing mainly at barrio Guánica, lost about $150,000.38 Planters at Guánica expressed interest in the planter relief program set up by the Military Government, only to recant when it entailed giving

38 Aráez y Farrando, Historia del ciclón, p. 226.
workers one acre of land. Of the 295 planters that initially applied in the area, only 13 were approved for relief and signed for it; 176 refused to sign (78 percent, the island's highest); 32 did not reply; and five were not approved. In short, the hurricane affected all social classes, but coffee producers suffered the worst short and long-term damage.

On 1 February 1899, by presidential proclamation, the U.S. dollar became Puerto Rico's legal tender. The government substituted 60 cents for one peso. The move caused "a contraction of the circulating medium to the extent of 40 percent." The Military Governor conceded that the exchange "proved to be a hardship upon the people," because merchants continued with the same price structure in dollars. As a result, merchants, including many Europeans, benefited and workers were hardest hit. Henry C. Fritze, the principal owner of the German merchant-banker firm of Fritze, Lundt & Co., earlier had warned:

If a laborer's wages be 1 peso per day, and the average power of that coin to purchase what his needs require be equal to 60 cents gold, then to reduce the value of the coin in which he is paid to 40 cents would be so much destroy the reward of his labor, although his nominal compensation should remain the same.

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41 The hurricane probably killed momentarily the interest of Yauco coffee planters to ship their product from a port at Guánica rather than Ponce, where "it costs a dollar and a quarter to bring a quintal of coffee here, and very much to take the provisions to the estate." The planters also preferred Guánica because "we would be able to save the profit made by the middlemen." Carroll, "Appendix," Report, p. 91.
While Congress was setting the rules of the game for Puerto Rico, only two U.S. sugar concerns ventured to invest in the island: the Central Aguirre Syndicate and a Philadelphia-based syndicate, probably Central San Cristóbal. The latter acquired a large tract of land in the Naguabo district, on the east coast, and reportedly were about to commence planting and the construction of buildings. Aguirre was established in 1899 and was granted its request to import U.S. agricultural and sugar making machinery duty free. It set up operations in southeastern Puerto Rico and began milling in 1900. Aguirre’s investors were atypical men. W. S. H. Lothrop, J. D. H. Luce, Henry De Ford and F. Dumaresque were four Bostonians with ample social, financial and political contacts. In the 1880s, De Ford and Dumaresque started a business in Boston dealing in raw sugar, and they may already have business connections with Puerto Rico. In 1898, the two also had founded a banking firm, Henry De Ford


44 No further information was found on this company. See “Porto Rico,” LPSM, (17 December 1898), p. 395.
& Co. Later, De Ford & Co. would become the depositary for customs receipts and the U.S. Military Government’s expense fund.46

In April 1900, U.S. Congress approved the Foraker Act, which extended civilian government to Puerto Rico. The law provided a temporary concession of a limited self-government under the supervision of the War Department; final responsibility for the island resided in U.S. Congress. In May 1900, Puerto Rico received its first colonial governor, Charles Allen, a presidential appointee with the consent of U.S. Congress. The Foraker Act also provided for an Executive Council and a House of Delegates. The Executive Council, appointed by the president, acted as upper house of the local legislature and as a sort of cabinet for the governor. It consisted of a secretary, an attorney general, a treasurer, an auditor, a commissioner of interior, and a commissioner of education, with five persons of ‘good repute.’ At least five of its members had to be native Puerto Ricans. The House of Delegates had 35 members, elected by male Puerto Ricans.

In the heated debate to approve the Foraker Act, the Puerto Rican elite raised many issues, but “the most forceful was that of tariff barriers between Puerto Rico and the mainland.”47 Sugar producers and other interests clashed because free trade meant U.S. duty-free entry for all Puerto Rican products, including sugar. The most powerful opponents of free trade in sugar were domestic U.S. sugar producers: Louisiana sugar planters and the American Beet Sugar Association, represented by Henry G. Oxnard.

Citing the Hawaiian experience, Oxnard petitioned Congress “to put a tariff” on Puerto Rican sugar products. He noted that the island’s lower production costs and cheaper labor would increase its sugar production because “large investments will go into Puerto Rico...as soon as it is


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found that this immense profit can be made.”

Oxnard worried that duty-free entry for Puerto Rican sugar would set “a precedent from other and far more destructive demands from Cuba and other tropical countries seeking to capture our markets and eventually destroying the production of products at home that we have long fostered.”

The *Louisiana Planter and Sugar Manufacturer*, the leading organ of sugar cane planters in the continental United States, also adamantly opposed free trade. Evidencing a change of heart, editor John Dymond now alluded to the negative impact of free trade with Hawaii:

We were told that free sugar from Hawaii couldn’t hurt our producers, and then what sugar would come free from Porto Rico wouldn’t hurt, although Hawaii is sending us 650,000 or more pounds and Porto Rico will send this year double what she did last year, say 250,000 pounds, with large areas of available sugar lands that will triple her product.

Louisiana planters feared that Cuban and Philippine sugar imports would follow Puerto Rican sugar. They believed the leading proponent of duty-free sugar entry from Puerto Rico was the Sugar Trust, “that wants all the raw sugar it can get elsewhere free of duty.”

48 Quoted in Berbusse, *The United States and Puerto Rico*, p. 155. A writer from California wrote: “Taking up the slogan, ‘America for the Americans,’ is there in this country another industry so vitally important to the American people at this time, or one that promises so much, as the production of sugar from beets and placing that sugar upon the market as a finished product.” A Workingman, “The Effect of Free Sugar from Porto Rico and Cuba,” *LPSM*, 24, no. 2 (13 January 1900), p. 26.


50 “Is Sugar From Porto Rico Free?” *LPSM*, 25, no. 20 (17 November 1900), p. 307. Louisiana as a whole did not present a united front. A rice producer from Lake Charles, Dr. S. Nathaniel Knapp, saw no danger in free trade, because Puerto Rico imported about four million pounds of rice in 1895. He said free trade would only hurt Louisiana sugar, but imports would be so insignificant as to have “no weight whatsoever.” Berbusse, *The United States in Puerto Rico*, p. 155.

While there is no smoking gun pointing directly to the Sugar Trust on the Puerto Rican sugar question, the Sugar Trust clearly favored duty-free entry. During the debate in the U.S. House of Representatives, a Mr. Watson stated: "Havemeyer... was plain and outspoken regarding the position of Porto Rico and the Philippines and declared that there was no reason in the world why sugars should not be admitted free of duty from these countries."\(^{52}\)

Puerto Rico-based planters actively campaigned in Washington for free trade. A Chamber of Commerce delegation, representing foreign sugar interests operating in the island, included Jorge L. Finlay, Charles P. Armstrong, and J. D. H. Luce. The delegation was described as "the most persistent one that ever appeared here, not excepting those from Hawaii."\(^{53}\) Finlay, a British citizen, was British vice consul and owner of Central Carmen in Vega Baja. Finlay and Armstrong were members of the firm Mayrn, Armstrong & Finlay Brothers that owned Central Progreso in Carolina.\(^{54}\) Armstrong was also a member of L. W. & P. Armstrong, of New York. Luce was one of the original four Boston "Brahmins" that incorporated the Central Aguirre Syndicate.\(^{55}\)

In the end, according to provisions of the Foraker Act, sugar and other items exported from Puerto Rico to the United States were to pay 15 per cent of U.S. tariff rates, until the island's legislature could pass an Insular Revenue Act. On 25 July 1901, when the insular revenue act took effect, a presidential proclamation established free trade -meaning free sugar- between Puerto Rico and the United States.

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52 Quoted in Rexford G. Tugwell, *Investigation and Administrative Responsibilities under the Five Hundred Acre Limitation on Land Holdings in the Organic Act for Puerto Rico to the Secretary of the Interior, December, 1941* (San Juan: Bureau of Supplies, Painting and Transportation, 1941), pp. 3-11.

53 E. Ham, "Sugar Legislation in Washington," *LPSM*, 24, no. 22 (2 June 1900), p. 339. The delegation boarded at the Arlington Hotel "at a large expense, in spite of the fact that the argument which its members advanced was that the planters...were impoverished, bankrupt, made so by the hurricane that swept over a portion of Porto Rico."


U.S. cane and beet sugar producers in Hawaii, Louisiana and other states failed to halt free sugar trade, but they did manage to attach a rider to the Foraker Act limiting acreage available for sugar producers in Puerto Rico. It stipulated that

every corporation hereafter authorized to engage in agriculture shall by its charter be restricted to the ownership and control of not to exceed five hundred acres of land, and this provision shall be held to prevent any member of a corporation engaged in agriculture from being in any way interested in any other corporation engaged in agriculture.\(^\text{56}\)

The U.S. domestic sugar producers aimed to block future corporate expansion of the cane industry in Puerto Rico, particularly any potential attempt by the Trust to directly own latifundia.\(^\text{57}\) Senator Foraker himself, in a veiled reference to the Sugar Trust, said "the idea being to prevent a monopolizing on the part of anybody of the lands of Porto Rico."\(^\text{58}\) Over the next two decades, however, the Sugar Trust used at least two methods to obtain Puerto Rican raw sugar. First, it gained control of corporations producing raw sugar in Puerto Rico by securing controlling or substantial interest through stockholders and directors.\(^\text{59}\) Second, it employed buyers on the island, particularly the German firm, Fritze, Lundt & Co.

The 500-acre limitation was widely violated from the day they approved it. Despite periodic controversies over the measure, both the U.S. executive and legislative branches and their island counterparts kept their

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57 Tugwell, Investigation, pp. 3-11.
hands off the issue. Later, it became part of Puerto Rico's own corporate law. Attempts to enforce or amend the measure proved fruitless. The limitation remained a dead letter until the 1940s.

Caribbean scholar Gordon K. Lewis asserts that the machinery of government set up by the Foraker Government proved to be "an imperial office protecting the American metropolitan interests against the locally elected legislature," but that judgment is only partially correct. Both a U.S.-dominated government and a Puerto Rican-controlled legislature championed the expansion of the sugar industry, whatever their respective national composition.

The Foraker Act opened the way for civilian government in Puerto Rico, which continued to promote economic growth based on raw sugar production. The government's most outstanding public project in support of sugar interests was the construction of an irrigation system in the southeast region between the Patillas River and Ponce, spanning a distance of about 40 miles and including about 33,000 acres. In 1908, before the system was completed, about 24,855 acres were under cultivation in the area. Severe droughts in 1907 and 1908 caused major losses. The Arroyo, Coamo, Guayama, Ponce, Salinas and Santa Isabel municipalities in the southeast registered losses top $4 million, with their sugar output down by 57,000 tons of sugar during this period.

Yet, the irrigation system reduced future losses. It began operations in 1908 and was completed in 1914. The system essentially consisted of several storage reservoirs on the north side of the island and tunnels through the mountains to channel water by canals to the south side. Construction costs amounted to about $5 million, paid with proceeds from a government bond sale. To cover operating expenses, the government levied an

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annual water tax of $15 per acre on the total area included within the range of the irrigation system.\textsuperscript{63}

While not the only factor, the irrigation system helped to increase cane acreage and yield, leading to a remarkable rise in production by the three leading centrales in the area. From the 1907-08 crop year until the 1913-14 crop year, Aguirre increased its output from 11,470 tons to 26,916 tons, Cortada from 1,541 tons to 8,893 tons, and Machete from 4,464 tons to 8,150 tons.\textsuperscript{64}

Indeed, from 1898 to 1913, about 35 to 40 new centrales were built of varying sizes, capacities, and capitalization. Of these, Puerto Rican-based capital financed at least 28 and foreign capital eight: four from money from the United States, two from U.S.-Puerto Rican capital, one from U.S.-German capital, and one from Belgium. (See Appendix 1.4) The three main U.S. centrales -Aguirre, Guanica Centrale and Fajardo-were built in the 1899-1906 period. It seems that French capital did not build any central, but took over centrales already in operation. Surprisingly, Belgian capital built one central in Puerto Rico's interior district.

In 1906, the Louisiana Planter and Sugar Manufacturer proclaimed "an epidemic of central establishment in the Island."\textsuperscript{65} The peak came in 1907, with the building of about eight new small centrales, including five in the southern area, all by Puerto Rican-based capital. Expansion reached such proportion that "a unanimous complaint in the island" was the inability of U.S. companies to furnish all the cars and locomotives ordered the previous year.\textsuperscript{66} In 1908, The Washington Post quoted San Juan's


\textsuperscript{65} “Porto Rico,” LPSM, 36, no. 23 (9 June 1906), p. 363.

\textsuperscript{66} “Porto Rico from French Consul's Point of View,” LPSM, 39, no. 7 (17 August 1907), p. 98.
assistant postmaster saying that “sugar planters of Porto Rico are making so much money that they don’t know what to do with it.”

Evidence of the sugar industry’s prosperity is clear in the June 1905 establishment of a Board of Exchange of the West Indies, with particular attention given to sugar. Its incorporators included Luis Toro Pasarell, president of the Porto Rico American Tobacco Co.; Rafael Fabián, the owner of the largest department store in San Juan and a central owner and bank president; Ramón Valdés Cobián, central owner and promoter of insular transportation; and Scotland-born John Wilson, of Central Oriente. In a statement, the Board noted that

there is always a surplus of money to invest in sugar here. The leading centrals are capitalized in some cases to a million dollars more than there is need for in any way of running expenses or improvements. It shows unlimited confidence in the sugar industry.

No record has been found about the termination of the Board, but its establishment showed a need for information in San Juan on Puerto Rican sugar prices. Without good price data, the market favored the sugar broker, because “he knows that the sales between other planters and dealers have been kept secret and therefore can ask whatever he wants.” Before the Board began, the planter lost a whole day talking to sugar dealers to find out that day’s market price for his commodity.

The proliferation of centrals slowly eliminated the hacienda, with its steam-and-oxygen-powered mills and also encouraged expansion of the colonato system. Many old sugar haciendas became colonias of the new sugar factories. The much-touted division of labor in the central system between agriculture and manufacture became a reality to some extent during the twentieth century, although most centrals continued to own a sizeable amount of cane land. The reputable Willett and Gray’s Weekly Statistical Sugar Journal reported in 1910 that

lands suited to sugar cane culture are rapidly passing under the control of wealthy corporations, by purchase or by contracting for a term of years the canes of the ‘colonos’ or farmers. The modern central…with the accompanying railroad, and land to insure an adequate supply of cane, costs a great deal and is the work of corporations.  

The colonos who produced sugar for the modern centrales included both landowners and land rentiers. Colono landowners consisted of those who financed cultivation expenses themselves and those financed by the centrales to which they sold their cane. The colono land rentiers included those who rented land from the central and those who worked central land free of charge or at nominal rents. They financed either their own crops or received financing from the central. Some colonos cultivating central-owned land had farming tools and animals, but more frequently, the central furnished seed, fertilizer, agricultural tools and other equipment, with the colono providing only labor. The price paid to colonos by the central depended on individual arrangements.

Centrales depended greatly on colono cane. The U.S. Bureau of Foreign and Domestic Commerce found that “in establishments producing more than 72 per cent of the sugar in Porto Rico…62.64 per cent of the cane harvested for the crop of 1913-14 was purchased from colonos, while the sugar companies” grew 37.36 per cent.  

Acreage cultivated by colonos varied widely. The extremes ranged from large companies organized and capitalized like a central that cultivated extensive areas, to small colonos, who cultivate anywhere from one acre to 10 acres and did their own labor. Some individual colonos were large landowners, planting many acres of sugar cane annually. The typical contract stipulated that colonos would plant certain acreage in cane for a set period of years. The central tried to contract for as long a term as possible, usually from five years to 10

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years, to ensure a uniform supply of cane. Colonos obtained large amounts of interest-bearing loans to help finance their crops. They received payments either in cash or sugar. Most often, the central paid for cane transportation from the fields to the factory.

It was widely believed that company lands (tierra de administración) under central management were more productive than those of the colonos. For example, during the 1909-10 crop, Central Cortada’s plantations yielded an average 31 tons of cane per acre, while those of the colonos produced only 26 tons per acre. Cortada cut 1,621 acres of cane, of which 1,303 belonged to the central and only 318 to colonos.72

2.2. Central Pasto Viejo [LPSM, 29 June 1918, 411]

Competition for colono cane was keen in some districts. For example, centrales Pasto Viejo and El Ejemplo fought a “capitalistic war” for colono cane in Humacao and Caguas.73 Also, in 1911, Central Vannina secured many contracts by paying colonos in the Río Piedras area 6 percent commission. Thus, it beat nearby centrales that offered the regular 5.5 percent. That year, Central Carmen in Vega Baja also added a new mill to

its nine-roller and a crusher Fulton outfit to increase sugar extraction "to pay the increased percentage to the colonos which the competition of other Centrals has put them in a position to demand."74

Cane scarcity caused a lull in the building of new centrales. Capital had been the scarce factor in central development during the first decade of U.S. domination, but by the second decade, raw material was becoming scarce instead: "A few years ago it was difficult to get sufficient capital to establish centrals, while now it is difficult to get sufficient cane to warrant the establishment of new ones."75

By 1910, the capital-intensive nature of production was clear. (See Table 2.2) A total 41 centrales accounted for just 28 percent of production units, but manufactured 97 percent and exported 93 percent of the island's total raw sugar production. Production by the 41 units averaged 8,189 tons that year, compared with 638 tons of the remaining steam mills and 23 tons of the oxen-powered mills.76

Table 2.2
Types of Sugar Mills, 1910

<table>
<thead>
<tr>
<th>Item</th>
<th>Modern Central</th>
<th>Old Steam Mill</th>
<th>Ox mill</th>
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</thead>
<tbody>
<tr>
<td>Number of mills</td>
<td>41</td>
<td>14</td>
<td>91</td>
</tr>
<tr>
<td>Total tons made</td>
<td>335,750</td>
<td>8,937</td>
<td>2,099</td>
</tr>
<tr>
<td>Average tons per mill</td>
<td>8,189</td>
<td>638</td>
<td>23</td>
</tr>
<tr>
<td>Percentage exported</td>
<td>96.4</td>
<td>76.6</td>
<td>-</td>
</tr>
<tr>
<td>Percentage consumed in Puerto Rico</td>
<td>3.6</td>
<td>23.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Figures estimated from "Exhibit A: Comparative Statistical Report of Sugar Manufactured, Exported & Consumed in Porto Rico," Memorial to the Secretary of War Mr. Stimson by the Association of Sugar Producers of Porto Rico (San Juan: Progress Publishing Co., 1911).

74 Ponce de León, "Porto Rico," LPSM, 47, no. 23 (2 December 1911), p. 379.
76 While centrales generally displaced muscavado factories during the decade, one exception surfaced. In 1912, Eduardo Q. McCormick, part-owner and administrator of Central Machete, established the Real Sugar Factory. On his own time and expense, he built "a small, but productive muscavado sugar Factory" in Patillas. Ramón H. Guerra, De todo un poco, vol. 2, Excursiones por una insula (San Juan: Progress Publishing Co., 1912), p. 17.
Of the 41 units, a total 33, or 78 percent, were Puerto Rican-owned; U.S. capital owned five; and three other were owned by European capital. (See Appendix 2.1) Puerto Rican companies produced 57.4 percent of the 41 firms’ raw sugar production and 91.5 percent of the sugar consumed in Puerto Rico. The foreign owned centrales produced 42.5 percent of raw sugar output, with U.S. corporations producing 36.5 percent and Europeans, 6 percent. U.S. centrales produced an average 20,399 tons, three times more than European and Puerto Rican companies, which produced an average 6,734 tons and 6,023 tons, respectively.

By 1910, three U.S. centrales -Guanica Centrale, Aguirre and Fajardo- clearly surpassed all factories, producing almost a third of the island’s output. Guanica Centrale, controlled by SPRSCO/NJ, was the top producer island wide, providing 17 percent of all raw sugar output. Georgetti’s Plazuela, followed closely by Cambalache, topped Puerto Rican centrales, 25 of which did not produce more than 8,000 tons. (See Table 2.3)

<table>
<thead>
<tr>
<th>Production (tons)</th>
<th>Mills</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 7,999</td>
<td>29</td>
<td>1 Fr., 1 Gm., 26 P.R., 1 U.S.</td>
</tr>
<tr>
<td>8,000 - 14,999</td>
<td>8</td>
<td>1 Fr., 7 P.R.</td>
</tr>
<tr>
<td>15,000 - 22,999</td>
<td>1</td>
<td>P.R.</td>
</tr>
<tr>
<td>23,000 - 30,999</td>
<td>2</td>
<td>U.S.</td>
</tr>
<tr>
<td>31,000 -</td>
<td>1</td>
<td>U.S.</td>
</tr>
</tbody>
</table>

Fr = France, P.R. = Puerto Rico, U.S. = United States, Gm = Germany

By region, the southern district was the island’s top producing district. In 1910, despite its water problems, it accounted for 34 percent of total raw sugar production. The second most important producing region was the northern district, with 29 percent of total production, followed by the east, with 24 percent; the west, with 7 percent; and the interior, with 5 percent. (See Appendix 2.1)

For the 1913-14 crop year, just before the outbreak of World War I, the U.S. Bureau of Foreign and Domestic Commerce secured data from representative factories in the five districts. (See Table 2.4) Again, the southern district, where U.S. centrales were predominant, showed the best results in most respects. The south had the highest cane yields per acre. Also, except for the eastern district, the south needed the least amount of cane to make a ton of sugar, and obtained more pounds of sugar from each ton of cane. The south’s cost of cane at the mill was somewhere in the middle of island’s costs -higher than the northern and interior, but lower than the eastern or western regions. Costs in the interior district were 67 cents a ton cheaper, while costs in the northern, eastern, or western districts were higher by as much as $1.74 to $8.22 per ton. In addition, manufacturing costs were lower in the south than all other districts, except the west. The total cost of sugar f. o. b. factory in the south was less than other districts, with costs ranging from $3.51 a ton to $8.33 a ton.

The three largest U.S.-owned raw sugar factories -Guanica Centrale, Aguirre, and Fajardo- were set up in districts with no raw sugar factories in the immediate vicinity. On the contrary, the other two centrales -Los Caños and San Cristóbal- were in areas with raw sugar factories nearby.

San Cristóbal and Fajardo were found in the east. They represented the extremes in that region, excluding the centrales in Vieques. San Cristóbal had the lowest production and Fajardo, the highest. San Cristóbal, in Naguabo, was small.77 It reported to a head office in 108 Wall Street in New York City. Phillip G. Mumford served as president

77 San Cristóbal probably was built in the site of a hacienda with the same name. The production of Hacienda San Cristóbal in early 1900s fluctuated “between 3 and 4,000 sacks of centrifugal muscavado sugar.” Ferreras Pagán, Biografía, vol. 2, Riqueza, p. 32.
and Charles T. Church as vice-president. Rounds, Hatch, Dillingham, & Debevoise, a New York corporate law firm, acted as San Cristóbal's lawyers.

Fajardo Sugar Co. was the first of the only three centrales island-wide combining U.S. and Puerto Rican participation in shareholding and top management. Built in 1906, Central Fajardo was the third largest central in Puerto Rico. The project traced its roots to a visit by Fajardo planters to New York to ask financial help from "their friends," who were associated with the National Sugar Refining Co. of New Jersey and the newly organized Cuban-American Sugar Co. They sought funds "to raise capital to erect a modern factory." Leading the central was Jorge Bird Arias, son of local merchant Jorge Bird y León, and Charles P. Armstrong, of L. W. & P. Armstrong of New York. The two men met at General Russell's Military Academy in New Haven. The Armstrongs imported the sugar that the Birds exported from Puerto Rico during the late nineteenth century. As a business family history says, "It was only natural that the Birds, casting about for capital for a new centrifugal mill at Fajardo, should turn to the Armstrongs."

78 Born in Rochester, New York, Mumford was educated at St. Paul's School, Concord, New Hampshire, and at Harvard, where he was a member of the class of '96. After several years in business in Rochester, he came to Puerto Rico and initially engaged in banking. He left Puerto Rico during World War I, became a senior member of William Schall & Co. in 1929 and 1930, and then president and chairperson of the board of the American Machine and Metals. "Phillip Mumford, Industrialist, 77," The New York Times, 29 October 1951, p. 23.
79 "Minutes of a Special Meeting of the Executive Committee of The San Cristóbal Sugar Company on 21 August 1908," BBC.
80 The other two were Central Rochelaíse, of the Mayagüez Sugar Co., and Central Juncos, of the Juncos Central Co.
81 Statement p. 36. The Statement was submitted on behalf of L. W. & P. Armstrong, which claimed it had "advanced this year about $1,000,000 to various sugar interests in the island, a large part of which are owned and controlled by Porto Rican capital." See also George P. Meade, "The Proof Stick," The Sugar Journal, May, 1958, p. 31.
<table>
<thead>
<tr>
<th>Items</th>
<th>Southern</th>
<th>Northern</th>
<th>Eastern</th>
<th>Western</th>
<th>Interior</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of establishments included</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Tons of cane grounded</td>
<td>1,033,618</td>
<td>583,348</td>
<td>241,524</td>
<td>218,992</td>
<td>148,728</td>
<td>2,226,210</td>
</tr>
<tr>
<td>Tons of sugar produced</td>
<td>117,782</td>
<td>61,903</td>
<td>27,704</td>
<td>23,093</td>
<td>16,480</td>
<td>246,962</td>
</tr>
<tr>
<td>Tons of estate cane per acre</td>
<td>23.35</td>
<td>18.10</td>
<td>18.44</td>
<td>17.32</td>
<td>16.06</td>
<td>20.45</td>
</tr>
<tr>
<td>Tons of cane per ton of sugar</td>
<td>8.75</td>
<td>9.42</td>
<td>8.72</td>
<td>9.48</td>
<td>9.02</td>
<td>9.01</td>
</tr>
<tr>
<td>Pounds of cane per ton of cane</td>
<td>227.90</td>
<td>212.23</td>
<td>229.41</td>
<td>210.89</td>
<td>221.61</td>
<td>221.87</td>
</tr>
<tr>
<td>Cost of cane at mill per ton of cane</td>
<td>$4.53</td>
<td>$4.40</td>
<td>$5.32</td>
<td>$5.08</td>
<td>$4.33</td>
<td>$4.62**</td>
</tr>
<tr>
<td>Cost of cane per ton of sugar*</td>
<td>$39.78</td>
<td>$41.52</td>
<td>$46.35</td>
<td>$48.00</td>
<td>$39.11</td>
<td>$41.68</td>
</tr>
<tr>
<td>Manufacturing factory cost per ton of sugar*</td>
<td>$10.85</td>
<td>$13.90</td>
<td>$12.61</td>
<td>$10.72</td>
<td>$15.03</td>
<td>$12.08</td>
</tr>
<tr>
<td>Table cost f.o.b. factory per ton of sugar</td>
<td>$50.63</td>
<td>$55.42</td>
<td>$58.96</td>
<td>$58.72</td>
<td>$54.14</td>
<td>$53.76</td>
</tr>
</tbody>
</table>

* Including depreciation; molasses not deducted.
** The average cost of estate and colonos’ cane at point of field delivery was $3.9747 per ton and the additional costs of weighing, holisting, transportation to mill, and other charges were $64.917 per ton, or a total of $4.62387.


From the start, Puerto Ricans held a minority role in Fajardo Sugar Co.’s shareholders and on the board of directors and top management positions, but held some top and middle management positions. Operations manager Jorge Bird Arias was one of the leading sugar officials in Puerto Rico for years. His father, Jorge Bird y León, acted as the
company's shipping agent. Fajardo Sugar Co. took over the Birds' land and refinanced their mortgage.

Central Fajardo duplicated Chaparra mill in Cuba and was built by the same engineer, Samuel Vickess. At the outset, "graduates" of Chaparra occupied most staff positions.\(^3\) It is no surprise that Fajardo would be a clone of Chaparra. The same men controlled both.centrales: James Howell Post and Thomas A. Howell, of B. H. Howell, & Co. and the National Sugar Refining Co. of New Jersey. Howell Post and Howell sat on the board of directors of Fajardo, Chaparra and Aguirre centrales.\(^4\)

A German-American family, the Pavenstedt's, owned Central Los Caños, in Arecibo. Most of the family resided in Bremen and the central management, headed by R. B. Childs, was American.\(^5\) Los Caños had a mill made in the United States, but the rest of its machinery came from the C. Beckman house, of Berlin. While it possessed sizable land holdings, most were high lands (altura), not suitable for cane cultivation.\(^6\)

European centrales in Puerto Rico commanded much less importance than their U.S. and Puerto Rican counterparts. In 1910, French capital controlled three centrales: Fortuna, in Ponce, in the south; Coloso, located at Aguadilla, in the north; and Esperanza, in the eastern island-municipality of Vieques. It was attracted "by the probable profits involved by the sugar production in Porto Rico and the free entry into the United States."\(^7\) In fact, French capital had been important since the nineteenth century because most Corsicans were French nationals. Yet, most had grown local roots and incorporated their business investments in Puerto Rico. The same happened with British capital, but with smaller numbers, they swiftly lost relevance during the twentieth century.

Central Fortuna is linked with Mateo Luchetti. He organized and successfully operated Compagnie des Sucreries de Porto Rico, the parent

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\(^4\) Ayala, American Sugar Kingdom, pp. 108-115.
\(^5\) No information has been found on when Los Caños became a central. "Pavenstedt Land Company, Los Caños Centrale," RG 131, RBl, E 195, NA.
\(^6\) Ferreras Pagán, Biografía, vol. 1 Riqueza azucarera, p. 37.
\(^7\) "Porto Rico Sugar from the French Consul's Point of View," LPSM, 39, no. 7 (17 August 1907), p. 98.
company of Central Fortuna, Inc., in the early 1900s. Except its mills, Fortuna used French machinery. In 1905, the central installed the first portable track and light engine in Puerto Rico, which proved "an unqualified success, attracting a considerable number of owners of other sugar estates for its observation." Fortuna also was the first central in Puerto Rico to use the Naudet process, which combined milling, diffusion and clarification in one operation. By 1906, reports came out that the "fuel question was not satisfactory." SPRSCO/NJ acquired Fortuna in mid-1910 and kept it from milling during the 1909-10 crop year.

Central Coloso, between Aguada and Aguadilla, belonged to the Sucrerie Coloso de Porto Rico, incorporated in France with a capital of $800,000. Jorge de Servajean ministered as general manager, and his brother Pedro served as factory superintendent. Most of the technical personnel at Coloso were French. The central factory building, patterned like European beet sugar factories, was built of steel, brick and concrete "making it one of the most substantially built plants in Puerto Rico." French interests controlled the small Esperanza mill in Vieques, owned by B. Mourraile, but no further information on this central has been found.

Belgian interests owned one central in Puerto Rico. They invested Belgian capital, amounting to $1 million, in Santa Juana (St. Jean) at Caguas in the interior region. Santa Juana had some American machinery,

90 In the Naudet process, 60 percent of the juice is extracted by a six-roller mill, and 35 percent is extracted in a diffusion battery. The juice is filtered through the bagasse in the diffusers, then limed and refiltered through the bagasse. See Y. Y. A. Carlee, "The Sugar Industry in Puerto Rico," LPSM, 36, no. 14 (7 April 1906), p. 219. For a technical explanation of the Naudet process, see Noel Deerr, Sugar and the Sugar Cane (Manchester: Norman Rodger, 1905), pp. 137-138.
92 Guerra, De todo un poco, vol. 2, Excursiones, pp. 7-8.
but most was Belgian. Upon opening in 1907, Santa Juana lacked a railway and faced great difficulty in cane transportation. It initially relied on French automobile trucks. The central also experienced problems with land availability because “they neglected to secure control of lands in their neighborhood and the planters found it more profitable to cultivate tobacco.”

Centrales built by Puerto Rican-based capital during this period fall into three groups: independents; a Spanish group; and the firm of Georgetti, Cintrón, Aboy, & Co. Sometimes the Spanish group and the Georgetti firm joined with local capitalists and provided money or expertise for the locals to build a central factory on their own. Funding for the Puerto Rican-based capitalists generally had been amassed from merchant businesses. U.S. business historian Thomas Cochran found that the same families that had formerly produced sugar in small mills in their haciendas controlled these centrales.

Puerto Rican independents tended to build sugar factories in their hometown bases. They included Salvador Calaf, Antonio Roig and Oscar Bravo. The Calafs established their merchant business in Manati and started acquiring the sugar lands of Hacienda Monserrate in the mid-nineteenth century. They converted Monserrate, found just one kilometer from Manati, into a central in 1894.

95 Statement, p. 12.
98 Ramón H. Guerra, “Central Monserrate,” De todo un poco, vol. 1 (Ponce: Tipografía Matías & Sobrino, 1911), pp. 9-12, and Ángel L. Vázquez Medina, La Hacienda Monserrate de Manati. Desde su fundación en el año 1863 hasta que se convirtió en central en el 1894 (San Juan: Centro de Estudios Avanzados de Puerto Rico y el Caribe, 1986).
Antonio Roig originally was an employee of the German merchant house of Kraemer & Co., of Mayagüez, and of merchant Jorge Bird y León in Fajardo. Though "born of lower middle class parents," he married into the rich landowning, cattle-raising Guzmán family of Humacao and established his own merchant business, trading fish and provisions, lumber and hardware for sugar and molasses, cattle and minor farm produce.99 His connections with German merchants and ties through marriage, with some capital from his own merchant business, became the foundation of his first two centrales in eastern Puerto Rico.

Mayagüez-born Oscar Bravo studied at a high school in Paris and worked in a business in New York. On his return to Mayagüez, he occupied a high position in the German commercial house of Schultze & Co. Later, he established his own commercial house. In 1908, with José Miguel Morales, David and Robert Wilson, and Chase Ulman, Bravo organized Mayagüez Sugar Co. to build Central Rochelaise. Located two kilometers from Mayagüez by railway, Rochelaise combined U.S. and Puerto Rican capital. They acquired its machinery from Mirrless Watson Co. Ltd., a British company.100

Rafael Fabián, "manager of powerful Sugar Companies, member of high commerce (alto comercio) and a distinguished member of our social clubs," headed the Spanish group.101 He had large interests in Central Mercedita, owned by Yabucoa Sugar Co.; in Central Cortada, owned by Santa Isabel Sugar Co.; and Central Constancia, owned by Compañía Azucarera del Toa. He described all three companies as "under my control."102 Fabián also presided over Banco Territorial y Agrícola, the island's second largest bank in 1910, and of Santurce Industrial Co., manufacturers of matches, trunks, and other goods. Plus, he had some mercantile

101 Guerra, De todo un poco, vol. 2, Excursiones, p. 27.
102 Rafael Fabián to Manuel Rionda, 23 February 1911, BBC.
(fabrics) businesses, and owned the famous coffee shop 'La Mallorquina' in Old San Juan.\textsuperscript{103}

In 1912, Fabián joined forces with Carlos and Guillermo McCormick of Guayama. The \textit{Louisiana Planter and Sugar Manufacturer} reported that the "Fabian-McCormick sugar interests" had seven factories.\textsuperscript{104}

In 1905, the Puerto Rico-born McCormicks were part owners of Central Machete in Guayama and partners of Central Providencia in Patillas.\textsuperscript{105} Central Machete was built in 1903, in the site of the former Hacienda Verdaguer.\textsuperscript{106} In December 1908, Machete acquired new machinery from Fulton Iron Works of St. Louis, Missouri. This included a new nine roller mill, complete with a crusher and the full equipment of hydraulics and a 30 inches by 60 inches Corliss engine. The machinery replaced the "mill equipment which has become inadequate."\textsuperscript{107} Providencia, a former muscavado mill, became a raw sugar factory in 1902, when they combined new machinery with the old.\textsuperscript{108} Providencia was majority owned by a merchant-planter, Antonio S. Alcaide, who was also born in Puerto Rico.\textsuperscript{109}

Central Plazuela was the product of entrepreneur Eduardo Georgetti. He held the most dominant position in the sugar world of


\textsuperscript{104} George P. Anderton became a consulting engineer of these factories. "New York," \textit{LPSM}, 48, no. 9 (2 March 1912), p. 144.


Puerto Rico, both for his sugar interests and political activities. He was a majority stockholder of several raw sugar factories, founding president of the Sugar Growers’ Association of Porto Rico, director of Banco Territorial y Agrícola and of Insular Dock, president of Compañía Tabacalera de Puerto Rico, partner and manager of the firm Balseiro & Georgetti, and partner of Quintero & Co.\textsuperscript{110} Fabián and Georgetti’s interests coincided in some \textit{centrales}, such as Central Pasto Viejo, but their business dealings usually remained separate.\textsuperscript{111}

Central Plazuela, near the northern town of Barceloneta, was Georgetti’s benchmark raw sugar factory and the leading Puerto Rican sugar factory. It is one example of a raw sugar factory built before 1898 that continued successfully after Puerto Rico’s change of sovereignty. Balseiro & Georgetti first rented Plazuela in 1889 and then acquired it in 1894. In 1896, they started to get machinery to convert Plazuela into a \textit{central}: “...since then they have successively introduced new machinery for sugar production, continuing with their objective...to establish a complete and great sugar factory.”\textsuperscript{112} In 1907, Plazuela’s production was 7,860 tons, and in 1908 a total of 6,779 tons.\textsuperscript{113} In 1909, the \textit{central} registered a record crop of 12,500 tons and celebrated with a picnic for employees and friends. It followed up with another bumper crop of 16,600 tons in 1910. In late 1911, Plazuela’s owners built a new steel building for the boiling house in which was installed new vacuum pans, boilers, crystallizers and centrifugals.\textsuperscript{114}

Georgetti led the firm Georgetti, Cintrón, Aboy & Co., which engaged in buying and selling sugar and sugar machinery, and also financed

\begin{itemize}
  \item \textsuperscript{110} Jackson & Son, comp. & ed., \textit{The Representative Men}, p. 39.
  \item \textsuperscript{111} See \textit{Memoria sobre las operaciones de la Borinquen Sugar Company}, San Juan, Puerto Rico, Junio 1910. \textit{Central “Pasto Viejo”}, Humacao, P.R. (San Juan: Tip. Boletin Mercantil, n.d.).
  \item \textsuperscript{112} The Balseiros managed Plazuela’s daily operation and administration. Ferreras Pagán, \textit{Biografía}, vol. 1, \textit{Riqueza}, pp. 27-28.
  \item \textsuperscript{114} James Leary, chief engineer, was credited “with the steady progress and success of this central.” Fonce de León, “Porto Rico,” \textit{LPSM}, 46, no. 19 (4 November 1911), p. 309.
\end{itemize}
sugar enterprises.\textsuperscript{115} Sugar broker Manuel Rionda claimed that Georgetti was "more of a planter than he is a merchant," because his interest in brokering sugar was to defend the planter "against the evils of having only one firm [Fritze, Lundt & Co.] on the island buying sugar, with no competition."\textsuperscript{116}

In 1911, Puerto Rico was abuzz over the creation of Georgetti, Cintrón, Aboy & Co. The firm represented the "consolidation of the leading interests in Porto Rico, which outside of the Guánica interests, have recently been most active in the development of the sugar industry in Porto Rico."\textsuperscript{117} Yet, the partnership apparently did not survive the sugar crisis of 1912-13. By 1914, they dissolved it.\textsuperscript{118}

Both Georgetti and his partner Ramón Aboy Benitez were active in insular politics with the Union Party of Puerto Rico (Partido Unión de

\textsuperscript{115} \textit{While planning the venture, Georgetti wrote Manuel Rionda that he needed a credit line of about $1 million. The Georgetti firm served as agents for Joseph Oat & Sons, vacuum pan and effect builders of Philadelphia, and Fulton Iron Works, cane mill builders from St. Louis. Eduardo Georgetti to Manuel Rionda, 2 June 1911, BBC, and "Georgetti-Cintrón-Aboy & Co.,” LPSM, 48, no. 21 (25 May 1912), p. 373.}

\textsuperscript{116} Manuel Rionda to Rafael Fabián, 3 February 1911, BBC. Puerto Rico was a very small part of the business transactions of Czarnikow-Rionda Co., but significantly its clients mainly were leading Puerto Rican and Spanish central owners or managers, such as Rafael Fabián, Eduardo Georgetti, A. S. Alcaide, Juan B. Bianchi, J. C. McCormick, William S. Marr, and Sosthenes Behn. Much of Rionda's correspondence aimed to gather information on potential clients. None of U.S. major sugar corporations in Puerto Rico had business relations with Czarnikow-Rionda. Manuel Rionda held large sugar interests in Cuba. See Carl Van Ness, "The Braga Brothers Collection at the University of Florida," \textit{Latin American Research Review}, 21, no.2 (1986), pp. 142-148, and Muriel McAvoy, \textit{Sugar Baron: Manuel Rionda and the Fortunes of Pre-Castro Cuba} (Gainesville: University Press of Florida, 2003).

\textsuperscript{117} \textit{"New York," LPSM, 47, no. 9 (26 August 1911), p. 134.}

\textsuperscript{118} In 1914, the stationery letterhead of Ramón Aboy Benitez read "Aboy & Cintrón." Aboy Benitez, living in New York, informed Czarnikow-Rionda that he wanted to form a sugar commission business with Puerto Rican sugars, with half of his capital of $300,000. He wrote that he did not want to expose the other half of his capital in the sugar business because "I don’t want to repeat what happened in 1912." He said his business would depend on receiving a special brokerage rate so he could charge a lower commission than L. W. & P. Armstrong to Puerto Rican planters. R. Aboy Benitez to Manuel Rionda, n.d., BBC.
Puerto Rico), a centrist party that advocated for an autonomist relation with the United States. Georgetti, "possibly the richest sugar man in the country and a sincere friend" of political leader Luis Muñoz Rivera, was elected to the House of Delegates in the 1906, 1908, 1910, 1912 and 1914 elections.\textsuperscript{119} In 1917, when the Jones Act approved a new upper chamber, he was elected senator. Aboy Benítez also was elected to the House of Delegates in 1908 and 1912.\textsuperscript{120}

Centralization generated a nationalistic fervor in the Puerto Rico. In 1905, Puerto Rican author Guillermo Atiles García distinguished between a foreign and a local sugar bourgeoisie. He called the former group "despotic, absorbing" and present in Puerto Rico as "FOREIGN CENTRALIZATION." He said "AGUIRRE, GUANICA AND FORTUNA were consolidating, acquiring large cane properties where yesterday innumerable families earned their living."\textsuperscript{121} Yet, in the Guayanilla region, where both Central Rufina and SPRSCO/NJ operated, Atiles García was pleased that landowners substituted cane for banana plantations to avail of high sugar prices "in the markets of the North." Atiles García declared: "Perhaps with the last banana (piche), anemia and misery will end!"\textsuperscript{122} Atiles García recommended less concentration and a more liberal type of centralization. He favored large enterprises to give life to the people and to put the country on its feet! No large enterprises that give life only to companies of foreign industrialists! Enterprises that

\textsuperscript{119} Recalling his political activities with the Socialist Party (Partido Socialista), Luis Muñoz Marin wrote of his "deep affection and gratitude to Georgetti and hurt me to attack the economic institution where he held such a prominent position. As a tribute to this sentiment, I always refused to participate in the socialist campaign in Barceloneta, the town where his central was found." Luis Muñoz Marin, Memorias 1898-1940 (San Juan: Universidad Interamericana de Puerto Rico, 1982), p. 44.

\textsuperscript{120} See Bolivar Pagán, Historia de los partidos políticos puertorriqueños 1898-1956, vol. 1 (San Juan: Imprenta M. Pareja, 1972), pp. 124, 127, 131, 145, 151, 159, 164, 177, 185, 202, 209.

\textsuperscript{121} Atiles García, Kaleidoscopio, vol. 1, pp. 50, 119. (Capitals in the original)

\textsuperscript{122} Atiles García, Kaleidoscopio, vol. 1, p. 139.
establish reasonable relations between production and work. We want expansion! We don’t want absorption!\[123\]

By 1910, *centrales* had sprouted in every corner of Puerto Rico, from the coastal plains to the hilly and mountainous interior. Yet, no major U.S. sugar corporation was established in the north, west, or interior districts. Indeed, from 1906 onward, no U.S. capital-alone or in partnership-built new raw sugar factories on the island.

Puerto Rican-based capital dominated the sugar industry in the northern district. Most *centrales* in the area began in the 1880s, except Cambalache and Los Caños. In 1910, the northern district had only one steam mill in full operation, and only seven ox-drawn mills grinding, with a very small output.

Cambalache ranked second in importance to Plazuela in the northern district. Built near Arecibo in the mid-1900s, they equipped it with old machinery from a Ponce factory, supplemented with a new Krajewski mill and crusher.\[124\] In its first years, Cambalache was “phenomenally successful,” but the 1909-10 crop was “a big failure because of lack of experience and technical advice.” In 1911, Eduardo Georgetti bought a large interest in the company and observers expected that “competent advice is taken regarding the machinery.”\[125\]

Incorporated in 1911, Vannina was a new *central* situated between Rio Piedras and Caguas. Rumor spread that German capital financed the *central*, but Puerto Rican residents of Spanish and Corsican ancestry were its incorporators: Joaquín Villamil, Antonio Cauber y Pons, Santiago Lorenzi, and Vicente Antonetti.\[126\] Vannina did its first grinding for the

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123 Atiles Garcia, *Kaleidoscopio*, vol. 1, p. 120.
124 Arecibo was one of the best cane districts, but its port was an open roadstead exposed to the north wind and frequently loading cargoes was impossible for steamers. Consequently, for their shipping, cargoes had to be sent to San Juan by the American Railroad Company.
1910-11 crop, but started late in the season because of delays in completing the factory. Even so, the factory grinding produced more than the guaranteed quantity of cane, and the firm extracted more sugar than Krajewski-Pesant Co. had guaranteed it.127

In 1910, Sobrinos de Ezquiaga bought Central Progreso, formerly the property of the Finlay Brothers. The new owners spared “no money in the endeavor to make the property a thoroughly up to date Central.”128 They added lighting for the facility and built new offices with electricity. In 1912, they also installed a new mill, centrifugals, crystallizers, and a large Stirling boiler.129

The same year, the southern district held only raw sugar factories built after 1898, including Guanica Centrale and Aguirre. During the late nineteenth century, several sites produced muscavado sugar, either as haciendas or muscavado factories. They included Lafayete, Mercedita, Florida (later Central Florida in 1906), Rufina, Cuatro Calles (the nucleus for Central Providencia), Verdeguer (later the site of Central Machete), and centrales Reparada and Restaurada in Ponce. Sandwiched between Guanica Centrale and Aguirre, several southern centrales -Fortuna, Boca Chica, Constancia and Florida- were absorbed and disappeared. By 1910, however, only four steam mills remained in the southwest and two in the southeast. The southern region also held 14 ox-drawn mills, with eight in the southwest.

Puerto Rico’s well-watered eastern district, in contrast with the southern region, was highly favorable for sugar production. By 1910, only one steam mill and three ox mills remained in the area, with only a small output. Also in 1910, San Cristóbal, in Naguabo, acquired Esperanza Central, adding some mill equipment to its plant.130

129 The mill came from recently closed Central Buenavista, which was purchased by Loiza Sugar Company. See “Porto Rico,” LPSM, 48, no. 10 (9 March 1912), p. 163.
Hurricane San Ciriaco destroyed all sugar haciendas in the area. Mercedita, the only central in the region, survived the hurricane. Originally an ox mill, they transformed Mercedita into a central in 1897. In 1901, the Compañía Azucarera del Este, headed by Rafael Fabián, purchased Mercedita.  

Replacing the more traditional ventures, however, were five Puerto Rican-based capital centrales: Columbia, Lafayette, Ejemplo, Juncos, and Pasto Viejo. Central Columbia belonged to the mercantile societies of C. & J. Fantauzzi and Clausell & Verges. Its first crop was in 1900-01.

For the Columbia venture, the Fantauzzis, French nationals of Corsican origin, took local partners. Yet they carried out singly the building of Central Lafayette. The mercantile society of C. & J. Fantauzzi, formed in Puerto Rico in 1853, knew about sugar, being the Fantauzzis owner of a raw sugar factory in Coudun, France. Lafayette, in Arroyo, developed from a muscavado mill into a mid-sized central. In 1906, Lafayette let contracts for new mills and crushers, which “will rank this central among the largest of the island.” Don Antonio Fantauzzi took charge of the central during harvest and “afterwards returns to his home in Paris to enjoy a well-earned vacation.” The land in the Arroyo area near the central was “famous for the sweetness of the cane.” By 1912, two trains of mills operated there.

Central El Ejemplo was the first raw sugar factory built since the U.S. takeover of Puerto Rico. It was the product of Antonio Roig, the prime advocate of raw sugar factories in the eastern district. Roig built Ejemplo in the same site where Hacienda Providencia’s steam mill had been. To finance construction, he borrowed from Fritze, Lundt & Co. on two separate occasions: first, for the factory installation in 1898, and then, for restoration after damages by San Ciriaco in 1899. In 1909, Roig incorporated the business under the name Compañía Azucarera El

Ejemplo with an initial $350,000 capital. Fellow incorporators were Julio D. Guzmán, of Humacao, and Tomás Subirana, of Juncos.  

Juncos Central Co., Roig's next sugar venture, was undertaken jointly with U.S. capital, Jules Gay and the Davidson family of New York (the Davises later would be known for their large holdings in the American Brakeshoe and Foundry). By 1907, Central Juncos was already milling. Central Pasto Viejo was milling at least since 1907. In 1910, its majority shareholders were local. Pasto Viejo produced its first successful crop when "a group of determined capitalists, men who thoroughly understood the sugar business, organized the so-called Federal Syndicate of Humacao, rented the central upon the completion of the crop of 1914, and went on to operate it successfully for the first time in 1915." Reportedly, the key person behind the central's performance was engineer Ignacio Peña. Pasto Viejo, first organized under the name of Humacao Sugar Co., was reorganized as Porto Rico Sugar Co. in 1907. Its

136 "Recent Sugar Incorporations," The Porto Rico Horticultural News, 2, no. 9 (September, 1909), p. 16.
137 "A Dynasty in Sugar...", p. 19.
138 In 1910, the government obligated Juncos Central Co., in an unusual episode, to pay a fine and construct tanks with a capacity to contain the company's waste matter. The penalty followed an official inquiry into complaints of contamination that the firm was polluting the Gurabo River as early as 1906. Gurabo women even had written the acting governor that their drinking and washing waters were being polluted. See "Porto Rico," LPSM, 44, no. 16 (16 April 1910), p. 351, and "Porto Rico," LPSM, 44, no. 21 (21 May 1910), p. 431.
139 The locals were Eduardo Georgetti, with 291 shares; José Toro Ríos, 270; Juan Carlos McCormick, 257; Rafael Fabián, 226; Luis Toro Pasarell, 214; and Ramón Aboy Benitez, 79. U.S. shareholders were H.C. Guiler, 199 shares; George T. Parker, 198 shares; and Moses A. Walker, 46. German-born Waldemar Hepp had 85 shares. See Memoria sobre las operaciones de la Borinquen Sugar Company, San Juan, Puerto Rico, Junio, 1910. Central "Pasto Viejo", Humacao, P.R. (San Juan: Tip. Boletin Mercantil, n.d.), p. 4.
141 Peña carried out engineering theories he had learned during seven years in the United States, and practical methods of sugar manufacturing that he had mastered at Central Constancia, in Toa Baja, which was run by his uncle, Francisco Arrieta.
1904 reports show that Humacao Sugar Co., incorporated in New York, had secured the necessary sites, rights of way, and contracts for delivery of cane to the mill. William L. Bass was a principal in Humacao Sugar Co. Bass owned Pioneer Iron Works, in Brooklyn, N.Y., and Ingenio Consuelo, in San Pedro de Macoris in eastern Dominican Republic. Bass' business had "a double profit in it. He builds his own centrals and then operates them." Bass negotiated with "the cattle kings of the east coast of Porto Rico" for five years. His unfulfilled dream was to build a central within the U.S. customs zone. It was even suggested that he would relocate Consuelo from the Dominican Republic to Puerto Rico because there are few advantages offered to the sugar producer in Santo Domingo, as besides the Dingley tariff duty collected in the United States in Santo Domingo the Santo Domingan [sic] government has imposed an export ton of $2 a ton.

The island of Vieques, officially classified as part of Puerto Rico’s eastern district, was drought-prone and irrigation was impracticable. Vieques boasted its first central in 1896, when Santa Maria was upgraded from a muscovado factory, and the second in 1900, when Playa Grande was expanded. French-owned Central Esperanza was built in the mid-1900s. Arkadia came on line by 1910. It installed a new six-roller mill with help from New York-based engineer George P. Anderton. Reading Iron Works built the machinery and Anderton served as their sales agent.

146 "New York," LPSM, 44, no. 6 (5 February 1910), p. 87.
In western Puerto Rico, Aguada, Añasco, Mayagüez, and Rincón hosted only small centrales in the nineteenth century. Lack of capital killed the sugar haciendas in San Germán, where “one can see twelve of thirteen chimneys, the mills of most of which were long since past grinding.” In the twentieth century, cane lands control by Guanica Centrale in the south and Coloso in the north precluded larger-scale centrales from developing in the district. In fact, Guanica Centrale absorbed Central Pagán in Añasco in 1910. Local capital owned three centrales: Ana María in Mayagüez; Eureka, owned by Mateo Fajardo, in Hormigueros; and Central Corsica in Rincón. Mixed capital controlled the Rochelaise central in Mayagüez, with majority Puerto Rican ownership. Central Altagracia, also in Mayagüez, instead was the product of foreign but Puerto Rican-based ownership.

Central Ana María in Añasco nearly went bankrupt in 1911 because of the combination of insufficient capital, limited machinery, and inexperienced management. Its owner, a local syndicate, sold to Ramón Valdés Cobián that year. Valdés Cobián improved the factory every year until it “was very nearly a complete plant, taking into consideration the very small size of the mills, 24 inches to 48 inches, which do very creditable work.” Capacity rose to 500 tons a day, and the plant competed well against other centrales to obtain cane from colonos. By mid-1914, Ana María was turning out white sugar, produced through the sulphitation process, for sale in the local market.

Central Corsica was initially an “ingenio...of muscovado sugar” built by Domingo Rafucci Paduani, from Corsica, in 1884.\textsuperscript{152} It became a central in 1888, the year Domingo Rafucci left for Europe, leaving his son Alfredo Rafucci Bayrón as administrator. By 1912, Central Corsica had more than 1,164 acres in cane planted in company-controlled lands. It also had available about 40,000 tons of cane from colonos. The American Railroad Company [hereafter referred to as ARC] transported cane from Isabela, Aguadilla, Aguada, Añasco, and Mayagüez. All its machinery was of American manufacture, including a nine-roll Fulton mill, with a Krajewski crusher, and 13 Morris-Weston centrifuges.\textsuperscript{153}

The sugar industry was so profitable in the early twentieth century that local capitalists began to build centrales in Puerto Rico’s mountain interior region. The terrain was not the best cane land available and transport to the mill was tortuous. Even the interior town of Cayey, long a center for tobacco, developed a sugar central. Central Cayey was incorporated with capital of $100,000 by Mateo Rucabado, of Cayey, and Ramón Aboy Beníez, Luis M. Cintrón, and Antonio Pérez Pierret, of San Juan.\textsuperscript{154} George P. Anderton designed the factory, while working as consulting engineer for Georgetti, Cintrón, Aboy & Co.\textsuperscript{155} The central began grinding


in 1910, but colonos, dissatisfied with their return per acre, were reluctant to extend plantings. Central Santa Juana in nearby Caguas had similar problems, because its colonos also could earn higher returns from tobacco. Indeed, several colonos threatened Santa Juana that they would have to return to tobacco if they could not get a higher price for their cane.\textsuperscript{156}

In mid-1910, Utuado Sugar Co. contracted New York-based Lebedjef Co. to build a central in the mountain town of Utuado, with the stipulation that it be ready for grinding by January 1915.\textsuperscript{157} Carlos Cabrera, Eduardo Georgetti, and Carlos Morales Alvarado sat in the company's board of directors.\textsuperscript{158} Mountainous Jayuya and Adjuntas held two other centrales. The Jayuya Development Co. built Central Santa Barbara. Central Pellejas in Adjuntas was the product of the Pellejas Sugar and Coffee Co. The leading stockholder was Lucas P. Valdiviezo, one of the largest colonos of Guanica Centrale.\textsuperscript{159} In 1912, following the lead of Santa Barbara, Pellejas ordered a nine-roller 'Coloso' mill and crusher from the Bahammann Iron Works Co., of Cincinnati.\textsuperscript{160}

In 1912, two more small centrales built by Georgetti began operations.\textsuperscript{161} Central Plata, in San Sebastián, was described as “up-to-date in every respect.”\textsuperscript{162} In the north, Camuy Sugar Co. owned Central Camuy, in Camuy town. However, the controlling interest appeared “to belong largely to the Amador family,” in particular to U.S. trained-lawyer Pedro

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162 Ponce de León, "Porto Rico," \textit{LPSM}, 48, no. 17 (27 April 1912), p. 302. In 1911, it was informed that Plata "was making use of a good deal of old machinery taken from other factories that had outgrown their capacity." Ponce de León, "Porto Rico," \textit{LPSM}, 46, no. 19 (4 November 1911), p. 309.
G. Amador. Camuy’s factory was built in front of the Camuy railroad station. A branch of the railroad ran through the factory grounds, easing cane transport. In 1910, two other ventures were slated for Camuy: Alianza and Soller. La Alianza was organized in 1910 and included as shareholders Andrés Oliver, Spanish-born Manuel Ledesma and Agustín Pla.

The mills of Camuy, Plata, Utuado, and Cayey were almost identical, all about 3 feet long, with nine rollers and a crusher. The short rollers were “a new departure”: were large in diameter, -24 to 28 inches-, and with very deep grooves, -three or four grooves per inch-, “they get through a lot of cane with just as good extraction as the most powerful mills in the larger factories.”

Unlike Louisiana, where six-roller mills prevailed, Puerto Rico mostly used nine-roller mills and crushers in its major centrales. Nine-roller mills averaged 10.5 pounds of sugar per 100 pounds of cane, while the six-roller mill extracted less than 9.5 pounds of sugar. A Louisiana Planter and Sugar Manufacturer correspondent estimated that the one pound difference of sugar per 100 pounds of cane represented about 8,000 bags of sugar, which Louisianans essentially burned in their furnaces, instead of adding new rollers. Puerto Rico’s problem was not old facilities; many centrales were modern, built by reputable sugar-house engineers, with the latest designs. George W. Rolfe, of Massachusetts Institute of Technology, pointed out that they showed lesser efficiency because of a lack of proper facilities in bringing cane promptly from field to mill; misunderstanding the proper relation of different parts of a sugar house to the design as a whole; and carelessness (or ignorance) in working out details of design, vital for efficient running.

166 “Porto Rico,” LPSM, 45, no. 2 (9 July 1910), p. 25.
The central boom stalled in 1912, "the first year that no new sugar central of any proportions" was promoted. One explanation for the halt said "it would be difficult to squeeze another one in anywhere on the flat coast lands." It also posited that with the existing factories in good shape and able to process the cane in 100 days, there may not be need of more factories.169

A more important reason, however, was the 9 September 1913 approval of the Underwood-Simmons Act, which reduced and then abolished tariffs on sugar imports to the United States by 1916. Central Aguirre's J.D.H. Luce, the brother-in-law and close friend of Senator Henry Cabot Lodge, Republican from Massachusetts, tried to influence Congress on the issue. Luce gave Cabot Lodge information, which the legislator attempted to use to convince the Democratic majority against abolishing the tariff. Cabot Lodge said abolition would hurt Puerto Rico's sugar industry:

The sugar crop there is going to be reduced. It is falling off this year, owing to the fact that small planters and growers with the prospect before them of this bill and free sugar, cannot borrow the necessary money from the banks to carry on their businesses. If you look over the records in Porto Rico, you will find that a great many small sugar producers have already gone into the hands of the receivers. That means, of course, a reduction in their ability to buy from us.170

True enough, uncertainty created by congressional debate on the bill led banks to limit credit for centrales. That reduced machinery orders and financing for cane farmers, in turn reducing cane production.171 The credit crunch hit hardest the newer centrales and by July 1912, talks circulated "of reorganization and wholesale cutting down of expenditures, with the consequence that in some cases even some much-needed repairs

are likely to be left undone."\textsuperscript{172} Rafael Fabián reported that his colonos, which usually financed themselves with the banks, were now asking him for money.\textsuperscript{173} Fabian’s own Borinquen Sugar Company went into receivership in June 1912.\textsuperscript{174}

Barton L. Keen, president of Lebedjef & Co., the New York-based sugar machinery manufacturing firm, confirmed the reports, after a three-month stay in Puerto Rico. Contemplated plans for improvements and new factories were at a standstill, with just one or two exceptions.\textsuperscript{175} In July 1913, several centrales went into liquidation because of the credit restrictions, but other centrales kept operating under receiverships with a small profit.\textsuperscript{176}

The prospect of duty-free entry for all sugars prompted proposals to dismantle some factories and their transport to “where cane lands can be acquired for $6 or $7 per acre,” and “where one does not have to pay American prices for labor, nor have to buy machinery and supplies in the protected markets of the United States.”\textsuperscript{177} A similar response came from Louisiana. There, several centrales were dismantled in expectation of sending the machinery to Cuba.\textsuperscript{178} The \textit{Louisiana Planter and Sugar Manufacturer} correspondent commented:

\textsuperscript{172} “Porto Rico,” \textit{LPSM}, 49, no. 2 (13 July 1912), p. 31.
\textsuperscript{173} Rafael Fabián to Manuel Rionda, 22 May 1912, BBC.
\textsuperscript{175} Two important exceptions need to be noted. First, the report that the controlling interest, the Cuban American Sugar Company, of Central Aguirre had plans for complete replacement of its plant because it was far below the standard of its other factories. In second place, installation of new Fulton 34 inches by 72 inches nine-roller and crusher mill at Central Juncos. See “New York,” \textit{LPSM}, 48, no. 15 (13 April 1913), p. 48, and Ponce de León, “Porto Rico,” \textit{LPSM}, 49, no. 25 (24 December 1912), p. 416.
\textsuperscript{177} Ponce de León, “Porto Rico,” \textit{LPSM}, 50, no. 24 (14 June 1913), p. 377. A knowledgeable sugar engineer commented that “the cost of removing machinery from one Island to another is likely to be prohibitive, although the import duty on sugar machinery in Santo Domingo is only 5 per cent.” D. L. Thomson, “Porto Rico and Santo Domingo,” \textit{LPSM}, 51, no. 2 (12 July 1913), p. 48.
\textsuperscript{178} Acreage reduction took place in the beet sugar areas. See Taussig, \textit{Some Aspects of the Tariff Question}, p. 369.
It would be a great pity for the Island and a national disgrace if any considerable immigration should take place to Santo Domingo...and it would not look at all well if the Porto Ricans, after about 14 years of Americanization, should be so much Americanized as to be forced to leave their homes to seek a future in the neighboring Republic.179

Several arguments against the duty-free sugar bill surfaced in the press and in the official and unofficial memoranda of private and governmental bodies. One asserted the American consumer would save $1.25 per year on sugar, but American business would lose about $25 million worth of annual business with Puerto Rico, generated by the prosperity caused by sugar production.

Another claimed that the tariff elimination would cause domestic producers to be reduced to the same ruinous condition in which the English, French and Dutch colonies have been for many years, notwithstanding the low cost of coolie sugar, which most of the said sugar is produced.180

It argued that for Puerto Rico to compete, the United States would need to remove immigration restrictions to admit “starving coolies from the overpopulated island of Java.”181

William S. Marr, British-born administrator and important shareholder of Central Canóvanas, argued that it would hit Porto Rico very much whatever is done and in the event of Free Sugar the output of Porto Rico...would be reduced quite 50% on a very conservative estimate. Our cost of cultivation is much more expensive than it is in Cuba or St. Domingo, while there is no comparison with that of Java or even the British West Indies where labor is so cheap.182

182 William S. Marr to Manuel Rionda, 10 June 1913, BBC.
In the same vein, after detailed analysis of Plazuela’s 1912 annual report, Manuel Rionda concluded that Puerto Rico’s cost of manufacture (42 cents per 100 pounds) was lower than in Cuba (80 cents per 100 pounds), maintenance about the same, railroad freight costs practically nonexistent, and lands less productive and more expensive (“This is where they are at a great disadvantage as compared to Cuba”). Rionda contended that Plazuela could stand tariff reduction, but the cost “for labour will have to come down. There is nothing else for the Puerto Ricans to produce and working men must work to live.”

The issue of race surfaced in the congressional debate. Asked how long the U.S. sugar industry would survive under free trade, William L. Bass said that “in Louisiana...they will send the hogs into the cane fields the minute the bill was passed.” The *Louisiana Planter and Sugar Manufacturer* commented that this means that while our American industry would summarily go to the four-legged hogs to the utter annihilation of human support, the two-legged ‘hogs’ of all foreign nations producing sugar would gobble up all its profits and prosperity to their individual and national advantage.

In April 1913, Puerto Rican planters refused to sell at the prices set by the ASRICO in the board of exchange. Instead, they withdrew their sugars from the market to wait for a better price and, if necessary, export their sugar to England. The *Louisiana Planter and Sugar Manufacturer* headlined the action as a “revolt in Puerto Rico.”

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183 Horace Havemeyer had the same opinion. Comparing Puerto Rico with Cuba, he said Puerto Rican “lands are worth more, and the yield per acre of cane from which the sugar is made is not as great. It is not as good a country from an agricultural standpoint.” *Hearings held before the Special Committee on the Investigation of the American Sugar Refining Co. and Others on June 12-16, 19-24 and 26, 1911*, House of Representatives, vol. 1 (Washington, D.C.: Government Printing Office, 1911), p. 581.

184 Manuel Rionda to Czarnikow-Rionda, New York, 14 January 1913, BBC.


186 “Revolt in Puerto Rico,” *LPSM*, 50, no. 7 (26 April 1913), p. 263.
By July 1914, Puerto Rico’s economy was suffering “an acute depression.”187 Production dropped sharply by 46,000 tons from the 1911-12 to the 1912-13 crop year. Output fell another 5,000-ton in the 1913-14 crop season, when sugar growers netted $6 million less than the previous year.188 Planters and small cane farmers could not get the credit advances they needed from bankers and other lenders for the 1914-15 crop. They carried out spending cuts. These included a reduction in fertilizer usage and a 30 percent wage cut for laborers, which, as will be seen in Chapter 9, fueled labor strikes. They expected the situation to be even worse for the 1915-16 crop, because most of Puerto Rican sugar cane was an 18-month crop. F. R. Hoisington, president of the Cayey-Caguas Tobacco Co., predicted that tobacco cultivation would replace cane culture.189

The crisis hit hardest at small firms, which could not obtain financing elsewhere and had limited internal capital. Six centrales went into receivership. Pasto Viejo, San Cristóbal and Uruado went to the selling block by mid-August, and Camuy was shipped in parts to Venezuela.190 A Venezuelan syndicate, headed by General Andrade, purchased Camuy for $150,000.191

Central San Cristóbal, which went into receivership in mid-1913, closed the 1913-14 crop season, with a production of 39,500 bags, about 10,000 bags less than the previous year.192 It operated in 1913-14 under a lease by the receiver on a percentage basis, guaranteed by a $20,000

return. Central Carmen in Vega Baja, also under receivership, produced about 65,000 bags that year and a sucrose recovery better than 10 percent, for its best campaign ever.\textsuperscript{193}

Many groups from Puerto Rico voiced their anxiety over the removal of the tariff. The island was almost unanimously opposed, with government, private sector, political parties, civic groups, and labor unions all rejecting the trade bill. The widespread opposition was evident in two delegations sent to Washington.

The first delegation expressed their total opposition to the measure in congressional hearings held in 1912. Introduced by War Secretary Henry L. Stimson, the team included representatives of the House of Delegates (Cayetano Coll y Cuchi), of the Sugar Growers' Association (Carlos McCormick and Lucas P. Valdivieso), the Chamber of Commerce of San Juan (Harry F. Besosa), a Puerto Rican sugar central owner (Antonio S. Alcaide) and U.S. sugar corporation officials (Aguirre's J. D. H. Luce and Guanica Centrale's Frank A. Dillingham) in their individual capacity. Also included were delegates of labor unions (Santiago Iglesias Pantin and Aldea Nazario), and other interested parties (William L. Bass). At the hearing, General Clarence Edwards, chief of the U.S. Bureau of Insular Affairs, also opposed the bill.

Iglesias Pantin, president of the Free Federation of Workers of Puerto Rico (\textit{Federación Libre de Trabajadores de Puerto Rico}), best articulated the unanimity behind the sugar industry:

This is the first time the representatives of capital of all kinds and the workmen have felt that they must be united in order to prevent the destruction of the industries of our country by the passage of the pending bill... where a country -as is Porto Rico- is almost entirely given over to one industry, the prosperity of that industry means the prosperity of the laboring people.\textsuperscript{194}


\textsuperscript{194} \textit{Duty on Sugar No. 5. Hearings before the Committee on Finance, April 4, 1912, U.S. Senate, 62nd Cong, 2nd Session on H.R.21213} (Washington, D.C.:
Also, in 1912, a Porto Rico Official Economic Commission, created by Joint Resolution of the Legislature of Puerto Rico, was entrusted with presenting to the “National Authorities the economic problems of Porto Rico, as affected by the Bill to reduce the tariff duties.” The commission was composed of top island leaders. José De Diego served as chairperson. The best-known independence advocate within the Union Party of Puerto Rico, he was the speaker of the House of Delegates. De Diego also served as corporate lawyer representing Fritze, Lundt & Co., Banco de Puerto Rico, and Guanica Centrale, as well as the central-owning families of the Bianchis and the Bravos in western Puerto Rico. The vice-chairman was a statehood advocate, Martin Travieso, president of the Executive Council. Two other members were Antonio R. Barceló and Carlos Cabrera. Barceló had close links with the Birds of Central Fajardo. Cabrera, a central owner and member of the pro-statehood Puerto Rican Republican Party (Partido Republicano Puertorriqueño), “summons in his person three aristocracies: that of birth, of talent, and of capital.”

The commission underscored to Congress that from 1901 to 1912, Puerto Rico tripled the area cultivated in sugar from 83,000 acres to 210,000 acres, quadrupled its raw sugar output from 91,000 tons to 371,000 tons, and saw land values raise six fold from $6 million to $32 million. They gave four reasons for the faster growth in production and crops, compared with the cultivation area: (a) improvements in cultivation methods because of the introduction of new scientific methods, use of improved classes of seeds and proper drainage of lands; (b) use of fertilizers, with the value used rising from $21,000 in 1902 to $1.2 million in 1912; (c) installation of irrigation systems; and (d) substitution of older sugar machinery with modern equipment.

Government Printing Office, 1912), p. 159. A Commission to Represent Porto Rico on behalf of the Sugar Industry, presided by Rafael del Valle, vice-president of the Executive Council, decided “to compensate Mr. Iglesias in the sum of $500.00 for his services.” Rafael del Valle to General Clarence Edwards, RG 350, E 5, B 422-31 to 435, D 422-59, NA.


The commission claimed that sugar planters were “far from being rich,” because they reinvested “the gold produced by the land” in machinery, irrigation systems, fertilizer, and “a great improvement in the condition of the laboring classes of Porto Rico.” Suprisingly, the Commission asked that if the bill were approved, Puerto Rico be granted “economic independence” to

make its own custom laws,...establish commercial alliances with other nations, and to seek, wherever they may be obtained, the advantages that the United States cannot give us.

The lack of space for new raw sugar factories and the 1912-13 sugar crisis left eight centrales stillborn or on the drawing board. Two large landowners from the southern district were among those with unrealized projects. The Santiago Brothers had been promoting a central in Coamo: “The Santiago Brothers is one of the oldest and best-known families in the island and own immense tracts of land principally devoted to raising cattle and fine horses.” They owned and operated an outdated small factory (with no multiple crushing, triple effects or crystallizers) that ground their cane and made molasses into alcohol. Also stillborn were plans for Central Covadonga, the brainchild of Manuel González, one of the most important colonos of Central Aguirre. To be built in Salinas, Covadonga was conceived “not to be a corporation, for its owner does not need the selling of shares to guide to a happy ending this brilliant sugar business.”

Four centrales also proposed for the interior district never got off the ground. They included Central Ciénaga, to be between Hatillo and

197 Porto Rico Official..., Porto Rico’s Case, p. 11.
198 Porto Rico Official..., Porto Rico’s Case, p. 49.
Camuy; Cidra Sugar Co., which had access to land and had been spurred by high quality cane production in the vicinity; and the Compañía Azucarera de Caguas.202 Sosthenes Behn had incorporated the Caguas venture with a capital of $500,000, and projected a 600-ton capacity factory. Behn Brothers, industrial agents and brokers, later of International Telegraph and Telephone fame, also were “the leading spirit” in the stillborn Rio Grande Centrale near Canóvanas.203 Meanwhile, another northern district plan also fizzled. Gabriel Guerra had hoped to establish a central in Bayamón.204

Meanwhile, U.S. Congress had been discussing tariff revisions since 1909 through the Olmsted Bill, but the proposal went nowhere until 1913.205 Sugar interests realized they needed an organization to present their concerns to Washington. Eduardo Georgetti, therefore, called for the formation of the Sugar Growers’ Association of Porto Rico to represent island sugar planters and producers.206 On 28 February 1909, Georgetti was elected the group’s first president. The association’s executive committee included Georgetti as chair; Luis Verges as vice-chair; A.J. Greif as first member, representing Guanica Centrale; P. McLane as second member, representing Central Aguirre; and Rafael Fabián as third member.

203 Sosthenes Behn was president of Central Progreso Co. in Carolina and secretary of the Compañía Azucarera del Toa, a new corporation that took over the old factory and lands of Central Constancia at Toa Baja. See Ponce de León, “Porto Rico,” LPSM, 48, no. 2 (13 January 1912), p. 27.
A total of 27 centrales joined the Association, including the three leading U.S.-owned companies. Colones also were members, and those joining included José A. Busigó, of Sabana Grande; Mateo Fajardo of Mayagüez; Lucas P. Valdivieso of Ponce; Lluveras Brothers of Guayanilla; Müllenhoff & Korber of San Juan; and A. Quintero & Co. of Manati. They named the Porto Rico Horticultural News the organ of the Association.

The Sugar Growers’ Association had its first organizational meeting on 28 February 1909. It decided to send a commission to Washington, D.C. to lobby for the maintenance of the sugar tariff. Comprising the commission was a Mr. Callaghan, of Banner Line; Lorenzo D. Armstrong, of L. W. & P. Armstrong, of New York; and J. D. H. Luce, of Central Aguirre, all residents of the United States; Puerto Rico’s Resident Commissioner Tulio Larrinaga; and political leader Luis Muñoz Rivera, former resident commissioner and head of the Union Party of Puerto Rico. After meeting in New York with representatives of sugar machinery manufacturers, shipping lines, and executives from other Puerto Rico centrales, the group decided to add SPRSCO/NJ’s Frank A. Dillingham. A subcommittee, including Luce, Dillingham and former colonial military governor, Gen. George W. Davis, was authorized to go to Washington and contact the counterpart sugar associations representing Louisiana, Hawaii, and beet sugar states in order “to maintain the present sugar tariff on Cuban sugar.” After meeting with several leaders in Washington, D.C. (including Cuba’s Vice-President Alfredo Zayas), Muñoz Rivera reported: “The danger for Puerto Rican production of admission of the sugars of the greater Antille was neither imminent nor approaching.”

207 Under its auspices, an Association of Chemists and Engineers was formed in 1913 with the goal of harmonizing factory methods and results. Their first activity was to exchange mill reports to ensure that all factories used the same methods of analysis and calculations. See Yearbook of Association of Sugar Producers of Porto Rico, Year of 1910 to 1911 (San Juan: Progress Publishing Co., 1911) and J. T. Crawley, “Progressive Porto Rico,” LPSM, 50, no. 12 (22 March 1913), p. 188.
In 1910, amid the debate on the Olmsted Bill, Eduardo Georgetti proposed extension of the 500-acre limit to 3,000 acres. Not all sugar planters and corporations agreed with that request. L. W. P. Armstrong, of Fajardo Sugar Co., instead advocated a 5,000-acre limit. The lack of a consensus on acreage played an important role in killing the bill. The correspondent of the *Louisiana Planter and Sugar Manufacturer* said sadly: "...that means another year of land grabbing on the part of the big centrals."

By 1913, the Sugar Growers’ Association had become an ineffective organization, focusing only on issues threatening planter interests both on the island and Washington, D.C. Meetings were held irregularly, though they scheduled an annual meeting for April. J. T. Crawley, director of the association’s Experimental Station, voiced doubt that under conditions then, the group would be able "to have monthly meetings of the planters for discussion of topics of general or local interest." Comparing the Sugar Growers’ Association with Louisiana Sugar Planters’ Association and Hawaiian Sugar Planters’ Association, Crawley cited "a great gap in our efforts at improvement, which is yet unfulfilled."

However, the outbreak of World War I in Europe changed the weak outlook of the Puerto Rico sugar industry. Most warring countries were important beet sugar producers and the war decimated their sugar industries. A decline in supply led to price increases. In June 1914, prices in Puerto Rico reached about $3.15 per hundred pounds, and by August, they had more than doubled to about $6.50. The *Louisiana Planter and Sugar Manufacturer* reported that "on the basis of $6.52 the sugar men who held their supply for an increase have realized a profit of

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212 *Statement*, pp. 3-7.
over $1,000,000.”216 Among those reported to have benefited from the bonanza were Ramón Valdés Cobián, of Central Ana María; the Behn Brothers; Juan Carlos McCormick, of Central Machete; and Eduardo Georgetti, of Central Cambalache.

The threat of duty-free imports to the United States fizzled. Acreage for the 1914-15 crop had already been reduced, but plans for the 1915-16 crop called for cultivating every available acre.217 The carnage in Europe rekindled the confidence of Puerto Rican sugar planters that had been present during more profitable times:

All thought of any further tariff changes seems to have left the minds of local sugar men and they are predicting high prices from three years on and they are preparing to take every possible advantage of their opportunity.218

An immediate outcome of the U.S. military invasion was Puerto Rico’s opening to U.S. capital, the only Hispanic Caribbean country where it lacked a commanding presence. In contrast to Cuba and the Dominican Republic, Puerto Rico was neither a war-ravaged island nor politically unstable. U.S. capital in those islands dominated the sugar industry and other areas of the economy, while in Puerto Rico its economic presence was negligible, except in trade. Only after 1898, significant U.S. sugar interests linked to the Sugar Trust, but of different capitalist origins in the United States, acquired large expanses of land and built centrales. Boston and New York-based capitalists predominated, both probably with previous business connections with the island. Capital ceased to be a scarce factor of production.

The inclusion of Puerto Rican sugar within the U.S. tariff system in 1900 fueled sugar expansion, though U.S. sugar interests acted before

217 A report from the Treasurer of Puerto Rico showed that on 31 December 1915, a total 203,941 acres were planted to cane, the smallest tabulated since August of 1910. Between August 1910 and August 1912, acreage increased from 183,223 to 209,378 acres. In 1913, there was a small increase to 211,110 acres. See “Letter from Porto Rico,” LPSM, 57, no. 27 (30 December, 1916), p. 424.
Map 2.1 Showing sugar factories in operation in Puerto Rico, 1914. Drawn by José Ruiz Soler, Secretary, The Association of Sugar Producers of Porto Rico.
its promulgation by the President. The building of centrales boomed, with 35 to 40 new sugar factories constructed between the years 1898 and 1913. By 1914, in contrast to Cuba and the Dominican Republic, Puerto Rico had about reached its cane land limit, with 44 sugar centrales.

Of the five U.S.-built centrales, the three largest—Guanica Centrale, Aguirre and Fajardo—were built in the southern and eastern districts where no raw sugar factories had been constructed in the nineteenth century. U.S. sugar investments in the building of centrales stopped in 1905. From then on Puerto Rican-based capital led the way in the expansion of sugar until the mid-1920s, when the U.S.-based United Porto Rico Sugar Co. acquired several Puerto Rican-owned centrales, weakened by the price collapse at the start of the decade.

U.S. sugar corporations were more efficient and productive than European and Puerto Rican enterprises. European capital invested in sugar ventures manufactured only a small share of sugar production.

By 1910, Puerto Rican-based capital controlled nearly 80 percent of the centrales in the island, most in the north, western and interior districts, and produced more than half of the raw sugar manufactured in the island. With access to capital and the U.S. market, a Puerto Rican sugar bourgeoisie developed, building centrales and becoming colonos of sugar corporations. The island’s most important political leaders, such as Luis Muñoz Rivera and José de Diego, were linked with Puerto Rican and U.S. sugar corporations.

A government ruling caused the inclusion of Puerto Rico within the U.S. tariff structure, sparking the rise of the sugar industry. Another ruling—the Underwood-Simmons Act—brought it to a halt. The menace of free sugar by 1913 precipitated a credit crunch and the instant failure of several sugar enterprises. Free sugar also prompted the establishment by foreign and local centralistas and colonos of a flimsy organization—the Sugar Growers’ Association—to defend their corporate interests. Puerto Rican and U.S. sugar interests acted in unison when defending the sugar industry either in Puerto Rico or in Washington, D.C. The sugar industry was considered the main economic mainstay of the economy by all-important social groups, including the labor movement.
Puerto Rican, European and U.S. sugar producers in the island cooperated in some issues, but all their interests did not coincide. Aguirre, Fajardo and Guanica Centrale belonged or were connected with other U.S. sugar corporations in the Caribbean. Each needed more cane to keep growing. Guanica Centrale led the way in acquiring other centrales and their lands, but Aguirre and Fajardo would soon follow the same path.

The U.S. sugar corporations seemed to have a stronger financial foundation than the Puerto Rican centrales. The most powerful Puerto Rican consolidation -Georgetti, Cintrón, Aboy & Co.- apparently dissolved under the financial crunch of the crisis of 1913. It appears that at least up to 1914, U.S. sugar corporations fell under ASRCO’s sway, and most of the Puerto Rican centrales under Rionda. Yet, further research is needed about their connection with sugar brokers and refiners in the United States.

In 1914, Puerto Rican planters declined to sell raw sugar to the mighty ASRCO. Puerto Rico had become a domestic producer of raw sugar within the U.S. market. Puerto Rico’s interest basically coincided with that of Louisiana, the beet sugar states, Hawaii and the Philippines: the exclusion of outside raw sugar. The interests of the domestic raw sugar producers pitted them against the U.S. sugar refiners and the world’s raw sugar producers, particularly Cuba and the Dominican Republic in the Caribbean. Thus, Puerto Rican, Dominican and Cuban sugar bourgeoisies had opposing interests. Fears of competition turned out to be short-lived as World War I cut European supply, raised world sugar prices, and the market was large enough to be profitable to all.
The "splendid little war" of 1898 opened the doors of Puerto Rico to the North American entrepreneur. An army of U.S. capitalists swarmed the island, looking for investment opportunities. Unlike Cuba, Puerto Rico did not suffer destruction of property during the war. During and after the military occupation, U.S. capital rushed into various sectors of the economy, including banking, communications, construction, sugar production, tobacco production and cigar manufacturing, transportation, and utilities.¹

Sugar production attracted the larger investments. Only two U.S. firms—the Central Aguirre Syndicate and Central San Cristóbal—started to set operations before the Foraker Law and the free entry of Puerto Rican products to the U.S. market. SPRSCO/NJ acted cautiously. It waited for the approval of free trade to incorporate and only then moved full force to establish the largest sugar mill ever built in Puerto Rico.

This chapter focuses in the founding and the expansion of SPRSCO/NJ in Puerto Rico during the years 1900 to 1914. It begins describing the scheme of corporations—and their directors and officers—organized for cane

¹ See Ramos Mattei, "Las inversiones norteamericanas en Puerto Rico y la Ley Foraker," pp. 53-69.
growing and milling, and exporting raw sugar from Puerto Rico. Then it sketches the development of a remarkable production infrastructure—real estate acquisitions, factory building and enlargement, a transportation network (mainly the railroad), cultivation arrangements, and research and development policies and facilities with its top and middle management. Steady growth characterized SPRSCO/NJ’s during this period, but the road to expansion, as will be seen, was not free of failures or difficulties.

As customary in the business climate of the time, SPRSCO/NJ managed its affairs privately. Its incorporation mystified the press. On 18 November 1900, The San Juan News reported that a “Eugene Small presided a new sugar company with immense capital...formed to operate in Puerto Rico.” The paper said “prominent New York and Philadelphia capitalists established the new company,” with plans to purchase large estates and to establish central factories in various districts of the island. Yet, the original incorporators were unknown and they themselves did not know what was going on. Small said a friend asked him to serve as an incorporator and knew nothing more about it. Another, E. Clyde Sherwood, was a law clerk at the corporate law firm of Rounds & Dillingham and claimed ignorance, saying that “lawyer Dillingham will tell about it in a few days.” Dillingham refused to comment for the New York Sun.

Almost six months later, on 9 April 1901, the San Juan News headlined “Guánica Wants to Know Who Composes the ‘Guánica Land Company’, and What It Is Going to Do.” The paper asked “just who composes this company is yet a mystery...where is its headquarters?” The paper singled out the “reliable German firm, Fritze, Lundt & Co.” as possible owners, adding that the company

will build large wharves, a central, a railway from Yauco to Guanica and buy up many of the plantations about. The

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2 “More Capital for Porto Rico,” San Juan News (Puerto Rico), 18 November 1900, p. 1. The San Juan News was the first English language newspaper in Puerto Rico. It was edited by Hobart S. Bird, a lawyer from the University of Wisconsin, who sympathized with the labor movement.

beautiful plantation of Juan Amill, north of Guanica, is reported sold to the company for $150,000.4

By month’s end, the paper proposed that the ASRCO was behind it all. It said Guillermo Cabrera and Fritze, Lundt & Co. were just intermediaries for acquiring lands for Dillingham, who in turn sold them to the Sugar Trust.5

The panorama was indeed cloudy. The Guanica Land Company was the first of several companies incorporated under the laws of New Jersey, a state popular for incorporation because of its liberal business laws.6 Other companies were the South Porto Rico Sugar Company, Guanica Centrale, the Encenada Estate, the Bernal Estate, and Santa Rita Estate. The particular purpose of each company was connected with one final goal, the manufacturing of raw sugar for export to the United States.

The key company—the SPRSCO/NJ—was incorporated on 15 November 1900. The company’s stated purposes were:

to acquire, purchase, sell, lease, mortgage...lands suitable for the growing of sugar cane and other tropical products, to acquire, sell, lease, mortgage and otherwise dispose of mills, factories, centrals, machinery...for the manufacture of sugar.7

The corporation was to have offices and conduct business in the United States, its dependencies and in foreign countries.

7 “Certificate of Incorporation of South Porto Rico Sugar Company, 15 November 1900,” p. 3, CCG, AACUPR.
SPRSCO/NJ's initial capital stock was $1.6 million. On 6 June 1901, they increased its capital to $3 million -one half in 8 percent cumulative preferred stock and half in common stock, all at the par value of $100. They also authorized the company "to purchase and acquire shares of the capital stock of associations or corporations engaged in the cultivation, manufacture or transportation of sugar and the sugar cane." Immediately, SPRSCO/NJ acquired the whole stock and notes of three corporations -Santa Rita Estate, Encenada Estate and Guanica Centrale- gaining control of about 6,500 acres in the Guánica area. It paid the former owners, Puerto Rico-based Fritze, Lundt & Co., 14,990 shares of SPRSCO/NJ full paid common stock at the total par value of $1.49 million and $381,000 in cash.

On 7 June 1901, the board of directors elected the following officers: William Schall Jr., president; John E. Berwind, vice-president; Frank A. Dillingham, secretary; and Edmund Pavenstedt Jr., treasurer. It named the law firm Rounds & Dillingham to serve as general counsel. The board also gave approval for Muller, Schall & Co., of Wall Street, to subscribe $1.498 million of the preferred stocks to be paid on call.

The board also laid the groundwork to start business in Puerto Rico. It elected Pavenstedt Jr. and Dillingham to serve as an executive committee in charge of Puerto Rico operations; Henry C. Fritze, of Fritze, Lundt & Co., to serve as general manager of Guanica Centrale; and authorized the purchase of plantations in southern Puerto Rico and a plant

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8 "Amended Certificate of Incorporation of South Porto Rico Sugar Company, 5 June 1901," CCG, AACUPR.
9 Guanica Centrale was organized to grow and manufacture sugar in Puerto Rico. It held colonos' contracts for grinding the canes grown on about 500 acres of land near the Guánica Lake. Santa Rita Estate was organized to hold lands in Puerto Rico. The company held contracts giving the right on payment of $125,000 to obtain title to about 2,000 acres with dwellings and factory buildings, north to the lake, and leases for about 2,700 acres of adjoining lands. Encenada Estate was organized to hold lands and franchises in Puerto Rico. It held contracts giving it the right to purchase $60,000 about 4,000 acres of land between the harbor and the lake, together with a franchise for using the water from the lake and for the construction and operation of a private railway and wharf. See "Minutes of the First Meeting of Directors of the South Porto Rico Sugar Company, 6 June 1901," CCG, AACUPR.
site near Guánica. In April, 1901, Fritze and Carlos Cabrera, of Ponce, represented Muller, Schall & Co. in securing options on several plantations in Santa Isabel, Guánica and Mayagüez.

The meeting of June 7 in New York City culminated several transactions done that week by Guanica Land Company, Guanica Centrale and Encenada Estate, whose directorates and officials interlocked and closely connected with Muller, Schall & Co., Fritze, Lundt & Co., and the law firm Rounds & Dillingham. One such transaction was the sale of about 4,500 acres in Guánica for $60,000 by the Guanica Land Company to the Encenada Estate. The transaction included a franchise for their irrigation and operation of a private railway and dock. Two days later, in 6 June, Encenada Estate and Guanica Centrale agreed that the latter were to clear, plant and cultivate all lands near Guanica, Porto Rico, now or hereafter owned or leased by said ESTATE, and to build and operate sugar factories, irrigation plants, railways, wharves and other works for the sole purposes of growing, manufacturing and transporting sugar canes and sugar products thereof.

Throughout its corporate existence, SPRSCO/NJ was commonly known in Puerto Rico by the name of Guanica Centrale or Guánica Central. The object of Guanica Centrale was cane cultivation and sugar manufacture. Its articles of incorporation expressed that it “shall be restricted to the ownership and control of not to exceed five hundred acres of land within the island of Porto Rico.” Henry C. Fritze was elected its president; Julius C. Umbach, a member of Fritze, Lundt & Co., its vice-president; and Frank A. Dillingham, secretary and treasurer.

12 “Minutes of First Meeting of Directors of Encenada Estate,” CCG, AACUPR.
13 “Memorandum of Agreement between the Encenada Estate and the Guanica Centrale, 6 June 1901,” CCG, AACUPR.
14 “Certificate of Incorporation of Guanica Centrale,” CCG, AACUPR.
SPRSCO/NJ’s original ambitious plans never materialized. The Prospectus of South Porto Rico Sugar Company called for building two raw sugar factories on the south coast, one in Santa Isabel (about 15 miles east of Ponce) and another at Guánica (about 15 miles west of Ponce).15 The projected Santa Isabel Centrale never came to fruition. Two haciendas owned by Carlos Cabrera, that were to be the nucleus for that factory, Destino and Florida, became part of the sphere of an SPRSCO/NJ’s leading competitor, Aguirre Sugar Co.16 SPRSCO/NJ eventually built only the Guánica unit. Yet, paradoxically, the company with one factory ranked year after year as Puerto Rico’s largest producer until its demise in 1967, outpacing its rival Aguirre that controlled three factories from the 1930s onwards.

The construction of a raw sugar factory in barrio Guánica rural at Yauco municipality was well-planned, aimed at using the latest technology “in agriculture and manufacture.”17 Developers began with virtually barren land and needed to install the infrastructure to cultivate, manufacture and export sugar. SPRSCO/NJ contracted U.S.-based civil engineering firm Harris and Giles to lay out irrigation systems, a dock, and the factory at Guánica. They quickly decided that the factory was to be at Ensenada, on the shore of the renowned Guánica Bay and Pigs’ Island (Isla de Puerco). Without delay, a machine shop and a power plant were built in that spot. The power plant was to supply electricity for irrigation pumps for the more than 2,000 acres under cultivation.18 As the factory,

15 “Prospectus of South Porto Rico Sugar Company,” CCG, AACUPR.
16 Cabrera was the only Puerto Rican appearing as a SPRSCO/NJ founding incorporator. Ponce-born Cabrera was educated in the United States. In 1882, Hacienda Bocachica, of Cabrera Brothers, won a gold medal for its yellow sugars. Central Florida was bought eventually by Aguirre and taken out of production in 1912. For further details see Abad, Puerto Rico, p. 57; “Nueva central para Santa Isabel,” San Juan News, 25 April 1901, p. 8; Guerra, “Don Carlos Cabrera y Paz,” De todo un poco vol. 1, pp. 17-18; “Porto Rico,” LPSM, 48, no. 3 (20 January 1912), p. 42; Andrés A. Ramos Mattei, “La Central Aguirre Sugar Syndicate,” La sociedad del azúcar, pp. 106-107.
17 South Porto Rico..., 50th Anniversary Report, p. 3.
18 There were four pumps with a capacity of four million gallons for the fields and one with a capacity of 2.8 million for the factory and houses. All the water was obtained from driven wells. Most information on the physical plant
wharf and houses came on stream, the plant provided power for them as well. A chemical laboratory, with an experimental station for sampling varieties of cane, and a small mill for test work also were built.

3.1. Guanica Centrale in construction, ca. 1900 [Courtesy of Hans Joachim Fritzle]

The support of the colonial government, by way of franchises, was soon forthcoming. One corporation controlled by SPRSCO/NJ, the Guanica Land Company, was authorized by the Executive Council of Puerto Rico in March 1901 to build and operate a dam, a railway and a dock in the Guánica area for the annual sum of $300 and a term of 99 years.19 As said in the preceding chapter, most land available for cane at Guánica was not cultivated because the soil was dry and the land not irrigated. The construction of the dam enabled the company to irrigate more lands and increase the acreage under sugar cane cultivation. The dam was built in the Caño de los negros, an outlet of the Guánica lake. The company

of Guanica Centrale in the early period was taken from a detailed description by D. L. Thomson, "Sugar in Porto Rico and Guanica Central Factory," LPSM, 32, no. 14 (26 March 1904), pp. 221-223. When writing the article, Thomson, a mechanical engineer, was chief engineer in Guanica Centrale. In 1907, he was in charge of building Central Eureka in Mayagüez and was also representative of George W. Newhall Engineering Co., of Philadelphia, and of Fulton Foundry & Machine Works, of Atlanta.

was allowed to take no more than 20 million gallons of water daily to owned or leased lands, and to operate the pumping stations, canals and pipe lines necessary for the taking or conveyance of water.

Rapid transport of cane from the fields to the factory is crucial to the success of any sugar cane venture because the sucrose content of cane starts to diminish when the cane is cut. SPRSCO/NJ facilitated the transport by building a standard gauge railway, of one meter in width, across its owned or leased lands, from the shore of the Guánica Lake to Guánica Bay. The railway brought cane directly to the factory for grinding. SPRSCO/NJ also installed a telephone system to ease communications between the field and the burgeoning industrial site. The phone system had five stations: one at Guanica Centrale in Ensenada, one each at Haciendas María Antonia and Fraternidad, one at the field office in Santa Rita (formerly Hacienda Santa Desideria), also an ARC station, and one in Yauco.

SPRSCO/NJ built a filled-in stone dock, linking Pig's Island to the mainland and forming a peninsula. It served steamers and vessels for receiving and discharging goods, chattels and effects of the company, and for embarking and disembarking officers. Placed about a quarter of mile from where the factory was erected, the wharf was fashioned with limestone from the adjoining quarry.²⁰ It could originally hold vessels drawing 21 feet of water, with a railway that ran parallel. A large steel tank, connected to the pumps in the factory and capable of holding 428,000 gallons, stored second molasses before shipping. A general store for cement, iron, pipes, paint, oils and other bulk items was built on the dock.

Ensenada was an ideal choice for a factory site. At the shores of Guánica Bay, it was near the Mona Channel, which separates Puerto Rico from Hispaniola, allowing good marine access to the U.S. mainland. Puerto Rico was nearer to the eastern U.S. market, the location of the most important refineries, than any other sugar-producing country.

²⁰ In the quarry there were a steam stone crusher and a portable boiler, capable of crushing 60 tons of limestone daily. The plant was used for crushing stone for concrete foundations and for ballast for the railroad. The quarry also had a continuous working limekiln, which turned out about six puncheons of temper lime per day.
outside the United States proper. Nature protected Guánica Bay from hurricanes and other forms of bad weather. Also, Ensenada was close to vast coastal lands suited for sugar cane cultivation extending from Ponce to Mayagüez.
3.4. Guanica town new plaza, showing Catholic Church and wooden and thatch houses, 1910 [Armstrong]

3.5. Guánica lagoon and the American Railroad Co. Line, 1910 [Armstrong]
3.6. Water tank, tracks to the wharf and a section of the sugar mills and the Ensenada sugar town, 1910 [Armstrong]

3.7. Residence of Guanica Centrale's Superintendent. Note reference to where the U.S. troops landed in 1898, 1910 [Armstrong]
By early 1902, SPRSCO/NJ evidently needed more capital to meet its cultivation and construction targets. In May, the board of directors approved a $600,000 loan on five-year notes and voted to increase capital stock to $5 million by issuing an additional $1 million, each in preferred and common stock.

3.8. A 100-preferred shares certificate of the South Porto Rico Sugar Company [Personal Files, Humberto Garcia Muñiz]

From the start, Guanica Centrale prompted widespread comment in specialized sugar journals and the commercial press. In mid-1902, the Louisiana Planter and Sugar Manufacturer affirmed that "the future prospects of the sugar industry [in Puerto Rico] are indicated by the erection by the American Sugar Trust of what is believed to be the most complete plant in the world for crushing cane."21 Guanica Centrale, built by New York-based contractors Hugh Kelly & Co. at a cost of $1 million and with a grinding capacity of 1,500 tons of cane per day, started operations by

The crystallizers and filters came from Germany and all other machinery from the United States.

Guanica Centrale was described in 1904 as "one of the finest sugar plants in the world." Its main building had three floors. The ground floor housed the mill plant, pump room and centrifugal department. The mill house consisted of two duplicate trains, both having an elevator feeding Krajewski crusher, driven by a Corliss engine, then two 3-roller mills, with an intermediate maceration carrier. The mill engines were also Corliss. The centrifugals, of the water-driven type, were arranged in one line, 10 for first sugar and five for the second.

The second floor was occupied by the boiling house, which contained 18 mechanical filters, 12 filter presses, defecated juice tanks, 10 Grevenbroich crystallizers, washing machine and hydro extractor for filter press cloths, with electric motors for the same. The third floor was occupied by the defecators, Lillie quadruple effect, three vacuum pans, and syrup and molasses tanks.

The company celebrated its inauguration with a "festival at Guánica Central." High society guests from Yauco and Ponce attended, with those from Ponce transported by special train and returned in the evening when the ball ended. The first year of operation, as is common in all raw sugar factories, was one of many complications. Dillingham was brought to Guá justify "with full power to take such steps in connection with the management of the company and the operation of the sugar houses and plantation he should deem to its best interest."

Hugh Kelly & Co., of New York, whose senior member was Hugh Kelly, owned two raw sugar factories in the Dominican Republic, Ansonia and Porvenir, and one in Cuba, Teresa. It built two sugar factories, Boston and Preston, in Cuba. See Edson, Sugar, p. 69; "Central of 1600 Tons a Day, Contracts Let for a Big Sugar Factory to be Built at Guánica," San Juan News, 22 October 1901; and "Hugh Kelly," The New York Times, 31 October 1908, p. 9.


Guanica Central Opened with a Dance," San Juan News, 9 January 1903.

South Porto Rico Sugar..., 50th Anniversary Report, p. 3.
ended in May 1903, and only yielded about 10,000 tons of sugar, of which Guanica Centrale cultivated half and independent cane farmers (colonos) the other half. Only 96 test grade sugars were made. Drought caused this dismal first crop. Puerto Rico as a whole, and the dry southwestern area in particular, were affected by the dust cloud that resulted from volcano eruptions in Martinique and St. Vincent the previous year.27

The operations manager during the first year was Harry Garnett, who came from British Guiana’s sugar industry.28 Garnett stayed only one harvest, leaving to handle the startup of operations at Central Preston in the Nipe Bay, Cuba.29 Dillingham then selected Adrian J. Greif as vice-president and general manager of Guanica Centrale, in charge of operations in Puerto Rico.

Adrian J. Greif had limited experience in the sugar business, mainly in Cuba. Nonetheless, the crucial factor in his appointment was that he was a well-seasoned railroad man.30 The extension of the railroad was indispensable for the expansion of SPRSCO/NJ. Greif quickly caught SPRSCO/NJ’s spirit of expansion; sugar expert Hubert Edson wrote that “his energy was phenomenal and he was deeply imbued with the idea of enlarging the property.”31

The factory at Guanica Centrale did not keep its original layout for long as it was “completely remodeled and was constantly being modernized and improved” by Greif.32 Only two seasons had passed when Guanica Centrale more than doubled its daily capacity from a 1,500-ton

29 Later Garnett administered Central Trinidad, also in Cuba. He died in New Zealand, as administrator of an important estate in the Fiji Islands. See “Good Prices,” The Porto Rico Horticultural News, 2, no. 5 (May, 1909), p. 9.
30 Nolan Parrenin, interview with author, Yauco, Puerto Rico, 2 June 1984. Nolan Parrenin, the son of Hyppolyte Parrenin, who came in the early 1900s, said that Greif was “more of a railroad man than a sugar man.”
31 Edson, Sugar, p. 94.
32 Edson, Sugar, p. 94.
house to a 3,600-ton house. It acquired a nine-roller mill and a Marshall crusher, with two powerful Corliss engines from Whitney Iron Works Co., of New Orleans. It also ordered a new vacuum pan, eight Bock crystallizers, two juice heaters, and a complete sulphur and lime station from another New Orleans company, John H. Murphy. 33

Amid the expansion, a trade war raged between U.S. and British manufacturers of sugar machinery. British-born Robert Graham, a mechanical engineer, based in Ponce, started an “acrimonious controversy.” 34 He wrote letters to the Louisiana Planter and Sugar Manufacturer affirming U.S. machinery superior, and wrote to the London-based International Sugar Journal as well saying that British machinery was better. The Louisiana journal characterized Graham as “a humorist of a somewhat grim type,” but John Dardis, chief engineer at Guanica Centrale, claimed victory for U.S. machinery:

Right now the two big American factories here in Porto Rico are grinding the cane from over fifty places with English mills on them, as the owners prefer selling their cane to grinding it. It took American push and capital to put up a factory to get sugar out of the cane. 35

In 1904, SPRSCO/NJ had about 11 miles of railroad, connected with the ARC’s road to Ponce. It had three Baldwin locomotives, each weighing about 40 tons, with wagons. They transported canes to the mills in cars carrying about 10 tons each. The system had no problems hauling trains weighing about 300 tons. The ARC, a French-owned public service company, transported cane from other districts to Santa Rita station,

33 Some 15 to 20 sugar machinery manufacturers competed in the bidding for these contracts. It was noted that “New Orleans is now a notable manufacturing center for all apparatus required in sugar factories.” “The Enlargement of the Guanica Centrale,” LPSM, 34, no. 14 (8 April 1905), p. 216.

34 Graham rented a machine and foundry shop in Ponce in 1879 and later acquired it. It was described as “one of the best in the island.” Atiles Garcia, “Taller de herreria y fundición de Roberto Graham,” Kaleidoscope, vol. 1, p. 185.

where it was picked up by SPRSCO/NJ’s rolling stock and hauled 10 kilometers to Guanica Centrale in Ensenada.

SPRSCO/NJ tried to control land suitable for cane cultivation both by purchase and rental. In the Guánica area, it sought to buy, as with Hacienda María Antonia, of the rich landowning family Ramírez de Arellano of San Germán, for which it paid $115,000. Also from the Ramírez de Arellano, it rented Hacienda Igualdad, with an area of 844 acres (870 cuerdas), at an annual rental of $9,000 for 10 years and about 730 acres in Cabo Rojo for seven years, at an annual charge of $4,000. Another lease was for Hacienda Barrancas in Ponce, rented for five years, at an annual charge of $7,960. Agents, particularly Theodore Duckwitz Pavenstedt, usually conducted the purchase and lease transactions. In all, Guanica Centrale looked for lands spanning a distance of about 90 miles, eastward to Mayagüez and westward to Ponce.

When SPRSCO/NJ began its expansion, it faced little competition. In 1899, only two raw sugar factories were found west of Guánica toward Mayagüez, one in Mayagüez itself and the other in Añasco. There were seven steam mills in Lajas, eight in Yauco, three in Sabana Grande, 14 in Cabo Rojo, and seven in Mayagüez. By 1910, about 25 old fashioned oxen and steam-driven mills remained in operation, more than half in San Germán, with a combined production of nearly 1,700 tons, chiefly of muscavado sugar, destined primarily for local consumption. In 1904, José Ferreras Pagán noted that hurricane San Ciriaco badly damaged Central

36 The machinery of a steam mill is still found in this property of 1,260 acres. “Escritura sobre compraventa número 96, otorgada por Don José Antonio Quintín Gustavo Ramírez y Ramírez, como apoderado de su esposa Doña Gumersinda Rodríguez y Díaz, a favor de la Sociedad Anónima ‘The Ensenada Estates Incorporated’, en el barrio de Candelaria, municipio de Lajas, a 16 de junio de 1909 ante el notario F. Manuel Toro,” CCG, AACUPR.

37 Leases usually had a number of additional years at option of the leasee, and the leasing company paid the land taxes. See “Translation: Simple Copy of the Lease Contract, Sale of Cattles and Contract for Grinding Canes, Hacienda Isabelita, Entered by José Quintín Ramírez y Ramírez & Others, to the ‘Bernal Estate’ and ‘Guanica Centrale’, Before Notary Don Benito Forés Morazo, April 30th, 1904,” and “Translation: Assignment of Lease no. 27,” CCG, AACUPR.

Pagán in Añasco and Central Altagracia in Mayagüez. By 1909, local capital had built two new sugar factories mainly in or near Mayagüez, but both were small. Central Rochelaíse had a capacity for 2,000 tons per day and Central Eureka, 2,250 tons per day.

SPRSCO/NJ and the ARC worked closely in the expansion of a cane transport network. In July 1902, Guanica Centrale agreed to give the ARC permanent rights of way through some of its properties to build a railway from Yauco to Mayagüez. It also agreed to transport a minimum of 30,000 tons of cane from 1903 to 1907, with variable rates depending on loading sites.39 By 1903, SPRSCO/NJ was already carrying cane from Lajas and San Germán to Santa Rita station. By mid-1909, the ARC opened the Lajas-Cabo Rojo-Boquerón line to passenger and freight traffic, and it inaugurated a Sabana Grande branch line.40 Two years later, it completed the Ponce to Mayagüez line. In all places, the results were the same: "Sugar lands along this road have doubled, tripled, or quadrupled in value during the last year, and thousands more acres of virgin soil will be put to cane next year."41

As SPRSCO/NJ extended its reach westward, it arranged for ARC to build feeder lines. Such was the case of the Cabo Rojo spur, which the ARC agreed to build in 1905 from its main line starting at a point near Hacienda Filial Amor, between San Germán and Hormigueros, and running toward Cabo Rojo for a distance of about four kilometers.42 Guanica Centrale donated all lands needed for the right of way and switches. It also guaranteed that they would transport 25,000 tons of cane annually over the feeder line to Santa Rita station for 10 years.

42 In 1909, Guanica Centrale signed a similar accord with the ARC to build a line from one end of its Boquerón line to Cabo Rojo for a distance of 18-20 kilometers. It guaranteed that a minimum 190,000 tons of cane per year would be transported on the route for 10 years. See "Agreement between the American Railroad Company and Guanica Centrale, 21 December 1906," CCG, AACUPR.
By 1910, Cabo Rojo was the scene of keen competition for colonos’ cane. There were five centrales near the region, “all long in machinery and all short of cane.” As a result, they were paying the colonos up to 6 percent of the gross weight of the cane, instead of the 5 percent the year before. Even so, Guanica Centrale strengthened its position through a provision in its 1905 accord with ARC, through which the railroad company agrees that it will never accept during the life of this contract, for transportation or transport sugar canes for any other party or parties than the Guanica Centrale, or planters who desire to ship canes to the Guanica Centrale, except with the consent of the Guanica Centrale.

Competition for land east of Ensenada to Ponce was inconsequential, however. There was only one raw sugar factory in that 40-mile stretch. Trujillo, Mercado & Co.’s Central Rufina, in Guayanilla, was transformed from a muscavado factory (fábrica de mascabado) to a central in 1901. Yauco had eight steam mills, Guayanilla six, Peñuelas three. Three important haciendas—Buenavista in Peñuelas, Dolores in Tallaboa, and Los Indios and Mercedes in Guayanilla, with a total of 8,643 acres (8,910 cuerdas) and about 2,890 acres (2,980 cuerdas) planted in cane—left their old-fashioned machinery idle and instead sent their canes by railroad to Guanica Centrale. In 1902, SPRSCO/NJ was milling “the greater part of the canes in the railway line from Yauco to Ponce.” In 1910, two

44 “Agreement between the American Railroad Company and the Guanica Centrale concerning the Cabo Rojo Spur, 15 January 1905,” CCG, AACUPR.
46 Coll y Toste, Reseña, pp. 149, 260, 353.
48 Ferreras Pagán, Biografía, vol. 2, Riqueza, p. 79.
oxen-driven mills, with the infinitesimal production for local consumption of 8.5 tons, were still functioning in Guayanilla; one steam mill in Añasco ground 12.50 tons. In 1909, a high yield year, Central Rufina's production totaled only 3,765 tons and was ranked 20th in a list of the 43 raw sugar factories milling that year. Guanica Centrale headed the list with 43,400 tons.49

In Ponce itself, the market was more competitive. In 1899, Coll y Toste counted six centrales and 18 ingenios, but in 1902 Ferreras Pagán could only collect information on three centrales: Fortuna, Reparada and Restaurada.50 Three raw sugar factories remained in 1909. The largest was Central Fortuna, property of the French-owned Compagnie des Sucreries de Porto Rico and ranked 6th, with a production of 10,000 tons. Next followed Central Mercedita, of Sucesión Serrallés, ranked 10th, with 7,500 tons, and Central Constancia, of Saurí & Subirá, ranked 27th, with 2,500 tons.51

Competition became even stiffer moving toward southeastern Puerto Rico, the territory of Central Aguirre, owned by De Ford & Co. For instance, in 1903, Guanica Centrale needed consent from De Ford & Co. for American Railroad to build a 2.5 kilometer line to Hacienda Restaurada. De Ford & Co. had the original right to build a line from Ponce to Guayama.52

SPRSCO/NJ’s control of land, so essential to develop Guanica Centrale, was managed with care because of the 500-acres limit on land ownership contained in the Foraker Act. To get past that provision, the other four corporations incorporated in New Jersey in 1901 were each

50 No information was obtained on Mercedita, Coto Laurel, Ponceña and Destierro, all owned by the Sucesión Serrallés, and on Constancia, owned by Saurí & Subirá. See Ferreras Pagán, Biografía, vol. 2, Riqueza, p. 76.
52 Guanica Centrale guaranteed the ARC it would ship no less than 36,000 tons of cane over the next 3 years, at a rate of 50 cents per ton from the loading place to Santa Rita. H. C. Fritze, president, Guanica Centrale, to American Railroad Company of Porto Rico, 24 October 1903, CCG, AACUPR.
“separate and distinct,” with functions “entirely different.”\textsuperscript{53} It sought to divide purchase and leasing of land, and cane cultivation and sugar manufacture among the four companies. Encenada Estates was organized to hold lands and franchises in Puerto Rico. Guanica Centrale took title to the factory site and sugar town in Ensenada and 4,431 acres of surrounding lands scrub and pasture in order to engage in cultivation and manufacturing of sugar. It also held colonas’ contracts for grinding cane grown on about 500 acres near Guánica Bay.\textsuperscript{54} Santa Rita Estate purchased Santa Rita, comprising 2,080 acres, from Mariani Brothers.\textsuperscript{55} It also leased other lands in the district.\textsuperscript{56} Bernal Estate was organized solely to engage in renting and improving lands in Puerto Rico. It held leases on several properties in Guánica, Ponce, Yauco and San Germán. Bernal Estate bore the installation cost of pumping stations and construction of worker cottages on leased lands.

In 1906, Encenada Estate Inc., organized in Connecticut, was developed to engage solely in purchasing, holding and improving lands on the island.\textsuperscript{57} All the lands owned by Santa Rita Estate were transferred to Encenada Estate Inc., while all the leased lands were assigned to Bernal Estate. The new corporation took over all the property of the former

\textsuperscript{53} “Memorandum, 19 January 1908,” CCG, AACUPR. See also “Memoranda concerning the Transfer of Properties between the South Porto Rico Sugar Company and its Affiliates, 21 April 1938,” CCG, AACUPR.

\textsuperscript{54} The property consisted of the factory, buildings, dwelling houses, hotels, hospitals, police station, cottages, mill machinery, electric plant, wharf, tanks, shops, lime kiln, bridges, signal towers and sidings. Also included were 13 miles of main line railroad and yard tracks.

\textsuperscript{55} Santa Desideria was purchased for $125,000. Steam mills operated at one time in Santa Desideria and Fraternidad, so Guanica Centrale sold to M. G. Strayer all scrap iron and scrap steel on both haciendas at $2.00 per long ton of 2,240 pounds. Scrap brass or copper was sold at higher rates. See “Contract for Sale of Scrap, 30 June 1916,” CCG, AACUPR.

\textsuperscript{56} Among those leased was the 1,500-acre Hacienda Fraternidad, of Pedro S. Vivoni, for a 10-year term for the yearly sum of $9,000. The contract, dated 25 March 1901, was signed originally with Fritze, Lundt & Co. See H. C. Fritze, Fritze, Lundt & Co. to Santa Rita Estate, 31 May 1901, CCG, AACUPR.

\textsuperscript{57} Connecticut revised its corporation laws in 1901 and 1903, making them similar to New Jersey. See Russell Carpenter Larcom, \textit{The Delaware Corporation} (Baltimore: The Johns Hopkins Press, 1937), pp. 69, 93.
Encenada Estate, with a total assessed value of $1.108 million. Santa Rita Estate and Encenada Estate then were dissolved. Meanwhile, Guanica Centrale was kept out of real estate transactions, but it operated the lands of Encenada Estate Inc. and Bernal Estate per agreement:

The Guanica Centrale does not own or lease any real property and no real property should be purchased or leased on its name; nor should it appear or act in connection with any purchase made by the 'Encenada Estate Incorporated' or with any lease made by the 'Bernal Estate'.

The SPRSCO/NJ’s land expansion campaign included scientific soil testing. As early as 1901, Guanica Centrale contracted Dr. W. C. Stubbs at Audubon Park, Louisiana State University, to conduct soil tests of several lots of Haciendas Ramirez and Pietri to help deciding their acquisition. Dr. Stubbs said:

Lot no. 1 was all, more or less, not adaptable in chemical ingredients to cane culture, and I cannot advise their purchase, unless...proximity or some other condition justify their purchase. Lot no. 2 is much better, and would probably answer your purpose for sugar planting.

It also went hand in hand with an increase of its grinding capacity at Guanica Centrale. In late 1909, John Redman Bovell, of Barbados, famous in the sugar world for his pioneering work with cane seedlings, visited Guanica Centrale and reported to the Barbados Agricultural Society that the mill house of Guanica Centrale consisted of four mills. He said two were Fulton Ironworks “Cora” 78 by 34 inches, a 12-roller mill, with crushers; a third was an 84 by 34 inches, 12-roller mill, with crushers; the fourth, 72 inch by 37 inch six-roller with crushers. Bovell said the fourth was used only when the factory received more cane than the other three

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58 “Memorandum, 29 January 1908,” CCG, AACUPR.
59 Dr. W. C. Stubbs, Director, Audubon Park, to Guanica Centrale, 44 Wall Street, 31 October 1901, TDBjrPP, LSUA.
mills could grind.\textsuperscript{60} That same year, Guanica Centrale was to add a three-roller mill to one of its present 12-roller mills. That would make a 15-roller mill, with crushers, or 17 rollers in all; a practice followed in Hawaii, but that was "a new thing in this part of the globe."\textsuperscript{61} SPRSCO/NJ's reputation for quality was well known: "...for no factory in the world has a more discriminating and exacting management, or a more efficient and faultless chemical and mechanical supervision, than this gigantic sugar plant."\textsuperscript{62}

Bovell reported that SPRSCO/NJ was to receive cane from about 11,000 acres of its own or leased estates. In addition, it was to grind canes from colonos, whom they gave credits from 5.5 to 6 percent of the weight of the sugar extracted, depending on quality, and paid on its value in the New York market at milling time. He said the land under SPRSCO/NJ's control was usually prepared either by steam plows or bullock-drawn plows and that most estates had "an admirable system of irrigation."\textsuperscript{63} Bovell also noted pumping stations operated by gasoline or electricity. Electric stations were found closer to Ensenada and obtained power generated by the factory sent by cable to various pumping units.

In 1909, SPRSCO/NJ prepared another expansion at Guanica Centrale. Its stockholders authorized an increase in capital stock to $8 million, half in common stock and half in preferred stock.\textsuperscript{64} Already the complex was the object of admiration from sugar circles outside the island:

...it is undoubtedly looked at from a purely artistic point of view, the most picturesque Estate in the island, and in truth it will be hard to find in any part of the world a

\textsuperscript{60} John R. Bovell, "Report on a Visit to the Guanica Central Sugar Factory, Porto Rico," \textit{The West Indian Bulletin} (Barbados, organ of the Imperial Department of Agriculture of the West Indies), 11 (1911), pp. 56-59.
\textsuperscript{61} "New York," \textit{LPSM}, 42, no. 11 (3 April 1909), p. 215. The 15-roller mill was an experiment done during the 1908 season, in which, "the megass from one of the twelve-roller mills was macerated and passed through the last three rollers of the adjoining mill and an extra 2 percent on the weight of the cane juice was obtained." Bovell, "Report...," p. 57.
\textsuperscript{63} Unless there was sufficient rainfall, it was attempted to supply each acre of cane with 50,000 gallons of water every 10 days. Bovell, "Report...," p. 59.
\textsuperscript{64} South Porto Rico..., \textit{50th Anniversary Report}, p. 4.
more striking view than that presented by this Colossus of modern machinery as seen from the sea. Situated at the very edge of the sea shore in a clump of green wood backing, with the semicircle of the mountain range closing in snugly behind it, the seven tall chimneys pushing their slender black bodies against the blue of the horizon, the three big story sheet iron edifice towering behind, mammoth like—the only greeting Guanica ever could get from a lover of the beautiful and the bizarre in Nature at first sight from the sea would be a long drawn ‘O-h-h-h’ of surprise and pleasure.  

Yet a feeling of alarm was growing in Puerto Rico, as Guanica Centrale acquired European-owned Central Fortuna in Ponce and leased Puerto Rican-owned Central Pagán in Añasco, a small town north of Mayagüez.

The purchase of Central Fortuna in July 1909 was the “biggest sugar estate transaction that Porto Rico has ever witnessed... This transfer adds some 1,100 tons of cane per day to the already tremendous capacity of this colossal estate.”66 Van Allen Harris, a civil engineer graduated from Princeton University, with 16 years experience, examined the actual physical condition of the assets.67 SPRSCO/NJ paid $1.75 million for control of Central Fortuna, its sugar properties, and all the contracts, engagements and leases of the Compagnie des Sucrières de Porto Rico.68 It set

65 “Porto Rico’s Centrals and Sugar Industry,” LPSM, 43, no. 17 (23 October 1909), p. 268. The accuracy of this description was disputed because “evidently the writer has never been to Guanica. ...We have visited Guanica many times and never saw the ‘clump of Greenwood backing', never viewed the nine (there were actually ten, one is hid behind the tall chimney of the power house in the picture) chimneys against the blue of the horizon. The horizon is pretty hard to see at Guanica, except thru the harbour entrance looking out to sea.” “A Few Inaccuracies,” The Porto Rico Horticultural News, 2, no. 11 (November, 1909), p. 14.

66 “Porto Rico,” LPSM, 43, no. 9 (28 August 1909), p. 135. Fortuna was originally owned by Marich & Bülbe and in 1877 it passed to J. Gallart. In 1904, it was the property of Sucesión J. Gallart and it possessed 1,261 acres, of which 776 acres were under sugar cane cultivation. See Ferreras Pagán, Biografía, vol. 2, Riqueza, p. 84.

67 For the crop year 1907-08, Van Allen Harris appears as vice-chairman of Juncos Central Co., of which Antonio Roig was president. See “Annual Report: Juncos Central Co.,” CFFL, Exp, AGPR.

up two separate corporate identities for Central Fortuna -Central Fortuna Inc. and Fortuna Estates- both organized in Connecticut.69

To finance the purchase, improvements and working capital, SPRSCO/NJ issued bonds for $450,000 and issued 13,655 shares of preferred stock and 17,710 shares of common stock. A special meeting of stock holders held in June authorized an increase of capital stock to $8 million.70

![Voucher of Central Pagan, redeemable only in the company store, 1910](Personal Files, Humberto Garcia Muniz)

The other important acquisition was Central Pagan, belonging to Sucesores de Bianchi. Reports in the Louisiana Planter and Sugar Manufacturer reflect the alarm in sugar circles in Puerto Rico of “gossip in the street that they have plans on foot for acquiring all the sugar properties

69 “Certificate of Incorporation of Central Fortuna (Incorporated), 1 July 1909,” and Certificate of Incorporation of Fortuna Estates, 1 July 1909,” CCG, AACUPR.
70 South Porto Rico Sugar Company and Subsidiary Companies, Statement, October 1, 1909, p. 1.
on the south of the island. The report now has it that negotiations are on with Signors Bianchi, the owners of Central Pagán, for the purchase of the property."71

Juan Bianchi Rosafa was a close friend of Manuel Rionda, of Czarnikow-Rionda Co.72 Bianchi did not take an important business decision without first consulting with Rionda, and usually, he heeded Rionda's advice. He specifically asked for advice on SPRSCO/NJ's bid for a 20-year lease on Central Pagán, the complex spanning more than 2,500 acres and including the buildings and machinery of the raw sugar factory, 50 rural fincas and haciendas, a steam plow, and the railroad between the municipality of Añasco and the Altosano ward in the municipality of San Sebastián.73 Also included were Haciendas Dolores, Elisa, Altagracia and Especuladora, belonging to Juan and Francisco Bianchi.74

By 1910, SPRSCO/NJ's cane lands had reached their limit in southwest Puerto Rico. (See Map 3.2) The purchase of Central Fortuna and the leasing of Central Pagán caused some concern in some sectors in Puerto Rico. Rumors circulated that SPRSCO/NJ was acquiring not only Central Cortada but also the ARC.

72 The two maintained a regular correspondence on such varied topics as Rionda's reports on Bianchi's son's progress in U.S. private boarding or military schools, to business matters, mainly sugar. For example, Rionda was reluctant to do business with the Mayagüez-based Altagracia Centrale Inc. fearing it could harm Bianchi's interests. Bianchi replied, "we appreciate this deference, which is an unequivocal proof of our friendship." Juan Bianchi to Manuel Rionda, 4 August 1910, BBC.
73 The mills of Central Pagán were fabricated by the British company Fawcett, Preston & Co. Greif reported that "it would seem that the different haciendas as a whole have been made up of small tracts which evidently were bought from time to time and afterward put together and each is constituted from these." [Adrian Greif], V.P. & G.M., to Frank Dillingham, 7 February 1910, CCG, AACUPR. For a description of Central Pagán in early 1900s, see Ferreras Pagán, Biografía, vol. 1, Riqueza, p. 101.
74 An inventory indicated that Central Pagán had 15,526 kilometers of 60 cm. portable track and 3,018 of 75 cm. portable track. Of its 280 portable cars, 193 were of Le Couville type. P. M. Todd, "Inventory of Live and Dead Stock, Pagan Division, Guanica Centrale, Taken Sept.1, 1910," CCG, AACUPR.
Map 3.2 Area of Cane Lands Influenced by U.S. Sugar Companies, 27 June 1929


Note: In 1910, SPRSCO/NJ had the same spread as shown in this map.

To counter any negative publicity, Greif started the patronage of several worthy, popular projects. First, he built a pavilion and grandstand on the Ponce athletic grounds. It was said that Greif "seems to have taken the Ponce Athletic team under his wing." A few weeks later, he presented the Ponce High School with $2,000. Then, he donated $500 worth of fittings, furniture and instruments for the operating room of the Yauco Hospital. It was noticed that "the donations are always made in the name of Mr. Greif, but whether it is philanthropy or corporation charity, it still brings Guanica to the front." Even so, a year later, in 1911, sugar

magnate Eduardo Georgetti wrote to Rionda that he was forced to give Central Corsica more money to avert that “Guanica Centrale absorbs them. I tell you this so that with your clear understanding and business eye, you will understand our necessity for credit.”

Guanica Centrale amazed knowledgeable sugar men both for its sheer size and grinding capacity, as well as its technical capacity and skills. Barbadian sugar scientist John Redman Bovell was very impressed by its engineering shop, which manufactured and repaired machinery. He said:

Some idea of the extent of the operations of this shop can be gauged from the fact that one of the large rollers which have just been cast was to be turned up: so it can be understood that if they have appliances for casting a roller 78 by 34 inches the shop is capable of doing almost anything required.

Guanica Centrale used a special mixture for casting its mills by which its rolls came out coarse-grained, did not glaze or choke, and gave excellent bagasse.

By 1912, reports abounded that Guanica Centrale was putting in “new machinery and making important betterments, but the management refuses to give any information.” Still, news filtered out that Guanica Centrale was using and installing part of the machinery from Fortuna, said to be in excellent condition, Delbert housings, as well as a 400,000-gallon Kestner climbing film evaporator. Word also spread in 1912 that

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77 Eduardo Georgetti to Manuel Rionda, 2 June 1911, BBC.
Guanica Centrale was ordering 50 30-tons, steel-under-frame cane cars, purchased another separator from Deming Apparatus Co.  

Guanica Centrale, Fortuna, and St. Jean at Caguas were the only raw sugar factories in 1912 using fuel oil. Oil storage and distributing facilities for the wider Puerto Rico market were still being built. Indeed, in 1911, the Trinidad Lake Petroleum Co. had agreed to sell Guanica Centrale and Central Fortuna if needed all its oil requirements for a three-year period.

SPRSCO/NJ found the factory of Central Fortuna in “a sad condition” and in 1910, it halted operations there. All cane was sent for processing to Guanica Centrale, a haul of 20 miles, which could easily handle the extra load because of its large capacity. Greif decided to “reconstruct Fortuna.” Word leaked that Fortuna was in the market for a considerable amount of equipment in the line of electric motors and dynamos, gas engines and gas producers. Soon, SPRSCO/NJ awarded contracts for six large crystallizers to John Turl’s Sons, of Newburgh, New

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83 Wood and coal were said to be expensive, even though some coal was being imported from the Dominican Republic. The quantity of firewood had greatly diminished due to “the destruction of the remaining trees in the hills...to supply the towns with charcoal for cooking purposes.” Ponce de León, “Porto Rico,” LPSM, 48, no. 23 (8 June 1912), p. 440. See also Ponce de León, “Porto Rico,” LPSM, 48, no. 25 (22 June 1912), p. 440.
84 Guanica Centrale was to pay one dollar per barrel of 42 U.S. standard gallons; the Trinidad Lake Petroleum Co. was required to deliver no more than 25,000 gallons per month. See “Agreement between the Trinidad Lake Company, Limited and the Guanica Centrale, 15 June 1911,” CCG, AACUPR.
85 Edson, Sugar, p. 103. In 1910, to make matters worse, a cyclone flooded Hacienda Fortuna, drowning most of its livestock, and Central Fortuna suffered severely, with water attaining a depth of over a meter. All small bridges around Fortuna were washed away and also a good part of its railroad line. “Porto Rico,” LPSM, 43, no. 23 (4 December 1909), p. 363.
86 Edson, Sugar, p. 103. Edward H. Thomas carried out the reconstruction of Fortuna, probably when he was employed by the West India Management and Consultation Co. See “Porto Rico,” LPSM, 43, no. 23 (4 December 1909), p. 363, and “The J. G. White Management Corporation,” LPSM, 58, no. 15 (14 April 1917), p. 236.
York. It contracted Fulton Iron Works to build a six-roller mill to be installed in connection with the nine-roller mill and crusher present in Fortuna, creating a 15-roller mill tandem, the second on the island after Guanica Centrale. Wibray J. Thompson, Fortuna superintendent, wrote to the Sugar Planter’s Association of Louisiana that the “factory which is now rapidly approaching completion here is a wonder of excellence. I wish every progressive Louisiana planter could see it.” In 1912, with only a dozen factories equipped with 12-roller mills, SPRSCO/NJ’s Guanica Centrale and Fortuna were the only 15-roller mills in Puerto Rico.

As could be expected, the increase in milling capacity affected land policy at Fortuna; the “expansion of the factory” led to the “expansion of the lands and of contracts with Colonos.” Irrigation was provided with electric power from a central plant equipped with three 150 horsepower gas engines. For the crop year 1911-12, Central Fortuna produced about 9,800 tons of “96 degree sugar”; the next year, the harvest increased to nearly 13,500 tons, but in 1913-14, it dropped to roughly 10,000 tons.

SPRSCO/NJ’s initial plans for Fortuna went further than mere production of raw sugar for export to the United States; it sought profitably to produce white sugar of the highest possible quality for direct consumption. To study the refining process, SPRSCO/NJ’s two top officials

89 Wibray J. Thompson, Central Fortuna, to Reginald Sykers, Secretary, Sugar Planters’ Association, 16 October 1910, F1 17, LPAP, 1908-1911, 1917, n.d.
in Puerto Rico, general manager Adrian J. Greif and fabrication superintendent French T. Maxwell traveled to Adeline, Reserve and other sugar factories in Louisiana to witness the manufacture of white sugar direct from cane juice.\(^93\) SPRSCO/NJ selected the dry-lime process of clarification used by Moriz Weinrich for their refining process at Fortuna.\(^94\) The company installed an experiment plant under the supervision of Maxwell. Experiments were conducted by A. L. Mathews, a sugar beet expert; Harry A. Nadler, an engineer; and C. C. Capdevielle, a chemist. The company arranged with a well-known sugar dealer from New Orleans to distribute Fortuna’s refined sugars in the Mississippi Valley. In June 1913, Maxwell accompanied by Nadler and Mathews, of Guanica Centrale; A. C. Paton, of Fajardo Sugar Co.; and Guilford L. Spencer, of Cuban American Sugar Co. visited Java and Formosa to look at additional refineries.\(^95\) Then, however, Greif ordered the experiment abandoned.\(^96\) The *Louisiana Planter and Sugar Manufacturer*, at a loss over the decision, questioned whether the plan had been “simply a bluff with which to deceive and discourage the Porto Rican, and Cuban planters who were contemplating going into white-sugar production.”

\(^{93}\) “Central Fortuna to Make White Sugar,” *LPSM*, 49, no. 21 (23 November 1912), p. 342.


\(^{95}\) Guilford L. Spencer, Noël Deerr (of England) and H. C. Prinsen-Geerligs (of Holland) were considered the triumvirate that dominated sugar cane technology during the first quarter of the century. The three were originally chemists but turned to technology and management. Spencer’s *Cane Sugar Handbook* first appeared in 1889 and became standard reference in the industry, with many subsequent editions, even in Spanish. See “White Sugar Students’ Returning,” *LPSM*, 51, no. 20 (15 November 1913), p. 331; Charles E. Coates, “Guilford Lawson Spencer,” *LPSM*, 74, no. 14 (4 April 1925), p. 267; and George P. Meade, “The Proof Stick,” *The Sugar Journal*, December, 1960, p. 9.

Noting that the Sugar Trust was “largely interested” in SPRSCO/NJ, the journal asked

why they should desire particularly to engage in the manu-
ufacture of white sugars when their enormous establishments
in the United States could convert their 96 test sugars into
pure white granulated for half a cent a pound, including
compensation for the difference in a weight and the cost of
the cooperage, labor and material involved in the process of
manufacture.  

The acquisition of the Fortuna factory turned out to be a disaster;
it ended with the closure of the factory within four years’ time and the
transport of its cane to Guanica Centrale. First, the remodeling failed,
it produced “an ununified and unbalanced factory” because “no central
plan” was ever prepared. Second, the increase in land for cane cultivation
failed to boost production. “Greif’s eagerness to expand operations” led
to “a basic error in the agricultural policy pursued by local management”
consisting “in the over planting of cane beyond of what could be served by
expected rainfall and irrigation water.” Finally, the plans for the manu-
facture of white sugar from cane juice collapsed.

In 1914, SPRSCO/NJ decided to dismantle Fortuna and started
to ship part of the machinery to La Romana, a small town in eastern
Dominican Republic, where it planned to build a factory at a more con-
vienent time. Conditions in the Dominican Republic were “so unsettled
that...Guanica has not been able to extend its plantings in that country
sufficiently to warrant the erection of mill there.” Fortuna cane was to
be shipped to Guanica Centrale and Louisiana W. C. Hanson was
appointed a cultivation superintendent of the area. E. L. Hess was

97 “Some Sugar Experts on Tour,” LPSM, 50, no. 26 (28 June 1913), pp. 405-406.
98 Edson, Sugar, pp. 103, 105. Edson, manager of Fortuna at that time, gives
a fascinating account of the situation, which forced him to resign from Central
Fortuna Inc. after refusing to approve Greif’s proposal to rent an adjacent
property in order to grind more cane.
100 Hanson had been manager of Peytavin Plantation, Donaldsonville,
Louisiana, for many years. “Louisiana Sugar News,” LPSM, 53, no. 11 (12
contracted for cutting canes in the Fortuna district at rates per ton ranging from 66 cents to $1.00, with an additional 10 cents per ton if the cane of some haciendas was transferred to Guanica Centrale.\textsuperscript{101}

SPRSCO/NJ, in competition with the United Fruit Co., supported another experiment that, if successful, would have been an important breakthrough in the sugar cane industry. In mid-1912, Guanica Centrale was assigned a patent secured by Louis Gathmann for a new method of producing sugar from cane. The new method involved extracting half the juice from cane by crushers or shredders, and then pressing the cane to extract the remaining juice during the off-season. The juice would be converted to raw sugar through the usual methods. The bagasse would be preserved chiefly through drying. The method aimed to expand operations at the factory throughout the year.

As usual, SPRSCO/NJ refused comment, but John Dymond, editor of the \textit{Louisiana Planter and Sugar Manufacturer}, noted that the process was not new. Sugar baling had been going on for several years at Central Preston in Cuba. The only difference, the journal noted, was “at Preston, all the juice was left in the cane and Mr. Gathmann leaves but half the juice in the cane.”\textsuperscript{102} The journal presumed that if “the great Guanica Centrale” had acquired control of the patent “some novelty on it maybe

\textsuperscript{101} An additional 10 cents was to be computed in the rates per ton of some haciendas. See “Memorandum of Contracts between E. L. Hess and Central Fortuna for Cutting Canes in the Fortuna District, Dated May 20th, 1914, and Covering Crops 1914-15, 15-16, 16-17,” CCG, AACUPR.

safely presumed."  

Nothing more was heard about the new method either from Guanica Centrale or United Fruit's Central Preston. Presumably both failed at breaking an important bottleneck of cane sugar-making.

Yet SPRSCO/NJ's efforts were not limited to improving the industrial part of sugar production. The company also sought to better agricultural output. Unfortunately, no company records have survived about the cultivation practices of Guanica Centrale and its subsidiaries in its own or colonos' lands. As discussed in greater detail in Chapter 4, Guanica Centrale was the first sugar company in Puerto Rico to establish its own experimental stations.

Proper tillage is a necessary step to prepare land for cultivation. From the start, Guanica Centrale used steam plows. It tried a traction plow, but it did not prove practical because of the open drainage system. By 1912, the use of steam plows was becoming more generalized in the island. Most plantations on the south coast used steam plows, which reached 12 to 15 inches. The plows prepared the land well for subsequent irrigation "by furrowing the loam to depths untouched by the primitive tools previously used and bringing to the roots what was practically virgin soil."  

The only attempt to mechanize cane cultivation was the use of plows. No account has been found that SPRSCO/NJ tried to introduce the row cultivator, in common use in Louisiana by 1905. As discussed in Chapter 9, the oversupply of labor probably precluded further technical innovations in the field.

104 It was noted that a planter would invest the required $20-25,000 for steam plowing if he had sufficient land in cultivation to warrant it and credit to purchase them as the land would be best prepared and less of it reserved for pasture of the oxen. Ponce de León, "Porto Rico," LPSM, 49, no. 3 (21 July 1912), p. 45.
106 Louis Ferleger, "Farm Mechanization in the Southern Sugar Sector after the Civil War," Louisiana History 23 (Winter, 1982), pp. 21-34.
Also, fertilization was probably a routine procedure at Guanica Centrale, since the subject was common in literature in the latter half of the nineteenth century and the topic of research elsewhere in experimental stations. The only account found is a report from Henry Bourne to Cultivation Superintendent P. M. Todd in late 1913 about the application of cyanamid in various haciendas. The report found that the chemical scorched the cane leaves and "a watch will be kept to see if this fertilizer is harmful to the roots and growing shoots of the cane."

Apart from sugar matters, SPRSCO/NJ apparently had only one other business: the selling of milk. On 17 September 1914, Guánica Centrale agreed to sell Emilio Fagot all the cow milk produced at its Rio Cañas farm in Juana Díaz. At a price of 6 cents per American liter, Guanica Centrale was to deliver in Ponce a minimum of 80 liters and a maximum not to exceed 250 liters.

The 1912-13 crop year was a tough one for the colonos of Guanica Centrale, partly because of a severe drought that cut the crop season short and partly because of the crisis caused by the free sugar issue. Greif described the crop year as "the hardest experienced in this country ever since I have been here." He linked problems to prosperity in previous years that allowed every "responsible person" to borrow money. Also, Greif said:

worst of all, the low price of sugar which left nearly everybody in the country below their calculation of the money they were going to earn - it being a fact that the average value of a ton of cane to the colonos for the crop 1912-13 was about $1.37-1/2 less than 1911-12. The larger the colono, the worse the blow.

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108 H. Bourne to P. M. Todd, Manager of Cultivation, 5 December 1913, TDBJrPP, LSUA.
109 "Agreement between Guanica Centrale and Emilio Fagot, 17 September 1914," CCG, AACUPR.
110 A. J. Greif, 'Colonos Deficits,' to F. A. Dillingham, president, 26 July 1913, CCG, AACUPR. In cases were money was loaned, a mortgage on all canes, cattle, carts and other implements was taken.
Greif detailed the predicament of individual colonos with the largest deficits. Several belonged to the largest landowner families in their towns, as for example, Lucas P. Valdivieso of Ponce, the Carbonnels and Colbergs of Cabo Rojo, the Quiñones of San Germán, and the Ramirez Arellano of Mayagüez. He said some spent the money lent for cultivation for other purposes. In particular, he said, wealthy Lucas P. Valdivieso had a truly exorbitant deficit equal to almost half the total deficit of $85,461.86 [itemized in Appendix 3.1] Valdivieso, the leading stockholder of the small Central Pellejas in Adjuntas, used part of his loan to buy land adjoining his haciendas in Peñuelas and in Ponce. The previous crop season Valdivieso had earned a profit of $68,000 from about 33,000 tons of cane shipped from the Haciendas Dolores, Buena Vista, Angola, and some rented properties in the Peñuelas district. Greif noted that a large part of Valdivieso’s deficit for the 1912-13 crop resulted from a drop in cane prices. Valdivieso was apparently unaware of the amount of the deficit because he “never closed up one year’s account and opened the other until the end of the crop -say June 30th.” Thus, he “did not know actually were he stood so far as any particular crop costing him, until the crop was harvested and he received his returns.” To make matters worse, Valdivieso’s private business was all entangled with his cultivation accounts for cane.

To remedy the problem, Greif introduced a new practice to monitor cultivation loans for colonos. It consisted of “some simple systems of bookkeeping [to] be pushed at this time...now that a number of them owed us unpaid debts and cannot resent it.” Greif reassured Dillingham that “notwithstanding the large deficit, the Management will feel satisfied that they are fully protected by the guarantees and securities.” Taking advantage of the crisis, Guanica Centrale imposed to colonos an accounting system that controlled their expenditures.

The production of Guanica Centrale from the 1902-03 crop season to the 1913-14 crop season was impressive. It doubled in 1906-07, its third season, and almost tripled by 1910. In about a decade, SPRSCO/NJ

111 A. J. Greif, ‘Colonos Deficits,’ to F. A. Dillingham, president, 26 July 1913, CCG, AACUPR.
boosted its production six fold.\textsuperscript{112} (See Chart 3.1) The company maintained a comfortable lead as the top producer in the island. Assets accumulated from $3.994 million in 1903 to $13.079 million in 1914. Yet the changes in sugar prices affected SPRSCO/NJ's surplus profits over the period. Profits tripled from $117,000 in 1908/09 to about $350,000 in 1911-12 and 1912-13. However, in line with low sugar prices, profits dipped in 1913-14 to their lowest amount for the decade, to about $293,000.\textsuperscript{113}

Graph 3.1

\textbf{Guanica Centrale's Production of Raw Sugar 96 Degrees}

\textbf{1902-1903 to 1925-1926}

Source: Comparative Crop Report, Guánica Factory, South Porto Rico Sugar Company of Puerto Rico, n. d., CCG., AACUPR.

The year 1914 was a turning point for SPRSCO/NJ in the Caribbean and the world sugar industry as a whole. At Guánica, Greif resigned in mid-July and was replaced by French T. Maxwell. Though the head office

\textsuperscript{112} These production figures include only cane planted in Puerto Rico and milled at Guánica Centrale. The Fortuna production and cane milled from the Dominican Republic at Guánica Centrale is not included.

\textsuperscript{113} South Porto Rico Sugar Company and Subsidiary Companies, Statements, September 30, 1914.
discharged Greif, Guanica Centrale’s colonos gathered at Ensenada and presented Greif with a handsome gold watch as a farewell gift and token of their appreciation.¹¹⁴

Greif’s command of the railroad business had made him an ideal candidate to lead SPRSCO/NJ’s expansion in southern Puerto Rico, but it can be speculated that the Fortuna fiasco and the drop in SPRSCO/NJ profits weakened his position as local head of Guanica Centrale. During his tenure, however, SPRSCO/NJ projected Guanica Centrale as the leading raw sugar factory in Puerto Rico, becoming, alongside Cuba’s Central Chaparre, one of the two world’s largest sugar factories in the early 1900s. SPRSCO/NJ secured access to cane supplies in an aggressive manner. First, it created a solid home base in the Guánica region, where it built a central factory, around which the Ensenada sugar town developed. Then, it expanded and solidified its control over cane lands from Mayagüez to Juana Díaz, laying out irrigation systems where necessary. SPRSCO/NJ transported cane to Guanica Centrale in its own private railway and in the public railway, and cane contracting served as the basis for the expansion of this transportation network. Fourth, it absorbed two important raw sugar factories, but the acquisition of their lands was the greater consequence. Finally, as discussed in Chapter 6, it grounded Dominican cane at Guanica Centrale, the first and only time in Caribbean history when cane from a sovereign state was shipped to a colonial jurisdiction for milling.¹¹⁵

Guanica Centrale was viewed with admiration by many in the sugar world outside Puerto Rico and with apprehension by many in the sugar sector in Puerto Rico. From the start, Guanica Centrale was the fulcrum of SPRSCO/NJ’s business in the Caribbean and the product of German capital based in the United States and in Puerto Rico. Expansion, both eastward and westward, faced least competition from raw sugar factories,

¹¹⁵ A new dock was built to provide room for the increased shipping. Used for disembarking cane from La Romana, it became known as the “Dominican dock” (muelle dominicano). “Porto Rico,” LPSM, 51, no. 14 (4 October 1913), p. 240.
and indeed, much of the lands were already under cane cultivation and its production could be readily railroaded to Guanica Centrale. In the trail of Guanica Centrale’s expansion, based on the most advanced technology, qualified managerial and technical personnel, and enterprising ownership, old ingenios were left to rust in their own obsolescence, with a product that had no market. At the start of 1910, SPRSCO/NJ’s dominion over sugar lands was imposing: “This company controls nearly all the sugar cane land between Santa Isabel, east of Ponce, to Mayagüez in the west coast.”

SPRSCO/NJ followed a successful expansive policy in field and factory in its formative years. Increasing production figures translated into rising profits, and the latter only falling because of the externally caused free-sugar crisis of 1913. The company suffered failures in their experiments in white sugar production and cane desiccation. Still, these experiments show an attempt at diversification into export products that required their basic raw material (cane for desiccation) or similar production processes (cane juice into white sugar). Very few sugar corporations in the Caribbean region showed this kind of innovative disposition. What combination of factors made SPRSCO/NJ an unusually successful, yet innovative company is the topic of our next chapter.

A unique component in SPRSCO/NJ's success was the unusual mix of three connections: German capital, Louisiana’s factory management and technical expertise, and Barbadian agricultural or biological technology and cultivation supervision. This chapter will discuss each connection and the relations among them.

Coming from late nineteenth century, the German capital connection consisted of groups in New York City and Puerto Rico. The Barbadian and Louisianan sugar industries were at opposite development levels in early twentieth century, yet their complementary strengths made SPRSCO/NJ a successful company during its first 14 years. SPRSCO/NJ served as a vehicle for the transfer of capital, management techniques with technical expertise, and biological technology to Puerto Rico and the Dominican Republic of previously unrelated forces.

According to SPRSCO/NJ's bylaws, a board of 10 directors managed the company's affairs. William Schall Jr. presided the board. Other members were John E. Berwind, Percy Chubb, William C. Cushman, Frank A. Dillingham, Henry C. Fritze, Rudolph Keppler, Edmund Pavenstedt

1 "By-Laws of the South Porto Rico Sugar Company,” CCG, AACUPR.
Jr., Charles M. Russell, and Julius A. Stursberg. All had their business operations in New York, except Russell, who came from Massillon, Ohio, and Fritze, a resident of Ponce, Puerto Rico. At least five board members—Schall Jr., Pavenstedt Jr., Keppler, Fritze and Stursberg—were of German extraction.

German risk capital, represented by Muller, Schall & Co. in New York City, and Fritze, Lundt & Co. in Ponce, was the key factor in the establishment of the SPRSCO/NJ. Muller, Schall & Co. took charge of underwriting the corporation, while Fritze, Lundt & Co. handled SPRSCO/NJ's initial land acquisitions and other affairs in Puerto Rico.

The origins of Muller, Schall & Co. go back to the mid-nineteenth century. In 1853, William Schall established a private banking and commission business in New York City, under the style of Schall & Co. Later, the style became Muller, Schall & Co., with William Schall Jr., the son of the original founder, as senior partner. His partners were Frederick Muller, son-in-law of Schall Sr.; Carl Muller, younger brother of Frederick; and Edmund Pavenstedt Jr., who joined in 1894. In 1891, at age of 33, Schall Jr. was admitted to the New York Stock Exchange.

Schall Jr. had strong ties with the German community in New York. In 1881, he joined the German Club (Deutscher Verein), an organization started in 1842 and formally chartered in 1874, which "limited its membership to Germans and those who speak German." Charles Unger, president of the German Club, recommended Schall Jr. for membership in the Stock Exchange. Schall Jr. was president and director of Consolidated Coal of Wyoming, and trustee of the German Savings

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2 "Minutes of an Adjourned Meeting of the Incorporators of South Porto Rico Sugar Company," CCG, AACUPR.
4 New York Stock Exchange Directory, January 1, 1894, p. 62, NYSEA.
5 "Minutes of the Committee of Admissions," New York Stock Exchange, p. 146, NYSEA.
6 King's Handbook of New York City; An Outline History and Description of the American Metropolis, 1893 (Boston: Moses King, 1893), p. 551.
7 Mr. Unger said that he had known Schall "ever since he was born, almost." "Application of William Schall Jr. for Admission, February, 1891," NYSEA.
Bank, which began operations in 1866 "to accommodate Germans as a class, who were noted for their thrifty habits." In 1901, Schall Jr. was a U.S. trustee of the Hamburg-Bremen Fire Insurance, and director of the Atlantic Trust Co., the Merchants and Manufacturing Warehousing Co., and the New York Marine Underwriters.

At the Stock Exchange, Schall Jr. probably met Rudolph Keppler, a broker and banker with his own firm, Rudolph Keppler & Co. Born in 1843 in Constanza, Germany, Keppler joined the Stock Exchange in 1875 and presided over it from 1898 to 1903. He was also a member of the German Club.

William Schall Jr. spent little time in Puerto Rico, though he "knew much of the island." His interests in Puerto Rico were not limited to the promotion of sugar. In 1899, a year before SPRSCO/NJ's establishment, he helped incorporate in West Virginia the American Colonial Bank of Porto Rico [hereafter referred to as ACBPR], with a capital stock of $250,000. Residents in Puerto Rico held about 40 percent of the bank's shares. The bank started operations in 1900 and Schall Jr. remained president and director until his death in 1928. From its inception, the

9 Directory of Directors, p. 561.
ACBPR was the leading bank in Puerto Rico. In 1910, the bank’s assets totaled $4.8 million, more than 30 percent of the $16.7 million combined assets of the nine banks active in the island. The ACBPR, operating “somewhat like the local institutions,” took an active part financing the processing and movement of sugar and other staples.

The decision by Muller, Schall & Co. to help establish the ACBPR was a smart move. Law prohibited U.S. national banks from establishing foreign branches, and the firm had abundance of information about Puerto Rico through its German connections on the island. Those connections stemmed partly from Edmund Pavenstedt Jr., whose family had sizable sugar interests in Puerto Rico dating back to the mid-nineteenth century. The firm also had banking business contacts with Puerto Rico, mainly through Fritz, Lundt & Co.

Pavenstedt Jr. was born in Bremen, Germany, where he received his formal education and served in the military. In the early 1880s, he served an apprenticeship with the firm of Geyer & Uungk, specialized in tobacco. In 1885, he came to Puerto Rico to learn the sugar growing business in Los Caños, a plantation in Arecibo his father Edmund Pavenstedt Sr. acquired in the 1860s. The following year, Mosle Brothers, sugar importers and bankers in New York City, employed him. He returned to Puerto Rico and supervised Los Caños until 1890. At the time of his

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17 Mosle Brothers was one of several merchant bankers in New York. Others were Lawrence, Turner & Co., of 64 Wall Street; Morward & Co.; and Thomas Owen & Co. A merchant banker advanced money either to the planter or to the shipper; either against the planter’s crop or against shipping documents for sugar consigned by such shipping houses. See United States of America, *Petitioner, against The American Sugar Refining Company, et al., Defendants, Defendants’ Testimony*, vol. 11 (The J. W. Pratt Company, 1914), p. 6435.
father’s death in 1900, he and eight sisters (resident in Germany) inherited the sugar factory and the plantation. They had a value of $100,000 and had produced a profit of $150,000 in 10 years. In 1902, the heirs of Pavenstedt Sr. transferred the real property, sugar factory and other fixed assets to the Pavenstedt Land Co. and the personal property, such as oxen and equipment, to the Los Caños Central. Both concerns incorporated in New York. Pavenstedt Jr. had an initial 10 percent share in Muller, Schall & Co., worth $50,000. Pavenstedt Jr. was a member of the German Club since 1890 and held a $2,000 bond on the same.  

Fritze, Lundt & Co. was established in Mayagüez and in Ponce in 1892 to continue the business of Kramer & Co., a German firm specialized overall merchandise, the export of coffee, sugar and molasses, foreign exchange and insurance. It should be noted that

Under the Spanish regime in Puerto Rico, especially in the Nineteenth Century, many of the Island’s richest business firms were German. German investments in Puerto Rico were considerable, and German merchants were among the Island’s sharpest and most successful traders.

By 1894, Henry C. Fritze served as German vice-consul in Ponce, and a year later, he was a founding proprietary member of the Crédito y Ahorro Ponceño, a banking institution. His firm was known as “merchants, capitalists and bankers” (comerciantes, capitalistas y banqueros), which also dealt with cooperage (tonelería), owned a coffee-processing plant (tahona), and was shipping agents for the Spanish line of steamships,

18 Information taken mostly from “Pavenstedt, E.” and “Pavenstedt Land Company, Los Caños Centrale,” RG 131, RBI, E 195, NA.
20 “A Dynasty in Sugar,” p. 15.
Sobrinos de Herrera, which sailed to Cuba, Puerto Rico and Haiti. In 1899, Fritze, Lundt & Co. purchased most of the coffee of Castañer Hermanos, acquiring 16,683 pounds that year. That year, the firm reported a loss of about $40,000 from destruction caused by hurricane San Ciriaco. Fritze, Lundt & Co. also was a member of the Ponce Chamber of Commerce (Cámara Oficial de Comercio de Ponce). Fritze, Lundt & Co. opened an office in San Juan around 1903 and eventually closed the ones in Ponce and Mayagüez.

4.1. Fritze, Lundt & Co. building in Playa de Ponce, Ponce (Courtesy of Hans Joachim Fritze)

21 Ludvig Duplace, German consul in San Juan, also had an active business life; he was a commission and shipping agent, owned an exchange office and a liquor factory, and dealt in provisions and textiles. See José Blanch, Directorio comercial e industrial de la isla de Puerto Rico para 1894 (Mayagüez: Tip. al vap. de La Correspondencia, 1894), pp. 19, 103, 107; Ramón Morel Campos, Guía local de la ciudad de Ponce (Ponce: Imp. El Telégrafo, 1895), pp. 59, 76; and de Magalhães, Commercial and Business Directory of Porto Rico, pp. 89, 101, 103.
23 Aráez y Farrando, Historia, p. 93.
24 José María González, Guía oficial general de Puerto-Rico ([San Juan], Puerto Rico: Impr. de la Gaceta, 1897), p. 395.
By the turn of the century, Fritze had achieved high standing not only in business but also in the cosmopolitan society of Ponce. In 1898, along with Fernando M. Toro and Lucas P. Valdivieso, he was a member of the delegation that negotiated the surrender of Spanish troops to the United States.\(^{26}\) He married into a well-to-do Ponce family, the Toro Pasarells. Later, his brother-in-law, Francisco Toro Pasarell, joined the firm and married his niece. Another brother-in-law of his was Luis Toro Pasarell, president of the Porto Rico American Tobacco Co. for 27 years.\(^{27}\) In 1900, Fritze, Lundt & Co., as partners of Toro y Ca. together with Luis Toro Pasarell and Leopold Engelhardt & Co., sold La Internacional, a cigar and cigarette factory, to the Porto Rico American Tobacco Company for the hefty sum of $153,716.\(^{28}\) Henry C. Fritze became a member of

\(^{26}\) "Appendix 1," in Lee, An Island Grows, pp. 135-142.


\(^{28}\) Rafael León Paz, “Protocolización (escritura 286), 22 de marzo de 1900,” F Protocolos Notariales, S Ponce, Pueblo: Ponce, Año: 1900, C 2057, fo 1826-1853, AGPR. The author thanks Dr. Juan José Baldrich for this information.
the board of directors of the Porto Rico American Tobacco Co. and the Porto Rico Leaf Tobacco Co. from 1901 to 1908. He was president of the Crédito y Ahorro Ponceño from 1902 to 1904. Fritz, Lundt & Co. held 75 shares of the Crédito y Ahorro Ponceño in 1908. In 1909, German shareholders (residents in Ponce, New York, Hamburg and Bremen) controlled about 14 percent of Crédito y Ahorro Ponceño, while ACBPR held a leading 35 percent of the shares. In 1911, the correspondent of the Louisiana Planter and Sugar Manufacturer said the ACBPR and the Crédito y Ahorro Ponceño “are largely controlled by the Wall Street house of Muller, Schall & Co.”

The presence of Fritz extended to Ponce’s social and cultural spheres. On 18 December 1904, the Fritz-Toro family donated part of the mausoleum erected in memory of the town’s firefighters in the cemetery. In June 1911, Fritz, Lundt & Co. awarded Dominican exiled journalist Emilio A. Morel a gold medal in a literary competition, the Floral Games (Juegos Florales).

In 1903, the firm reportedly shipped half the island’s sugar exports, including all of Guanica Centrale’s production. The dominance of the sugar market by Fritz, Lundt & Co. over other sugar brokers (such as Sobrinos de Ezquiaga, Antonio Roig or Eduardo Georgetti) was rooted in its ownership of the only available warehouses for storage and preservation of sugar and molasses, forcing “the plantations of the island...to employ

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30 My calculations from the shareholders’ list published by the bank. See Crédito y Ahorro Ponceño, memoria del año 1909.
32 The huge mausoleum, with a 20-feet obelisk, is currently an attraction at the municipal cemetery of Ponce.
33 Morel was working for the local newspaper El Día. Emilio A. Morel to Francisco J. Peynado, presidente, Club Unión, Santo Domingo, 21 June 1911, P&P, ED/UPR/PR.
it in order to market their products to the United States."35 Warehousing of the sugar was needed for money lenders to pay advances on sugar.36 In 1909, Fritze, Lundt & Co. was authorized to build a molasses tank in the marina in Mayagüez, with a capacity to hold 1,500 gallons. The tank connected with the nearby track of the American Railroad Co., making possible for molasses shipped from various sugar estates to be transported directly to the tank and pumped inside. To transport molasses right into ships for export, the company built an underground 8-inch pipe from the tank to the quartermaster's dock.37 In 1909, Fritze, Lundt & Co. built another tank for molasses in San Juan, with a capacity of 50,000 tons.38

Fritze, Lundt & Co. received large loans for its sugar export business from the Bank of Nova Scotia, which began operations in Puerto Rico in 1910. The firm profited from Nova Scotia's agencies in New York and other major cities, as well as of its experience in foreign exchange and the finance of international trade.39


In mid-1903, persistent rumors tied Fritze, Lundt & Co. with the Sugar Trust: "They represent the trust and handle as it seems as much sugar as all the other merchants on the island put together." \(^{40}\) In 1914, amid talk of a conspiracy to depress the prices of Puerto Rican sugars, Fritze, Lundt & Co. was described in the *Louisiana Planter and Sugar*

\(^{40}\) "Sugar News and Review of the Week," *San Juan News*, 21 June 1903.
Manufacturer as “a large purchaser of sugar in Porto Rico for the American Sugar Refining Company.”41

Fritze, Lundt & Co. and the Sugar Trust maintained a connection through German-born Arthur Donner, treasurer and director of the ASRCO.42 A competitor of the Sugar Trust, Manuel Rionda, chief partner in New York of one of the world’s leading sugar importing and brokerage houses, Czarnikow-Rionda & Co., complained that:

there is no doubt that the relations of Fritze, Lundt & Co. with Mr. Donner gives them considerable advantages...because Donner gives them orders c.f. ...what blocks our operations in Puerto Rico on the same terms as in Cuba is that Donner and Fritze, Lundt & Co. are in better conditions than we are...the steamships do not go to unload to the refineries except when they bring full loads.43

Another important SPRSCO/NJ connection with the Sugar Trust was Charles H. Senff, a relation of the Havemeyer family and director of the ASRCO for many years.44 Noting that neither his father nor he had any interest in sugar lands in Puerto Rico or Dominican Republic, Horace Havemeyer testified that cousin Senff “is interested in Guanica Central,” but he did not know the extent of his investment.45

Besides Fritze’s and Senff’s links with the Sugar Trust, the Sugar Trust itself had its own representation in SPRSCO/NJ’s board of directors in the person of Julius A. Sturtsberg. Sturtsberg was a former secretary and

43 Manuel Rionda to José Miguel Morales, 20 March 1901, BBC.
treasurer of the Havemeyer and Elder Refining Co. in 1886 and member of the board of trustees of the Sugar Refineries Co. in 1887. He had been a member of the German Club since 1881. In 1901, Stursberg was president and director of the American Enameled Brick and Tile Co. His presence in the board gives credence to Jack Simpson Mullins' hypothesis that "Trust's directors and individuals, closely allied with" a company "probably found in the Trust a ready buyer for their raw sugar."48

In 1901, Henry C. Fritz was appointed general manager of Guanica Centrale, with authority, in principle, over practically all matters relating to the company. Fritz's knowledge of insular conditions explains his appointment. His own business dealings made him well informed of the island's real estate market. Fritz played a crucial role buying and leasing sugar cane plantations. The appointment expired in 1904. Fritz's direct relationship with Guanica Centrale appears to end in 1905, when he retired from its board of directors. His substitute at the board, Gustav B. Kulenkampff, was a prominent member of the German element in New York City. Born in Bremen in 1873, Kulenkampff retained German citizenship, though he lived most of his life in New York City.50 Reputed to be a very rich man, he was a member of the coffee importing firm of Wessels, Kulenkampff & Co. and was connected with the Hamburg-American Steamship Line.

Other board members - John E. Berwind, Percy Chubb, William C. Cushman, Frank A. Dillingham and Charles M. Russell - were not of German descent. Berwind, with a fortune estimated at $150 million, held

46 Stursberg directed the manufacturing end of the business for the Brooklyn Sugar Refining Co. in the 1870s and was a trustee, together with Henry O. Havemeyer and Charles Seiff, of the DeCastro and Donner Sugar Refining Co. See United States of America, Petitioner, Against the American Sugar Refining Company, et al., Defendants, Petitioner's Exhibits, vol. 1, pp. 216-217; Mullins, "The Sugar Trust," p. 43; and Eichner, The Emergence of Oligopoly, p. 66.
47 Directory of Directors, p. 624.
49 See "Agreement between Guanica Centrale and Henry C. Fritz, 7 June 1901," CCG, AACUPR.
50 "G. B. Kulenkampff Is Dead in Germany," The New York Times, 14 June 1927, p. 27.
extensive holdings in coal and maritime business. In 1901, he was director of the Berwind-White Coal Mining Co. and of the International Coal Co., as well as president and director of the New York-Porto Rico Steamship Co. and the World Maritime News Co. Chubb, born in Australia of a British subject, was a marine insurance expert. In 1887, he became active in his father’s firm, Chubb & Son, and was president of the Federal Insurance Co. Chubb was director of the Merchants’ and Manufacturers’ Warehousing Co. (same as Schall) and trustee of the Real Estate Trust Co. He was a member of an exclusive social club in New York City, the India House. William C. Cushman, born in New York City, organized and headed the wholesale grocery firm of Cushman Brothers, which was sold about 1900 to Thomas W. Lamont. After the sale, Cushman left the board and went to London to work in the hardware business.

Charles M. Russell was a critical member of the board of directors; he did not belong to the New York business and finance world. In 1903, Russell presided over The Russell & Company, of

53 Situated at Hanover Square in the Wall Street sector, James Farrell, president of U.S. Steel Corp., organized The India House in 1914 for the “encouragement of the foreign commerce of the United States and the cultivation and perpetuation of American foreign trading tradition... The name was derived from days when there was an India Wharf, an India Street, or an India Hotel, in most ports and from the earlier era when ‘The Indies’ was a generic term for the objective of overseas trade and enterprise.” India House, Inc., “James A. Farrell, Esq., 28 April 1943,” TP, B 23, FDRL.
Massillon, Ohio, and of Standard Horse Nail Co., of New Brighton, Pennsylvania, as well as director of the Union National Bank. The Russell & Company manufactured gasoline traction and haulage engines and threshing machinery. The *Louisiana Planter and Sugar Manufacturer* featured in May 1912 a Russell gas tractor and gang of three disk plows, saying “if we can do now one-half of our work with traction engines and gasoline, thus dispensing with a large amount of our mule power, it will be a very forward step in our modern sugar agriculture.”

4.4. Residence of Charles M. Russell, Massillon, Ohio [Image courtesy of the Massillon Museum, Massillon, OH]


Berwind, Chubb, Cushman and Russell made valuable contributions to the board. Berwind offered his position, knowledge and connections of the U.S.-Caribbean maritime trade, indispensable for a commodity marketed in the United States. Chubb's contribution was the same for the insurance business. All SPRSCO/NJ's sugar in storage and shipping was insured, as were the company's buildings (factory, shops, etc. in Puerto Rico). Cushman knew the grocers' market, an important market for raw sugar. Russell provided insights into the mechanization of the agricultural side, at a time when agricultural machinery was substituting human and animal labor in field tasks.

A key member of the board of directors was Frank A. Dillingham. Dillingham was the son of well known New York publisher George Wellington Dillingham. He attended Yale University, graduated from Columbia Law School, and was admitted to the bar in New York City in 1894. For a short time he was associated with the well-known law firm of Cravath & Houston. In 1895, with Ralph Stowell Rounds, he formed the partnership Rounds & Dillingham, the corporate law firm which acted as counsel to Muller, Schall & Co. Either in late 1899 or early 1900, before making any judgment on whether to invest in Puerto Rico, Muller, Schall & Co. sent Dillingham on a reconnaissance trip. The young lawyer spent "several weeks on horseback exploring rundown plantations and uncleared jungles, conferred with businessmen, landowners and sugar technicians." Based on his recommendations, Muller, Schall & Co. decided to underwrite the South Porto Rico Sugar Company.

Dillingham's main responsibility at his law firm was SPRSCO/NJ's affairs. Yet, within the years, he became an official of other companies, but SPRSCO/NJ remained his main obligation. Dillingham became secretary, treasurer and director of the Highland Forest Co., of New York; the treasurer of Century Mortgage Co., of New York; director of Metallurgical Securities Co., of Connecticut; the Consolidated Arizona

Smelting Co.; and the Lake Placid Improvement Co. He was also director of the Pavenstedt Lands Co., of New York, and of the ACBPR. Though not of German ancestry, he was a member of the German Club, proving that he mastered the German language.

4.5. Registered Trademark of Russell & Co. [Image courtesy of the Massillon Museum, Massillon, OH]

In 1902, Rounds & Dillingham established a subsidiary office in San Juan, the first U.S. law firm to do so. The lawyer in charge was José R. F. Savage, a graduate of New York University Law School in 1896. In 1900, Savage served as an assistant district attorney of the U.S. Provisional Court and private secretary of colonial Governor Charles Allen. In 1902, he served as associate judge in the San Juan District Court, before taking over the business of Rounds & Dillingham in the island.\(^{61}\) In 1904, Rounds & Dillingham consolidated with the firm of Hatch & Debevoise. When Savage was appointed district attorney of the Federal Court in 1905,

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Edward S. Paine, "of good New England stock" and a Harvard Law School graduate, was appointed a resident partner of Rounds, Hatch, Dillingham & Debevoise. The firm was abreast of all Puerto Rican legislation; for many years it prepared a synopsis of the island's laws for Hubbell's Legal Directory.

Though the law firm in San Juan handled the major legal issues, SPRSCO/NJ contracted a lawyer in each of its cane districts. These lawyers were Fernando Manuel Toro in Ponce, Benito Forés in San Germán (later replaced by Miguel Angel García Méndez), and Arturo Reichard in Aguadilla. Fernando Manuel Toro, born in 1882, was the most important of the country's lawyers. Toro attended Juanita College, Huntington, Pennsylvania, and graduated from the New York University School of Law in 1905. On his return to Ponce, he joined Tord, Toro & Canales, but soon left the firm to become the lawyer of Guanica Centrale in 1908. His association with SPRSCO/NJ's purchase of Central Fortuna gave him a reputation:

...well versed in the law of real estate and has been instrumental in closing some of the large land deals ever consummated in the district of Ponce, and in the purchase by the Fortuna Estates of the properties of the Compagnie des Sucreries of Porto Rico.

Dillingham kept up-to-date of all company developments by a system of continuous and detailed reports. No major decision was taken without his authorization. Training, experience and performance based

65 Jackson & Son, comp. and ed., The Representative Men, p. 123.
his selection and promotion of personnel. He was always an officer of all companies controlled by SPRSCO/NJ, namely, Guanica Centrale, Bernal Estate, Santa Rita Estate, Encenada Estate, Encenada Estate Inc., Fortuna Estates and Central Fortuna Inc. He also traveled to Puerto Rico, usually with his family, at least once a year. Guanica Centrale employed his daughter, Louise, and a son, Winthrop, employed in Ensenada for short periods. Also among his duties was keeping in contact with several federal offices, mainly the Bureau of Insular Affairs and Congress.

Hubert Edson, an accomplished sugar man, assessed better than anyone Dillingham’s character. He said:

during my employment with South Porto Rico I discovered that Mr. Dillingham, another of the so-called ‘sugar barons’ of yesteryear, was as close to a man without sentiment in conducting business affairs as any man I have ever known. Not that he was ruthless in his methods, but he was cool and calculating in every proposition that came before him. In selecting an employee...he did not hesitate to pay any sum required if he was sure in his own mind that the services to be rendered justified the expenditure. He would consent to employing a man he personally disliked, if he thought that such a course of action would benefit him and his company. His actions in directing the policies of the company were taken in the same cold-blooded calculating spirit.

All purchase orders for equipment and other matters were sent to the New York office for approval and corresponding action. W. T. Herbert, of James S. Connell & Son, the dean of raw sugar brokerage in New York, at 105 Wall Street, said Cuba and Puerto Rico-based large

67 Edson, Sugar, pp. 94-95.
sugar corporations had offices of the company in New York. He said they sold direct to the refiners,

but in many cases the sales are made through brokers or commission agents, even when the planter has a New York office...I think the Guanica Company of Porto Rico; they sell through brokers, and pay commissions even when they effect direct sales, the broker acting as delivery agent. 68

Other companies in Puerto Rico followed this practice. Central Aguirre also sold direct to the refiners. Yet, U.S. corporations were not the only ones with offices in New York. Antonio Roig, both centralista and broker, had Antonio Roig & Co., 30 Church Street, presided over by Stewart Roe, a resident partner. Cuban American Sugar Co. and Cuba Cane Company also sold directly in New York, through B. H. Howell & Co. or its own officers. 69

SPRSCO/NJ, in an action typical of the sugar industry in the Caribbean, divided the production of sugar in two clearly distinct operations. Thus, the agricultural or cane supply (field) activity and the sugar manufacture (factory) process were conducted separately, disregarding their belonging to the same enterprise or the legal organization of the enterprise among different companies.

SPRSCO/NJ did not look far to find the top and middle management for administering Guanica Centrale and the other subsidiary companies. Then, the sugar cane industry in the U.S. South, particularly in Louisiana, was at the vanguard in many aspects of the industry. 70 Louisiana was a fundamental factor for the development of SPRSCO/NJ

70 For a general survey of the sugar cane industry in the U.S. South see Frank S. Earle, Southern Agriculture (New York: The Macmillan Co., 1908), pp. 118-141.
in Puerto Rico, the wider Caribbean sugar industry, and the whole sugar world. Yet, its contribution has not been accorded its proper place in the history of sugar.

The development of Louisiana's sugar industry since the 1870s is closely linked with the Louisiana Sugar Planters' Association [hereafter referred to as LSPA]. The LSPA was established in 1877. It grouped the richest and most politically powerful sugar planters in the state. The LSPA helped in using political power for the continuation of protective tariff legislation; convincing the U.S. Department of Agriculture to investigate cultivation and manufacturing problems of the sugar cane; and establishing a private sugar experiment station, the first of its kind in the world. It also began publishing a weekly trade journal, *The Louisiana Planter and Sugar Manufacturer*, in 1888, and founded the Audubon Sugar School in 1891. In the 1910s, vouching for the uniqueness of LSPA in comparison with similar organizations in the sugar world, an informed sugar technician observed:

The work of the Louisiana Sugar Planters' Association is unique among organized sugar planters, and so far as my knowledge extends there is no other organization of sugar men that fills so completely the need of the industry for financial, administrative and agricultural supervision.\^22


\^22 J. T. Crawley, "Progressive Porto Rico," *LPSM*, 50, no. 12 (22 March 1913), p. 188. Almost coincident to these words, the Louisiana sugar industry entered a crisis when serious diseases, mainly the mosaic, decreased the amount of cane used for sugar from 5.9 million short tons in 1911 to 864,000 short tons in 1926, while acreage devoted to sugar decreased from 310,000 to 129,000. They arrested the near collapse of the industry in the 1930s, but by then the sugar areas had suffered an acute depopulation. See T. Lynn Smith, "Depopulation of Louisiana's Sugar Bowl," *Journal of Farm Economics* 20, no. 2 (May, 1938), pp. 503-24.
For this study, the relationships of the LSPA with the U.S. Department of Agriculture and the Audubon Sugar School are of great relevance. As noted, the policy of the U.S. Department of Agriculture was the attainment of national self-sufficiency in sugar production. Its promotion of research in sorghum, maple, beet and cane was with this goal in mind.

To foster the use of scientific methods in the sugar cane industry, the U.S. Department of Agriculture, at the urging of Chief Chemist Dr. Harvey Wiley, assigned chemists Hubert Edson and Dr. Guilford L. Spencer to sugar factories in Louisiana and in the mid-West. Edson went in 1888-1889 to the Calumet sugar factory. Calumet was owned and managed by Daniel Thompson (a civil engineer turned businessman), with his son Wibray J. Thompson (a graduate of Cornell University, with a postgraduate course in the School of Mines of Columbia University, and

73 They assigned Dr. Spencer to Magnolia plantation, owned by Governor Warmouth, to work on diffusion experiments. His experience proved that the method was satisfactory, but was “not generally adopted because it was necessary to burn the bagasse and the diffusion bagasse was so wet that it could not be burned economically.” Charles E. Coates, “Guilford Lawson Spencer,” LPSM, 34, no. 14 (4 April 1925), p. 267.
It may seem paradoxical that this change of thinking came because of high yields that were due to excellent recovery of sugar from juice, despite the poor extraction of 84 percent by the milling plant. But the emphasis on improved mills made sense, since our figures clearly showed that the only source from which increased yields could be expected was the better extraction of juice.77

4.7. Wibray J. Thompson [LPSM, 2 July 1927, 18]

With the able management of Daniel Thompson, the scientific acumen of Wibray J. Thompson, and the flawless execution of Hubert Edson, Calumet Plantation became Louisiana’s leading private research center, with many experiments in field and factory carried on during the

77 Edson, Sugar, pp. 56-57.
1890s. For example, 1891 and 1892 experiments on cane seed selection that concluded that the planting of sugar cane of high sucrose content produced better cane had to wait until 1900 for confirmation by the Sugar Experiment Station. In a letter to The Sugar Beet calling attention to this discovery, Wibray J. Thompson noted that “the ultimate effect upon the world’s sugar cane industry of the improvement thus demonstrated possible should, it seems to me, be revolutionary on its character.”

The Louisiana connection with SPRSCO/NJ started early, centering on management and sugar manufacture, namely, the factory side. Yet, Guanica Centrale’s first operations manager, Harry Garnett, came from the British sugar circuit. Garnett, a planting attorney associated mainly with Curtis Campbell & Co. and Quintin Hogg, had been the manager of Plantation Non Pareil in British Guiana in 1896. The Louisiana Planter and Sugar Manufacturer wrote he was “one of the best men in the


79 Sitterson, Sugar Country, pp. 269-270.

80 Wibray J. Thompson, Calumet Plantation, to The Sugar Beet, 3 August 1893, LAWC.

sugar trade, having been a protégé of the late Quintin Hogg, the pioneer sugar operator in Demerara, British Guiana." 82

Garnett lasted only the first year and Adrian J. Greif, a Louisiana native, substituted him. 83 Greif had been a superintendent at the Southern Division of the Yazoo and Mississippi Valley Railroad. 84 He left the railroad business in 1902 and became general superintendent at Central Constancia, of the Colonial Sugar Co. in Cuba, known as “some of the most extensive sugar planting interests in the world.” 85 While in Cuba, he attracted SPRSCO/NJ’s attention and was asked to take charge of Guanica Centrale. 86 Because of Guanica Centrale’s huge milling capacity, Greif’s railroad experience was vital for SPRSCO/NJ’s expansion. His obituary stated that Guanica Centrale “was but a small plant, but, under Mr. Greif’s management, soon became one of the leading sugar factories of the world.” 87

Greif’s impact on Guanica Centrale’s management system was long lasting. Modern managerial systems started in the railroads, a business enterprise whose complexity required the appointment of salaried managers and the organization of functional departments and continual flow of information for its operation. 88 Greif applied a similar system at Guanica Centrale by dividing “Guanica operations into many departments, each of which had a supervisor who reported directly to him.” He also started a system of “constant checking and record keeping...so that any data for checking the overall efficiency of the factory was always at hand and any analytical information needed by the factory superintendent could be quickly supplied.” 89

83 Greif visited Louisiana with some frequency: “This is his native heath and he returns to it occasionally to see what it looks like.” LPSM, 45, no. 16 (14 October 1916), p. 249.
87 “Adrian J. Greif,” LPSM, 73, no. 15 (11 October 1924), p. 292.
89 Edson, Sugar, p. 95.
W. P. Miller, first chief engineer at Guanica Centrale, was also from Louisiana. It was said he made Guanica Centrale “a model house in all that pertained to his department.”90 In the 1890s, Miller had been an engineer of the Swansons, who owned and operated the North Bend Plantation on Bayou Teche. Later, he traveled extensively in the sugar world representing Stirling boilers. In 1916, they put him in charge of the New York office of Diebert, Bancroft & Ross Co., of New Orleans.91 Miller was “an acknowledged expert in mechanical matters as they related to sugar production.”92

Another Louisianan, Harry A. Nadler, worked in Guanica Centrale and Central Fortuna for several seasons. He was the son of Henry Nadler, prominent founder of the Nadler Foundry and Machine Co., of Plaquemines, Louisiana.93 Nadler had served as assistant professor in mechanical engineering at the Audubon Sugar School in 1909.94 In 1916, his brother, Carl S. Nadler, was assistant engineer at Guanica Centrale.95 Hubert Edson, who described himself as “a transplanted Louisianan to some extent,” was a superintendent at Guanica Centrale from 1908 to 1910 and manager at Central Fortuna in the 1912-13 crop season.96

Paradoxically, the Thompsons of Calumet Plantation, forerunners of private sugar cane research in Louisiana, ended working for Guanica Centrale. Daniel Thompson died in 1900, and his son Wibray J. Thompson took over Calumet Plantation, but, because of indebtedness, lost it to the

90 LPSM, 57, no. 8 (20 August 1916), p. 122. Miller worked in Louisiana and Texas before leaving for Puerto Rico.
94 Catalogue of the Louisiana State University and Agricultural and Mechanical College, Baton Rouge, Louisiana, for 1909-10, p. 115.
95 See “Louisiana Sugar Experts in Demand,” LPSM, 57, no. 9 (26 August 1916), p. 139.
96 Edson worked in the Calumet sugar factory until 1901. He also had working experience in the Reserve factory of Leon Godchaux in Louisiana and in Hawaii. See Edson, Sugar, p. 58, and LPSM, 37, no. 21 (24 November 1906), p. 33.
Shadyside Co. Ltd. in 1903. Other sugar companies engaged Wibray J. Thompson to work at the managerial level. In 1909, he had six sugarhouses under his supervision, scattered along a line of 150 miles, and belonging or affiliated to the Louisiana Sugar Company. He also worked in Mexico, Cuba and Puerto Rico. In Cuba, he became a fabrication superintendent at the Central Jatibonico from 1907 to 1910. In 1911, after SPRSCO/NJ’s acquisition, Thompson took the same position at Central Fortuna. Thompson wrote the editor of the *Louisiana Planter and Sugar Manufacturer* that

the writer has had during the past ten years, particularly intimate personal acquaintance with the sugar industries in Louisiana, Mexico, Cuba and Porto Rico. He has found THE PLANTER among both proprietors and employees, wherever he has visited sugar estates.

Wibray J.’s son, Daniel Thompson, came to the employ of Guanica Centrale in the early 1900s. His previous experience included a month’s research and study in the Glenwield factory and work as assistant chemist at Cinclare central factory, both in Louisiana. Also, he had been in Camagüey in Cuba and Mexico, presumably also in the sugar industry. Father and son dismantled Central Fortuna.

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99 In Mexico, he was employed in building a modern sugar factory for a U.S. company and was contracted by some Chicago capitalists to look at several ventures. See “The Sugar Situation in Mexico,” *LPSM*, 34, no. 12 (25 March 1905), p. 184; *LPSM*, 36, no. 2 (13 January 1906), p. 31; *LPSM*, 43, no. 15 (9 October 1909), p. 228; *LPSM*, 46, no. 26 (17 June 1913), p. 382; *LPSM*, 47, no. 12 (16 September 1911), p. 193; and *LPSM*, 50, no. 26 (28 June 1913), p. 411.
100 *LPSM*, 49, no. 20 (16 November 1912), p. 327.
102 Faith Thompson Schall, interview with author, 2 September 1982, Cataño, Puerto Rico. Also present Betsaida Vélez Natal. Born at Central Fortuna, Faith Thompson Schall was the daughter of Daniel Thompson Jr. Her marriage to Peter Schall, son of William Schall Jr., united the German capital with Louisiana management and technical expertise.
retired after the Fortuna fiasco and resided with his son in Ensenada, where he died on 20 May 1927.\textsuperscript{103}

In a nostalgic remembrance of past times, when receiving the wedding invitation of Daniel Thompson in 1912, John Dymond wrote that the occasion brings memories of years back when this Daniel Thompson was a baby boy in the arms of his nurse when we were visiting Calumet plantation in St. Mary parish at the home of Mr. Daniel Thompson, its proprietor... The senior Daniel Thompson was one of our most prominent and progressive sugar planters a generation ago, and did his full part in the development of the sugar industry of the State, including the building up of the Louisiana Sugar Planters' Association, and THE LOUISIANA PLANTER as the representative sugar journal, and of the Louisiana Experiment Station.\textsuperscript{104}

The Louisiana-Caribbean link became stronger with the coming of the Audubon Sugar School in 1891. The Audubon Sugar School, founded by the Louisiana Scientific and Agricultural Association, was originally part of the Sugar Experiment Station established six years before.\textsuperscript{105} Dr. W. C. Stubbs was the director of the Sugar Experiment Station and of the Audubon Sugar School until 1905. Dr. Stubbs was a graduate of the University of Virginia, former professor of agriculture in the State University of Alabama and a state chemist. The scientific community considered him "the chief authority on cane farming and cane farming implements within the South, but most of his work centered on the

\textsuperscript{103} "Wibray J. Thompson," LPSM, 78, no. 22 (28 May 1927), p. 434.
\textsuperscript{104} "Daniel Thompson," LPSM, 49, no. 3 (20 July 1912), p. 50.
chemical aspects of sugar cultivation."106 The Sugar Experiment Station and Audubon Sugar School have been described as

the first instance in America in which any industry established both laboratories for the scientific investigation of its problems and a school for the college training of men to put theory into practice.107

The Sugar Experiment Station focused initially on the agricultural aspects of sugar culture, namely fertilizers, soil characteristics, planting practices, and the cultivation of foreign cane varieties. By 1895, the Sugar Experiment Station, no longer in the vanguard of sugar cane research, started applying to Louisiana sugar problems the scientific and technical methods devised in experiment stations in the British Caribbean, mainly Barbados, and Java.108

At the end of the nineteenth century, southern Louisiana underwent the same centralization process in its sugar industry that had originated in Martinique in the 1830s and was taking place in Cuba, Puerto Rico, Dominican Republic, St. Lucia, Trinidad and British Guiana. In 1886, Samuel Fiske invented the first furnace for the burning of wet bagasse, a revolutionary step in raw sugar manufacture. The first nine-roller mill was introduced in Louisiana at Cora Plantation and it was such a success that Fulton Iron Works adopted the name "Cora" as trademark. Speaking before the Louisiana State Agricultural Society in 1892, Wibray J. Thompson echoed Caribbean sugar planters when he declared that the main obstacle facing Louisiana's sugar industry was the combination of cane cultivation and manufacture under the same management and that the remedy was the establishment of central factories.109

108 See Heitmann, Modernization, pp. 202-204.
109 See Sitterson, Sugar Country, p. 259. For a discussion promoting the establishment of central factories in Louisiana see Montejo, American Central Sugar Factories.
Table 4.1
Louisiana Sugar Men Working in the Sugar Industry in Puerto Rico, 1904-1924

<table>
<thead>
<tr>
<th>Name</th>
<th>Position or Affiliation</th>
<th>Year</th>
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</thead>
<tbody>
<tr>
<td>Carl Altsmanberger</td>
<td>LECSMA*</td>
<td>1911</td>
</tr>
<tr>
<td>J. Dalfares</td>
<td>n.a.**</td>
<td>1914</td>
</tr>
<tr>
<td>J. C. Falcon</td>
<td>LECSMA</td>
<td>1909</td>
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<tr>
<td>Charles R. Gaines</td>
<td>Assistant Superintendent</td>
<td>1911</td>
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<tr>
<td></td>
<td>Assistant Superintendent</td>
<td>1912</td>
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<tr>
<td></td>
<td>Assistant Superintendent</td>
<td>1913</td>
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<tr>
<td></td>
<td>Factory Engineer</td>
<td>1914</td>
</tr>
<tr>
<td>Alexis O. Smith</td>
<td>Chief Engineer</td>
<td>1923</td>
</tr>
<tr>
<td>F. Vives</td>
<td>LECSMA</td>
<td>1909</td>
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<tr>
<td></td>
<td>Central Ana Maria</td>
<td></td>
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<tr>
<td>A. P. Gaiennie</td>
<td>Factory Superintendent</td>
<td>1914</td>
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<td></td>
<td>Central Arkadia</td>
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<tr>
<td>W. C. Miller</td>
<td>n.a.</td>
<td>1914</td>
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<td></td>
<td>Central Cambalache</td>
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<tr>
<td>H. E. Fridge</td>
<td>LECSMA</td>
<td>1909</td>
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<td></td>
<td>LECSMA</td>
<td>1911</td>
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<tr>
<td>J. W. Joyce</td>
<td>LECSMA</td>
<td>1909</td>
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<tr>
<td>Joseph Pearson</td>
<td>Factory Engineer</td>
<td>1913</td>
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<td></td>
<td>Superintendent</td>
<td>1914</td>
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<td></td>
<td>Central Camuy</td>
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<tr>
<td>L. J. B. Mestier</td>
<td>General Superintendent</td>
<td>1912</td>
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<tr>
<td>Name</td>
<td>Position or Affiliation</td>
<td>Year</td>
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</tr>
<tr>
<td>Henry Dugas</td>
<td>Central Canovanas</td>
<td>1916</td>
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<tr>
<td>Emile Fucich</td>
<td>n.a.</td>
<td>1914</td>
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<tr>
<td>H. E. Fridge</td>
<td>n.a.</td>
<td>1915</td>
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<tr>
<td>John F. Hafemeyer</td>
<td>LECSMA</td>
<td>1911</td>
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<tr>
<td>W. D. Jundlin</td>
<td>n.a.</td>
<td>1914</td>
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<tr>
<td>J. E. Mestier</td>
<td>Chief Chemist</td>
<td>1911</td>
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<td></td>
<td>n.a.</td>
<td>1914</td>
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<tr>
<td>Ulysse Rome</td>
<td>n.a.</td>
<td>1916</td>
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<tr>
<td>Alfred Rousseau</td>
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<td>1911</td>
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<td></td>
<td>n.a.</td>
<td>1913</td>
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<td></td>
<td>n.a.</td>
<td>1914</td>
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<tr>
<td>Ben Breerman</td>
<td>Central Carmen</td>
<td>1909</td>
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<tr>
<td>H. A. Kreh</td>
<td>LECSMA</td>
<td>1911</td>
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<tr>
<td>Louis Copponex</td>
<td>Central Cayey</td>
<td>1911</td>
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<tr>
<td>A. B. Dautrave</td>
<td>Engineer</td>
<td>1911</td>
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<tr>
<td>E. P. Moore</td>
<td>Chemist</td>
<td>1911</td>
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<tr>
<td>Michael Phillips</td>
<td>Factory Superintendent</td>
<td>1915</td>
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<td></td>
<td>n.a.</td>
<td>1914</td>
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<td>A. B. Dauterive</td>
<td>Central Colombia</td>
<td>1909</td>
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<tr>
<td>D. B. Rogan</td>
<td>LECSMA</td>
<td>1911</td>
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<tr>
<td>Louis Thoman</td>
<td>LECSMA</td>
<td>1909</td>
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<td>LECSMA</td>
<td>1911</td>
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<tr>
<td></td>
<td>Factory Superintendent</td>
<td>1915</td>
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<td></td>
<td>Factory Superintendent</td>
<td>1918</td>
</tr>
<tr>
<td>E. D. Vignes</td>
<td>n.a.</td>
<td>1914</td>
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<tr>
<td>E. P. Moore</td>
<td>Central Corsica</td>
<td>1916</td>
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<tr>
<td></td>
<td>Chief Chemist</td>
<td></td>
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<tr>
<td>Thomas J. Flanagan</td>
<td>Central Corrada</td>
<td>1910</td>
</tr>
<tr>
<td>John F. Hafemeyer</td>
<td>LECSMA</td>
<td>1910</td>
</tr>
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<td>B. T. Nase</td>
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<td>C. N. Pressburg</td>
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<td>Curtis Richardson</td>
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<td>H. J. Norman</td>
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<td>R. M. Stewart</td>
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<td>Charles Vives</td>
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<td>Central Mercedita (Ponce)</td>
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<tr>
<td>E. Gitrod</td>
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<td>Felix Delaune</td>
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<td>James McCaffery</td>
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<td>J. M. E. Stow</td>
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<tr>
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<td>1915</td>
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* Member of the Louisiana Engineers', Chemists' and Sugar Makers' Association (LECSMA)

** n.a. - not available

Source: Louisiana Planter and Sugar Manufacturer, various years
In response to the centralization process affecting the industry, the Sugar Experiment Station, now operating with federal and state monies, included sugar-manufacturing processes in its research agenda. Yet, the Audubon Sugar School did not fare well, although it offered regular and irregular courses. Regular courses covered three years’ time and were only for advanced students. They designed irregular courses for overseers, sugar makers and engineers who wanted to add to their practical knowledge some underlying principles of their profession. The depression in the Louisiana sugar industry and the Cuban war of independence, both starting in the mid-1890s, dried up the number of students. When the Cuban independence war broke out, 15 Cuban students attending were suddenly recalled.\(^{110}\)

The Audubon Sugar School could not survive as a privately funded institution. To save the course, Dr. Stubbs negotiated with the Louisiana State University president, Thomas D. Boyd Sr., the incorporation of the Audubon Sugar School as a five-year program starting in 1897.\(^{111}\) In 1900, the School was proud of the numbers of students coming from foreign countries, such as Cuba, Guatemala, Costa Rica, Colombia, Puerto Rico, Barbados, Venezuela, Spain, Mexico, Hawaii, England and Scotland. By 1908, the School’s success led to its reorganization as a college of the Louisiana State University. The goal of the School remained the same:

...to make ‘sugar experts,’ i.e., men who can intelligently grow the cane, plan and erect a sugar house, run it as an engineer or sugar maker, and take the products, either of field or sugar house, to the laboratory and subject them to accurate analysis.\(^{112}\)

\(^{110}\) See “Audubon Sugar School,” Gumbo, vol. 1 (1900), p. 73.

\(^{111}\) Tulane University, a private university in New Orleans, also started to offer at the turn of the century a program in sugar chemistry and sugar engineering. Cuban students again were most of the student body. For details, see Heitmann, Modernization, pp. 230-243, 260-262.

\(^{112}\) Louisiana State University, Architectural and Mechanical College, Audubon Sugar School (Baton Rouge, La.: February, 1897), p. 1.
As the School matured in the university environment, the original objective of training planters' sons for future employment in Louisiana changed: "it now trained experts for the international sugar industry, particularly Cuba's large sugar factories."¹¹³ John Heitmann's assessment, unsupported by evidence in his valuable work, is correct regarding the world's sugar industry in 1906 and the Cuban sugar industry in 1920.¹¹⁴ (See Appendixes 4.1 and 4.2) Talking about Cuba, President Thomas D. Boyd Sr., said

the factories, over which these L.S.U. alumni exercise more or less supervision and control, manufactured this year one third of the total sugar crop of the island. These men are paid high salaries, one of them receiving as much as seventy-five thousand dollars a year.¹¹⁵

In Puerto Rico, more than half of the centrales engaged Louisiana men, a wider participation than in Cuba. (See Table 4.1) In 1913, they supervised or controlled at least 155,000 tons of a total production nearing 400,000 tons.

The centralization process caused a change in the personnel required to manage the field and the factory. The introduction of chemists into the factory in the 1880s was a transition stage in the modernization of the industry.¹¹⁶ Chemists were "able to point the losses" in the manufacture process, but "unable to apply the remedy," while the engineers were unable to apply "the remedy...owing of their lack of technical knowledge

¹¹³ Heitmann, Modernization, p. 230.
¹¹⁶ See Guilford L. Spencer, "Chemical Progress in Cane Sugar Manufacture," LPSM, 70, no. 2 (13 January 1923), p. 32.
of the subject.” The development of a new professional, the chemical engineer, combining “both the chemical knowledge and the technical training,” was the key to the complete modernization of the industry.\textsuperscript{117}

In 1912, Dr. Charles E. Coates, dean of the Audubon Sugar School, wrote that “the most efficient sugar-houses in the world today” were being managed by “young men, for the most part college bred, who control the laboratory, the mill and the engine room as well... It needs men with the highest scientific training.”\textsuperscript{118} Thus, the coming of the central factory brought “a new kind of professional...a new kind of discipline, sugar engineering, which later became a specialized branch of chemical engineering.”\textsuperscript{119}

Ironically, Dr. Coates also lamented that chemical control was missing in many Louisiana sugar houses and remembered the old times with well-known names of those that had migrated to the sugar areas of the Caribbean: “It is true that there were in the State during this time such men as [French T.] Maxwell,[Hubert] Edson and others, who today stand at the top of their profession.”\textsuperscript{120}

Eleven years later, the premier sugar chemist, Dr. Guilford L. Spencer, would write: “The modern cane factory is chemically controlled at every stage of the manufacture.”\textsuperscript{121} Spencer noted there had

\textsuperscript{117} Magnus Swenson, “The Chemical Engineer,” \textit{Bulletin of the University of Wisconsin, Engineering Series}, 2 (1900), pp. 199-200. Swenson added: “It would be entirely too technical and would take too much time, to give even a brief history of these improvements in cane sugar machinery. They were due in very large measure to the establishment of the Audubon Sugar School and Experiment Station which is now the pride of the southern sugar manufacturers, and although there is still much room for improvement, the enormous waste of a few years ago has been done away with.”


\textsuperscript{119} Heitmann, \textit{Modernization}, p. 268.


\textsuperscript{121} Guilford L. Spencer, “Chemical Progress in Cane Sugar Manufacture,” \textit{LPSM}, 70, no. 2 (13 January 1923), p. 32.
been great progress in the mechanical equipment at all stages of sugar manufacture, particularly in the mill construction, grooving of their rolls, delivery and feeding of the cane to the mills, and the settling devices for juices and parts of the evaporation. To obtain higher sucrose extraction, the sugar process became more industrialized under a system of exact chemical control.

SPRSCO/NJ and other U.S. sugar corporations in the Caribbean recruited their factory's managerial, technical and skilled personnel right at home, in Louisiana. Louisiana's sugar industry provided Guanica Centrale with its share of experienced personnel. Furthermore, Louisiana State University supplied SPRSCO/NJ with competent graduates, some of who attained the company's highest positions in Puerto Rico and elsewhere in the Caribbean.

4.8. From right to left: French T. Maxwell, vice-president of South Porto Rico Sugar Company of New Jersey and general manager of Guanica Centrale; unidentified person; Enloe L. Lowry, manager of Guanica Centrale's stores and in charge of the wharves, ca. 1925. [Personal Files, Humberto García Muñiz]

122 Central Aguirre also tapped Louisiana sugar men. Charles Gaines, chief of the sugar laboratory and sugar house superintendent of the Belle Alliance plantation of the Kock family in Assumption parish, went to Aguirre as assistant superintendent, clearly a case of "what Porto Rico Gains, Louisiana loses." "Mr. Charles R. Gaines Goes to Porto Rico," LPSM, 49, no. 23 (7 December 1912), p. 375.
French T. Maxwell was the most prominent of the graduates in the sugar profession from the Louisiana State University. Maxwell graduated in 1894 with a Bachelor of Science degree and was the first to appear under the denomination of “sugar chemist” in the Catalogue of the university. A member of the Alumni Society, he later urged T. D. Boyd Sr. to accept the presidency of Louisiana State University. Boyd Sr. developed great interest in the Audubon Sugar School while in the presidency. Indeed, two of his children, T. D. Boyd Jr. and Overton Boyd, achieved great standing in the Caribbean sugar industry.

Maxwell was a chemist in the mid-1890s and early 1900s in several sugar estates in Louisiana, including Leonce M. Soniat’s Cedar Grove, McCall Bros.’s Evan Hall, and James A. Ware’s Belle Grove. He advised his father-in-law, Senator J. D. Fisher, of Baton Rouge, with the purchase of a Mexican large estate as he “had long experience in connection with the sugar industry of our sister Republic.” From 1902 to 1910, he was a fabrication superintendent of centrales Chaparra and Delicias of the Cuban American Sugar Company, “where some remarkable records as to yield and output were accomplished under his management.” He acquired a large Cuban plantation, in a district “which will be favorably affected by the operation of the Manati Sugar Company’s factory.”

123 Before the integration of the Audubon Sugar School, the university offered postgraduate courses in Agricultural Chemistry, with “special attention...paid to the chemistry of sugar and sugar analysis, as it is believed that the demand made upon this institution for chemists for sugar houses in this and adjacent states fully justifies the bestowal of a considerable amount of time upon practical work of this important subject.” Trips to sugar houses in the vicinity during the grinding season were part of the course. Catalogue of the Louisiana State University and Agricultural and Mechanical College, Baton Rouge, Louisiana, for 1893-94 (Baton Rouge: The Advocate, 1894), p. 41.
125 LPSM, 24, no. 3 (20 January 1900), p. 367.
126 LPSM, 47, no. 1 (1 July 1911), p. 4.
127 See “New York,” LPSM, 49, no. 11 (14 September 1912), p. 176, and W. R. Dobson, Director, Sugar Experiment Station, to Dr. W. H. Dalrymple, Baton Rouge, 5 January 1905, TDBPP, LSUA.
1911, he became a superintendent at Guanica Centrale. Maxwell also joined the exclusive India House in New York.

Also outstanding was Baton Rouge-born Dudley A. Walsh, superintendent at Guanica Centrale from 1903 to 1906. In 1907, he took charge of Czarnikow-Rionda properties in Cuba, including the Washington Sugar Co. at Hatuey; the Francisco Sugar Co. at Francisco; and the Tuinucu Sugar Co. at Sancti Spiritus. Both Maxwell and Walsh were very well known and respected in sugar circles. According to W.S. Daubert, "...the names of such men as Dudley Walsh, French T. Maxwell and Dr. Guilford Spencer were watchwords for the ambitious young sugar man of those days."

The managerial, technical, and skilled personnel from the Louisiana sugar industry migrating to other sugar areas became known as "sugar tramps." In 1908, they formed the Louisiana Engineers, Chemists' and Sugar Makers' Association [hereafter referred to as LECSMA]; an unchartered association until they legally incorporated in October 1913. It grouped most "sugar tramps," namely, "the men who operate all the important stations in the great factories of Cuba, Porto Rico, Louisiana, Mexico and the tropical sugar world overall."

In 1911, LECSMA listed 115 members, with 104 residing in Louisiana. In 1914, LECSMA hired a professor of Spanish, M. L. Piedra, to teach the language to its members. The trip from New Orleans to the Caribbean islands was an experience to remember. Old "sugar tramps" exchanged stories, while newcomers sought to learn about their future working places. At the end of every Caribbean crop season, the "sugar tramps" left for new destinations:

Every outgoing steamer now carries a number of owners, chemists, superintendents and a few of the engineers for a well-earned holiday, and within the next few weeks things will be very quiet on the plantations.

The leading trade union in Puerto Rico expressed concern over the coming of sugar tramps. The Free Federation of Workers (Federación Libre de Trabajadores) criticized the outflow of monies by the contracting of U.S. technical personnel, specifically chemists, sugar boilers and mechanics.

Only two known exceptions in the tropical tour of "sugar tramps" broke the rule of male exclusivity. Guanica Centrale took the lead with the employment of Miss Jessie Farr as chief chemist in 1911. The other

133 See "Louisiana's Engineers', Chemists', and Sugar Makers' Association," LPSM, 47, no. 17 (21 October, 1921), pp. 272-273.
134 See "Louisiana Sugar News," LPSM, 53, no. 8 (22 August 1914), p. 120.
136 "La riqueza de Puerto Rico, ¿qué puede hacer la Legislatura?" Justicia (official organ of the Free Federation of Workers), 4 October 1914, p. 4. Louisiana State University also prepared Puerto Ricans, who occupied important positions in local colleges and sugar companies. For instance, Edmundo D. Colón, who obtained a Master of Science, was professor of chemistry at the College of Agriculture in Mayagüez, chemist at the Insular Experiment Station, director of the Bureau of Agriculture of the Department of Agriculture, and administrator and superintendent of field operations of Central Plazuela. Another graduate with an impressive sugar career was Francisco López Domínguez. See "Progressive Porto Rico," LPSM, 50, no. 13 (30 March 1918), pp. 194-195, and "Francisco López Domínguez, Secretary of Industry and Commerce," The Economic Review, June, 1939, pp. 34-38.
137 LPSM, 47, no. 19 (7 November 1911), p. 319.
took place in 1920 when the Haitian American Sugar Co., with a factory located outside Port-au-Prince, contracted five “Louisiana girls...who will be the first women to engage in sugar factory world in the western world.”\(^{138}\) The women were Inez Greenwood, Sidonia Gingry, Anne Haggerty, Irma Stevens and Alice Dean. Ms. Greenwood, daughter of a manager of the Belle Alliance plantation, had been head chemist at the Tally-Ho plant of the Murrels at Bayou Goula in the previous Louisiana campaign. Touted as the first time that women had been in charge of a factory laboratory, it seems that Guanica Centrale moved first. A. J. Greif occupied high positions in both companies so probably it was his initiative in the first place.\(^{139}\)

Generally, the different Caribbean sugar industries fell within their respective colonial or neo-colonial spheres. Few Louisiana men worked in the British sugar circuit (which included India). Yet, in 1907, J. W. Waldron was called to introduce Louisiana cane methods in the cane fields of a sugar factory in the British colony of Antigua.\(^{140}\) Others were L. Litty, a sugar boiler, and L. J. B. Mestier, chief chemist and superintendent, in Usine Ste. Madeleine in Trinidad.\(^{141}\)

In 1924, Overton D. Boyd, younger son of T.D. Boyd Sr., president of Louisiana State University, was appointed as sugar technologist in charge of the experimental sugar station at the Imperial College of Agriculture in Trinidad and Tobago. His appointment was considered a “compliment to the work of the sugar school” at Louisiana State University.\(^{142}\) Before his

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\(^{139}\) “The Redivivus of Hayti, the Black Republic,” LPSM, 57, no. 3 (15 July 1916), p. 36.

\(^{140}\) See “Sugar Industry Development in Antigua, B.W.I.,” LPSM, 39, no. 17 (26 October 1907), p. 259.


\(^{142}\) “Overton F. Boyd Appointed Sugar Technologist of the Agricultural College of Trinidad,” LPSM, 72, no. 17 (26 April 1924), p. 339. See also Arthur Rosenfeld to Overton F. Boyd, 17 August 1924, Family Papers, B 1, TDBPP, and “Overton Boyd,” Baton Rouge Morning Advocate, 27 November 1951. He was the author of “Plantation Granulated Sugar Direct from the Cane,” LPSM, 70,
appointment, he had been a chemist with Standard Oil and worked in the sugar industry in Louisiana, Mexico, Cuba, the Dominican Republic, Haiti, and the beet industry in California.

The different seasonality in cane and beet sugar regions allowed commuting by “sugar tramps.” A typical annual schedule of a “sugar tramp” started with the Louisiana campaign, which lasted from October to January, and then to travel to Cuba, the Dominican Republic or Puerto Rico for the crop months of January to June. The most enterprising ones continued to the beet campaign in the midwestern states or California. The seasons were not competitive but complementary, with important differences between the Louisiana and Caribbean crops:

In Louisiana, on account of the severity of our winter, cane must be harvested in the fall or winter or be killed. It is therefore only about eight or nine months old when worked in the sugarhouse. In tropical countries it is frequently fifteen and sometimes eighteen months old when harvested. Hence the superiority of tropical canes in sucrose over those grown in the southern part of this country. In the latitude of southern Louisiana, we make a crop every year, while in the tropics only two crops are made in three years. Our less yield per acre than in the tropics is therefore somewhat made up. But, per contra, in the tropics, they only plant cane once in four to six years, while we must plant every other year.  

In 1916, the New York-Porto Rico Steamship Line eliminated the New Orleans-Caribbean route because it was a losing proposition. By the 1920s, the “sugar tramp” started to disappear. Some, such as SPRSCO/

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144 Franklin D. Mooney, President, New York-Porto Rico Steamship Line, to Frank McIntyre, 6 April 1916, RG 350, BIA, E 5, B 417, D 2381-39, NA.
NJ’s French T. Maxwell and Daniel Thompson, settled in one central and spent their professional life there. Local labor substituted many others. One early example of substitution occurred also in Guanica Centrale. About 1908, when the “Louisianans...sugar boilers, a trade that was very select and hard to learn,” complained about the food, quarters and working conditions, the company replaced them with Puerto Ricans, whom they trained “for this key job at the factory.”

Most SPRSCO/NJ’s managerial factory personnel came from the United States, predominantly Louisiana, but in the cane supply part “most of the men seemed to come from the British Caribbean.” Guanica Centrale’s first cultivation manager, P. M. Todd, was born in St. Kitts in 1875. His father, E. G. Todd, was manager of Buckley’s Estate, owned by the absentee British peer, Earl of Hugh Mathew-LaNowe, and served as joint attorney of the proprietors of the Molyneux Estate. One of his brothers was also linked to the sugar industry, working first as manager of the Molyneux Estate and later at the Usine St. Madeleine in Trinidad in 1913. St. Kittian historian Glenn Richards says:

The Todds were not plantation owners but formed part of the managerial class, who managed properties and acted for absentee proprietors. Consequently, though white, they were not considered fully part of the upper crust of society by resident proprietary class.

About 1907, Guanica Centrale contracted Charles T. Murphy and Henry Bourne, white men from Barbados, to work with the U.S.

145 Edson, Sugar, p. 97.
147 E. G. Todd had been appointed to important posts in the crown colony government of the island.
148 Glenn Richards, “Phillip Manthorpe Todd (1st November 1875-13th September 1949),” p. 2. Dr. Richards, historian at the University of the West Indies, kindly sent the valuable above information on P. M. Todd. A solicitor, contemporary of P. M. Todd, Bryan King, said about the Todds: “They didn’t quite count as plantocracy.” Bryan King to Humberto García-Muñiz, 1 November 1984, Author’s Files.
Experimental Station in Mayagüez to breed and distribute new canes for its colonos. They undertook the work at two small experimental stations it had established, one in Santa Rita, midway from Guánica and Yauco, and the other in Hormigueros, south of Mayagüez. Guanica Centrale was also running experiments in the Ponce district. (See Table 4.2) SPRSCO/NJ hoped that it could develop a more resistant cane variety, with higher sucrose content. By 1908, Murphy and Bourne were producing seedlings, from several canes imported from Barbados, “among which were B-3412, B-3405 and B-376, exceptionally good canes for rolling canes.” In 1913, the U.S. station and Guanica Centrale were “producing seedlings, and judging by the success of this work in other countries, we have every reason to believe that varieties will be found which will be suited to the soil and other local conditions.” Tests on cane varieties appeared to have shown significant success:

they obtained practical results in their trials of varieties of sugar cane in the final selection of some of the foreign varieties and the creation in their seed plots of various new seedlings of magnificent qualities.  

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151 J. T. Crawley, “Agricultural Development in Porto Rico,” LPSM, 51, no. 17 (25 October 1913), p. 289. Crawley stated that the Otaheiti cane was the variety almost exclusively planted in former times in Puerto Rico and Cuba. A vigorous, healthy cane, with a fair percent of sucrose and high purity, it required rich, fresh soil and plenty of water. As in Puerto Rico most of the land was impoverished by long cultivation, it was largely superseded by the striped cane, which was also common in Cuba, and later a considerable amount of Catalina was grown. He added that many varieties of seedlings, particularly from Barbados, have been extended. These were Barbados nos. 208, 347 and 1753 and Demerara no. 117.

Table 4.2
Varieties Experiments in Ponce District

<table>
<thead>
<tr>
<th>Class of Cane</th>
<th>Tons per Acre</th>
<th>% Sucrose</th>
<th>Quality of Purity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otaheite</td>
<td>56.38</td>
<td>12.7</td>
<td>80.9</td>
</tr>
<tr>
<td>T-77</td>
<td>65.42</td>
<td>15.1</td>
<td>83.0</td>
</tr>
<tr>
<td>D-117</td>
<td>56.45</td>
<td>15.4</td>
<td>83.2</td>
</tr>
<tr>
<td>D-95</td>
<td>52.77</td>
<td>15.8</td>
<td>87.3</td>
</tr>
<tr>
<td>B-1753</td>
<td>52.99</td>
<td>12.8</td>
<td>13.4</td>
</tr>
<tr>
<td>Cristalina</td>
<td>52.08</td>
<td>13.4</td>
<td>79.3</td>
</tr>
<tr>
<td>D-74</td>
<td>49.01</td>
<td>17.6</td>
<td>88.4</td>
</tr>
<tr>
<td>W. Bamboo</td>
<td>47.52</td>
<td>13.2</td>
<td>78.1</td>
</tr>
<tr>
<td>Tiboo Mard</td>
<td>43.46</td>
<td>13.6</td>
<td>83.3</td>
</tr>
</tbody>
</table>

Note: Canes planted 5½ and 5¾, October, 1907, harvested December 22 and 23, 1908, all varieties fertilized, irrigated and cultivated alike, and weights taken at mill.

Source: Dr. D.W. May, "Varieties of Cane," Porto Rico Horticultural News 2.7 (July 1909), 1.

The introduction of cane varieties in the 1900s was an initiative of Dr. D. W. May, director of the Federal Experiment Station in Mayagüez. In securing new cane varieties, the intention was to produce hybrid canes that would allow profitable sugar production on a commercial basis, that is, greater tonnage per acre and thereby increase the sugar yield. Immunity or resistance to diseases and insect pests, high yield of sucrose, good millability, and good adaptive capacity to environmental and soil conditions were qualities required for breeding successful new varieties.

The first imported varieties, among which were D-74, D-95, D-117, T-77, B-347 and Yellow Caledonia, came to the island in 1904 from Audubon Park, Louisiana, and "a great many seedling canes from the

153 A letter designates cane varieties, showing the birthplace of the cane or the name of its breeder and a number, the one from the list. P.O.J. stands for Proefstation Oost Java, H for Hawaii, B for Barbados, S.C. for Saint Croix, Co for Coimbatore, D for Demerara, PR for Puerto Rico, EK for E. Karthaus and so on. B. H. means Barbados hybrid. See H. C. Prinsen Geerligs and R. J. Prinsen Geerligs, Cane Sugar Production 1912-1937 (London: Norman Rodger, 1938), p. 4.
British Island, especially Barbados” also arrived. In 1906, the Federal Experiment Station started cane breeding, but stopped when the Sugar Growers’ Association in 1910 established a sugar experiment station, at the urging of Jorge Bird Arias. They named J. T. Crawley, former director of the Insular Experiment Station of Cuba, first director of the station. An entomologist, a pathologist, a chemist, and a station superintendent joined him, all except one connected with the Audubon Sugar School of the Louisiana State University. The station was to study all phases of sugar production and its chief lines of work were the study and control of cane insects and diseases, soil studies, cultivation methods and varieties of sugar cane, including production of new seedling varieties.

The Sugar Growers’ Association could not continue to support an experiment station because of the free sugar crisis noted in the previous chapter. Several centrales fell into receivership. Others survived in precarious circumstances, with “only three centrals...left who can meet the expense of maintaining an experimental farm.” In March 1914, the Sugar Growers’ Association secured approval by the Legislature of a Joint Resolution transferring the station, with the name “Insular Experiment Station,” to the care of the Government of Puerto Rico. The transfer required the end of the Sugar Growers’ Association, so they formed another organization, the Sugar Producers’ Association, immediately.

Other centrales and interested parties did not take long to follow suit in the introduction of varieties. In 1911, Ponce’s Central Mercedita imported several Barbadian varieties, such as B-1809, B-3750, B-6293 and B-8660. That same year, the Fajardo Sugar Company, at the instigation of Jorge Bird Arias, established a nine-acre private experiment station,

155 See J. T. Crawley, First Report of the Director of the Experiment Station (San Juan: n.p., 1911), p. 31.
156 Memorandum for Record, [illegible], Major, U.S.A., Assistant to Chief of Bureau, 12 November 1913, RG 350, BIA, WD, E 5, B 4, NA.
157 Despite initial efforts to incorporate colonos, the Sugar Growers’ Association was composed mainly of centrales, who supported the organization by a tax of so much per ton of cane ground. See “Letter from Porto Rico,” LPSM, 52, no. 23 (6 June 1914), p. 391.
which served as substation of the Experiment Station. The station was to study fertilizers, liming, cultivation and planting tests; study, and to record and test different foreign and local sugar cane varieties. Harold J. Sewell, a colono in the Naguabo district, imported from J. W. Caldron, of Antigua, several canes. These canes became popular because of their good agricultural qualities. Some were the D-109, B-109 and St. Kitts Seedling, a sport of B-208, to which it reverted when grown in Puerto Rico.

Guanica Centrale and the U.S. station collaborated continuously, not limiting themselves to cane varieties. Initially, they worked together in investigations of soil fertility in Añasco and Yauco. As early as 1906, Dr. D. W. May, special agent in charge of the U.S. station, wrote “the elimination of the infestation of the cane borer in new planting in some fields had been done, at the suggestion of Greif, by soaking the cane before planting in a solution of lime water for 24 hours.” Guanica Centrale co-operated also with the experimental sugar station established by the Sugar Growers’ Association in 1910 on research to destroy the white grub.

Barbados’ migrant labor in other Caribbean sugar industries has been well-researched, particularly large migrations of many black workers to Guyana, Trinidad and Panama. Yet, the contribution of several white Barbadians, consisting of a transnational transfer of biological technology, such as Murphy and Bourne, has been overlooked. This contribution, at least in Puerto Rico and the Dominican Republic, was mainly

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158 Central Plazuela, Central Aguirre, and Central Fajardo established other substations.
159 See Rafael A. Veve, “Practical Results Obtained by Fajardo Sugar Company from its Experiment Station,” in Gilmore, The Porto Rico Sugar Manual, pp. 22-23.
in the cane supply side. Its origin lies in the crisis of the Barbados sugar industry at the turn of the century and the results of the experiments of John Redman Bovell and Dr. J. B. Harrison with cane seedlings' varieties and fertilizers.

This is not the place to dwell on the problems of the Barbadian sugar industry. Suffice to say that in the second half of the nineteenth century, cane diseases, the decline in sugar prices because of the competition of European bountied beet sugar, and the technological backwardness in sugar manufacture were the main culprits. Barbados' dependence on sugar was complete. The Report of the West India Royal Commission of 1897 said: "In Barbados there is substantially but one industry, one product, and one export -that of sugar." Yet, it must be highlighted that the Barbadian sugar industry was the only one in the Caribbean remaining in national hands until the 1990s.

Bovell's confirmation, with Dr. J. B. Harrison, of the fertility of cane seed by actual germination came at a time when the old Bourbon cane was under great attack by fungus diseases. The discovery of cane seed in the late nineteenth century opened the way for genetic improvement of the crop, which started in Barbados and then in British Guiana.

163 For a contemporary description see Report of the West India Royal Commission (London: Her Majesty's Stationery Office, 1897), pp. 29-34.
164 Report of the West India Royal Commission, p. 29.
166 Actual discovery of sugar cane seedlings took place in 1858 by J. W. Parris, owner of Highland plantation. Parris wrote an account in the local press, stating that the seedlings were from Bourbon, Transparent and native varieties of canes. They paid no attention to Pilgrim's discovery until 1888 when J. B. Pilgrim, following instructions from Bovell, then a superintendent of the Dodds Reformatory and Industrial School, informed him of a grass-like plant he could not identify. After Pilgrim's notification, Bovell and Harrison demonstrated the fertility of cane seed by actual germination experiments. Almost simultaneous to Bovell's confirmation of the propagation of cane by its seedlings, Dr. Beneke of Java had the same results. See "John Redman Bovell," LPSM, 82, no. 4 (26 January 1929), p. 61, and F. A. Hoyos, "John Redman Bovell (1855-1928)," Builders of Barbados (London: Macmillan Caribbean, 1972), pp. 83-89.
when Dr. Harrison moved there. Bozell propagated several Barbados cane seedlings and hybrids, some of which, as the B.H.-10(12), proved resistant to these diseases. He also studied the effect of manure on the cultivation of sugar cane. In recognition of his research work, Bozell was designated agricultural superintendent of cane field experiments. He developed new sugar cane varieties and their seed samples were sent to several experiment stations, including Audubon Park and Puerto Rico. By the early 1900s, Bozell had covered an ample field in the development of new varieties. He transcended the crossing of varieties and breeding for disease resistance and was breeding varieties suited to specific soil, climate, cultivation techniques, and disease conditions.

Another result of the sugar crisis was the appointment of a Royal Commission in December 1896 to study the causes of the depression and the general condition and future prospects of the British colonies in the Caribbean. One recommendation of the Commission, issued in 1897, was the organization of a scientific department to help the sugar industry. They immediately put the recommendation into effect. The Imperial Department of Agriculture for the West Indies was established with one of its main duties being the general improvement of the sugar industry. At that time, its experiments were regarded as "great service to

167 According to Dr. C. A. Browne, this “epoch-making development... revolutionized the agriculture of sugar cane not only in the United States but in all parts of the tropical and subtropical world.” C. A. Browne, Dr., Chief, Bureau of Chemistry, U.S. Department of Agriculture, “Some Historical Relations of Agriculture in the West Indies to that of the United States,” Agricultural History, 1, no. 2 (July, 1927), p. 31.

168 Bozell assisted other cane growing Caribbean islands. In 1899, he started the Skerrett’s Training School in Antigua, and began cane experiments in Antigua and St. Kitts. In 1910, St. Croix invited him to formulate a scheme for a department of agriculture, which led to the establishment of an experiment station in the Danish colony and the start of St. Croix’s own varieties from Barbados seedlings. In 1917, Bozell visited Guadeloupe and Martinique to report on the sugar industry, a service that led to the establishment of an agricultural experiment station in Guadeloupe.


170 Report of the West India Royal Commission, pp. 18-19.
IN MEMORIAM JOHN REDMAN BOVELL

En medio del presente año de felicidad, uno de los hombres que más bra
contribuyó al desarrollo de la industria azucarera del
sucro azucarero y del
Puerto Rico en parti
cular.

J. R. Bovell, en co
operator con Har
riko, prohibió hace
la aplicación de ce
velación del prolifera
de la Industria, que la
sceltad, que la
máquina de pa
el de la azucarera
Hacienda
Republique

La agricultura
portadera de
Rios a los domos de
Rios, a los domos de
Hacienda
Republique

Hom. John B. Bovell
Por sus años, anterior Director de Agricultura en Barbados, W. I.

4.9. John Redman Bovell [Revista de Agricultura de Puerto Rico, diciembre, 1929]

the planting community in the West Indies” and it was estimated that “fully one-half of the canes now cultivated in the West Indies are new canes yielding over large areas mean results ranging from 5 to 10 and up to 25 per cent higher than the older varieties.”

historian, Manuel Moreno Fraginals, sees the fertility of sugar cane seeds and the development of cane varieties as “the most significant revolution of the century as far as sugarcane is concerned.”

Bovell’s work served as the foundation for further research in the productivity of sugar cane:

It is largely this genetic work—though increased use of fertilizers, pest and disease control, and better extraction methods also contributed—which during the century from 1850-1950 caused the yield of cane-sugar obtainable per acre to rise tenfold, an achievement probably not matched by any other crop in the world.

Barbados’ connection with SPRSCO/NJ was a direct outcome of Bovell’s research with cane. Guanica Centrale employed several persons working directly with Bovell, such as Murphy and Bourne. No information has been found on Murphy, except that he worked with Bovell in the early 1900s. Bourne came to the employ of Guanica Centrale when he was in his mid-20s on Bovell’s recommendation. Bourne worked initially as assistant cultivation manager in Santa Rita, and later as cultivation superintendent of the Añasco district (Pagan Division) in the western coast of the island. In the 1920s, he took over the experimental work in Central Palma, Cuba, for a short time, but returned to work with SPRSCO/NJ, now with Central Romana. In 1909, Bovell himself

172 Moreno Fraginals, “Agricultural Backwardness...,” p. 129.
175 While at Santa Rita another Barbadian, P. L. Robinson, assistant cultivation manager, worked together with Bourne. See Kathleen Bourne, interview with author, 23 May 1989, Christ Church, Barbados. Also present Betsaida Vélez Natal and Joyce Gale.
176 Rafael Menéndez Ramos, “Experiences with Sugar Cane Varieties in Oriente Province, 1923-1927,” LPSM, 81, no. 5 (4 August 1928), p. 82. Bourne published an article entitled on varieties. See “Un estudio de las variedades de caña de azúcar con el objeto de clasificarlas,” Revista de Agricultura (Dominican Republic), 9, no. 6 (September, 1913), pp. 546-554.
was brought over by Guanica Centrale to examine some diseased canes, five years before the overdue identification of the mosaic outbreak that almost killed the sugar industry in Puerto Rico.\textsuperscript{177}

The scientific knowledge of the Barbadians employed became well known. A Puerto Rican sugar expert said Guanica Centrale “maintained for a long time competent men in charge of experiment projects which it has considered important for its business.”\textsuperscript{178} Besides their scientific training in sugar cane, the hiring of white Barbadians to take charge of the cultivation of South Porto Rico's agricultural divisions had other advantages. Being native to the Caribbean gave white Barbadians a certain familiarity with the terrain, climate, and, to a certain extent, the society. On the other hand, communication with the Louisiana-born and trained middle and top management was easy, as English was their native language. Also their class, color and race attitudes conformed more in their social outlook with the U.S. management than to the Puerto Rican ones.\textsuperscript{179} The forced emigration of many blacks because of lack of jobs was said to be “compulsory parting,” but for white Barbadians a cause for sadness:

It must be remembered that the scarcity of good places for young men of the middle and upper classes is a serious problem, one of which numberless [sic] families come to grief and have to break up and be scattered to the four corners of the earth...they left because Barbados has nothing to offer them. They are exiles.\textsuperscript{180}

\textsuperscript{178} Colón, “Agricultural Experiment Stations,” p. 477.
\textsuperscript{180} McClellan, \textit{Some Phases of Barbados Life}, pp. 48, 49.
In summary, the SPRSCO/NJ mobilization of German capital, Louisianian management and sugar manufacture technology, and Barbadian biological technology and field supervision was a resounding success. Financial management, risk capital for underwriting and expansion, marketing of its sugar, and first management teams with knowledge of the local terrain came from the German connection. Fritze, Lundt & Co. was probably Puerto Rico's most influential firm, dealing with the islands' three main cash crops, banking, shipping, and insurance.

SPRSCO/NJ's board of directors included an interesting mix of expertise in banking, insurance, machinery, legal, maritime and sugar business in Puerto Rico and the United States. The German element was clearly predominant. William Schall Jr. ran the financial side of the company. The New York office was in charge of SPRSCO/NJ's purchase of supplies and machinery and the sale of its raw sugar. In SPRSCO/NJ's office in 44 Wall Street, Dillingham was responsible for "diplomatic, technical and administrative as well as legal problems."  

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top of SPRSCO/NJ's managerial hierarchy. A large part of SPRSCO/ NJ's success was due to Dillingham. Dillingham -first secretary of the company and president from 1917 to 1940- acquired an unusual grasp of the problems involved in growing, making and marketing sugar. SPRSCO/NJ's 50th report confirms his contribution to the firm by saying that "the company bears the stamp of his ability perhaps more than that of any other man." 182

The Louisiana connection provided management, as well as sugar manufacture and cultivation technology, in the Caribbean theater. Louisianian Adrian J. Greif set in motion a modern managerial system, but his lack of specialized knowledge in sugar led to mistakes that cost him his position. His successor, French T. Maxwell, continued using the Greif's managerial system that had made Guanica Centrale renowned

in the sugar world. His Louisiana State University-specialization in sugar manufacture was a key element necessary for the success of Guanica Centrale. Maxwell's administration was so efficient that it lasted up to 1941. When Frank A. Dillingham died in August 1941, French T. Maxwell succeeded him as chairperson of SPRSCO/NJ's board of directors.

By military force, the United States started a colonial political and economic relationship with Puerto Rico. U.S. investments, including SPRSCO/NJ's businesses, inserted Puerto Rico into the sphere of influence of U.S. eastern capital in the Hispanic Caribbean. The German origins of New York-based capital, with links with its counterpart in Puerto Rico, are a novel element in that colonial relationship. Moreover, the discovery of a connection between Louisiana's sugar technology and management and the Hispanic Caribbean sugar industry presents a more comprehensive picture of capital relations inside the United States and of the United States with the Caribbean. U.S. eastern capital harnessed southern managers and technicians to operate their enterprises in the Caribbean.

The experimental stations established in Puerto Rico meant the institutionalization of research efforts on cane varieties and related areas, with Barbados' biological technology as the major influence. Barbados, in the forefront of cane research and agriculture in the Caribbean, supplied SPRSCO/NJ with trained technical personnel to run the cane supply area, an inter-regional and inter-colonial transfer of biological technology. To be a profitable corporation, SPRSCO/NJ broke the traditional Caribbean metropolitan colonial arrangements and reached for Barbadian biological technology.
In 1910, SPRSCO/NJ astounded the sugar world with large acquisitions of land in La Romana, a small village in eastern Dominican Republic. The company cultivated sugar cane for milling at Guanica Centrale in Puerto Rico. Certainly, it was the only time that sugar cane was shipped from one independent state, the Dominican Republic, to a colonial territory, Puerto Rico.

In this chapter, as background to this milestone, the growth of the sugar industry in the Dominican Republic from the mid-nineteenth century until 1920, with particular emphasis on the eastern side of the country, will be outlined. Then, I will focus on the evolution of La Romana itself. I will describe how it grew from an isolated coastal village, surrounded by hinterlands used for cattle raising, into a sprawling port town used to market commercial agriculture for the entire El Seibo province. Later, with SPRSCO/NJ’s arrival, it becomes a center for large-scale sugar plantation agriculture and home to the world’s largest sugar factory.

In the second half of the nineteenth century, after the War of Restoration that expelled Spain for the second and last time from the Dominican Republic, the Dominican sugar industry experienced a revival. The renaissance came because of both national and international
factors.¹ On the international scene, two armed conflicts reduced the amount of sugar on the world market and boosted sugar prices: the U.S. Civil War (1861-1865), which destroyed Louisiana's sugar industry; and the Franco-Prussian war (1870), which affected the production of sugar beet. Also, the sugar industry in some British Caribbean colonies suffered a structural crisis because of soil exhaustion, technological obsolescence, and the loss of influence of the West India Committee in England.

Another armed conflict—Cuba's Ten Years War (1868-1878)—prompted the relocation of sugar capitalists and technicians from Cuba to the Dominican Republic. About 3,000 people—both Cuban and foreign born—migrated to the Dominican Republic.² These migrants proved crucial to reviving the Dominican sugar industry. In 1872, Cuba's Carlos Lohnaz, a nationalized U.S. citizen, built La Isabel, the country's first steam-driven mill, in the Maritime District of Puerto Plata.³ The revival first began on


³ The steam-mill machinery was imported from the United States and set up by J.V. Paicurich, a Cuban engineer who graduated from the New York Institute. Lohnaz was associated with Allen H. Crosby in a Wall Street importing firm known as Lohnaz & Crosby, Inc. Among his commercial references was Moses Taylor, from City Bank. While in the Dominican Republic, Lohnaz and his brother Diego established a company called Lohnaz Brothers, which dealt with import, export, and commission business. Juan J. Sánchez claims that another Cuban, Joaquin M. Delgado, built the first steam sugar mill, La Esperanza, near Santo Domingo in 1874. See Sánchez, La caña, p. 29, and Jaime de Jesús Domínguez, Notas económicas y políticas sobre el periodo julio 1865-julio 1886, vol.1 (Santo Domingo: Editora de la Universidad de Santo Domingo, 1983), pp. 306-312.
the outskirts of the capital city, Santo Domingo. It spread to San Pedro de Macorís in the east and Puerto Plata in the north. Also producing, but in smaller quantities, were such towns as Azua, Baní, Palenque, Ocoa, and Samaná. By 1882, about 30 ingenios operated nationwide. They were individually owned, mainly by foreigners, used a mix of mechanized and semi-mechanized technology, and contracted colonos and employed a predominantly Dominican wage labor force, though Puerto Rican, coco loco and Haitian workers were already present.⁴

On a national level, the sugar industry also received a boost from government policy to grant tax concessions and exclusive franchises.⁵ The government first granted concessions to six individuals from 1873 to 1875, but the projects never materialized. Starting 1875, under the administration of President Ignacio González, it began a more generous system of franchises. They included land grants, permits to import foreign workers and exemptions from import duties for sugar machinery (such as steam mills), food provisions to feed the peons for three years, and waivers on military service for Dominican laborers. The French consul, A. C. Garrus, wrote in 1880 that

In many plantations [of sugar cane] ready for production or in the process of installation, proprietors are looking for ways to benefit from the many concessions of every type given by the Dominican government, without exceptions of nationality.⁶

⁵ For the most comprehensive analysis, see Lluberés, “The Sugar Industry,” pp. 36-41. See also Domínguez, Notas, pp. 92-95, and Mu-Kien Sang, Ulises Heureaux. Biografía de un dictador (Santo Domingo: Instituto Tecnológico de Santo Domingo, 1989), pp. 41-50.
The policy reached its climax during the Ulises Heureaux dictatorial regime (1883-1899). Heureaux, known as Lilis, had financial backing from the leading merchants and owners of sugar ingenios. In return, he favored them with broad franchises and concessions.\(^7\) The sugar industry expanded so greatly during his regime that the balance of social power shifted from the tobacco-coffee-cocoa producing Cibao region in the north to the sugar producing in the east and south.

Heureaux’s principal financial supporter was Juan Bautista Vicini, a top merchant-turned industrialist, of Italian origin. For the 1891-92 crop year, his five ingenios produced 22 percent of the total national harvest. Heureaux, known for his witty remarks, reportedly said of Vicini: “As you should know, I am only the Vice President. The President is Don Juan, who is the owner of the money.”\(^8\) Heureaux also had ties with William L. Bass, who ran three ingenios: Consuelo, La Fe, with J. E. Hatton, and Duquesa, with Van Krosigh; as well as with the Cambiaiso brothers of Ingenio San Luis; and John Hardy, of Central Ansonia.

In eastern Dominican Republic, the sugar industry concentrated in San Pedro de Macoris. U.S. visitor Samuel Hazard noted the sugar potential in the area in 1873:

This...country...so well adapted to sugar estates...remind me, by their extent and character, of the vast sugar plains of Cuba. These are now occupied but by roving herds of cattle and their attendant 'hateros' or herdsmen.\(^9\)

San Pedro de Macoris had been part of the province of El Seibo until 1882, when it was separated and declared a Maritime Province.\(^10\)

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\(^8\) Quoted in Sang, *Ulises Heureaux*, p. 56.


\(^10\) “Núm. 2013-Decreto del C.N. erigiendo a San Pedro de Macoris en Distrito marítimo,” *Colección de leyes... 1881-1883*, vol. 8, pp. 204-206.
In 1883, the provincial port was declared open to foreign import and export trade.\textsuperscript{11} Sugar transformed the fishing village known as Mosquitisol, meaning mosquitos and sun. From a small trading center that produced mostly plantains, coconuts and minor crops for sale to Santo Domingo, it became "the first center of [sugar] production of the Republic."\textsuperscript{12}

The transformation began in 1876, when Cuba's Juan Amechazurra, an experienced sugar professional (\textit{azucarero de profesión}), planted cane seed he brought from his native land and built Ingenio Angelina. The results were so magnificent that he publicized them in several newspapers in Cuba, by that stimulating further migration to the Dominican Republic. In 1879, another Cuban, Santiago Mellor, also a nationalized U.S. citizen, built a second sugar mill, Ingenio Porvenir. By 1884, seven sugar mills surrounded San Pedro de Macoris. Nine years later, in 1893, these ingenios produced 484,000 quintals of a total national production of 721,000 quintals.\textsuperscript{13}

In the early 1880s, world sugar prices plummeted because of high production of European bountied beet sugar. Beet sugar output had represented just 16 percent of world output in mid-nineteenth century, but rose almost to a par with cane by 1880.\textsuperscript{14} Low world prices coincided with high domestic prices within the Dominican Republic. Monetary instability in the country also devalued workers' wages and prompted difficulties in contracting local workers.\textsuperscript{15} The Dominican sugar industry entered a crisis phase. Between 1884 and 1890, at least fourteen mills went into bankruptcy or closed. Of those remaining, some survived by changing owners or by consolidating with other functioning mills.\textsuperscript{16}

\begin{itemize}
  \item \textsuperscript{11} "Núm. 2156-Resolución del C.N. habilitando el comercio exterior al puerto de San Pedro de Macorís," \textit{Colección de leyes...} 1881-1883, vol. 8, p. 555.
  \item Sánchez, \textit{La caña}, p. 41.
  \item See Table 2.3 in Ph. G. Chalmin, "The Important Trends in Sugar Diplomacy Before 1914," in Albert & Greves, eds., \textit{Crisis and Change}, p. 12.
  \item For further elaboration, see William L. Bass, \textit{Reciprocidad. Exposición presentada al Gobierno de la República Dominicana} (Santo Domingo: Imp. La Cuna de América, 1902), pp. 77-83, 85-98.
  \item Del Castillo, "The Formation...," pp. 224-227.
\end{itemize}
The monetary problems were resolved in September 1899, when the U.S. dollar was adopted as the national currency. Still, with continued low prices on the world sugar market, the Dominican peasant chose to remain on his own provision plot (conuco). Sugar producers resorted to importing workers from the Canary Islands and other Caribbean sites.

The first wave of immigrants to San Pedro de Macorís came from Puerto Rico and the Canary Islands. In the 1880s, Juan Serrallés, a resident of San Pedro de Macorís and member of the well known Puerto Rican sugar family, brought over some fellow compatriots for field work in his Ingenio Puerto Rico. Larger contingents were introduced in 1893 both by William L. Bass for his Ingenio Consuelo and by the Immigration Society (Sociedad de Inmigración), an association joining sugar producers, colonos, and money lenders, which imported more than 200 Puerto Rican families contracted by Corsica-born Juan M. Santoni.

In the most comprehensive work on the Dominican sugar cane industry in the nineteenth century, *La caña en Santo Domingo*, Juan J. Sánchez noted a fundamental contrast in population density between the Dominican Republic and Puerto Rico that contributed to the migration:

> The territory of the Dominican Republic is empty, while the island of Puerto Rico is packed. They have tried to

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17 “Número 3923-Decreto del G.P. estableciendo el patrón oro en la República,” *Colección de leyes... 1898-1899.*, vol. 15, pp. 263-264.

18 Conuco, an indigenous term, has been defined as “the provision plot of most Dominican peasants...generally measuring 20 tareas [about 3 acres] and planted with plantains, sweet potato, pumpkin and other nutritious plants.” José Ramón López, “La caña de azúcar en San Pedro de Macorís, desde el bosque virgen hasta el mercado,” 2. *Ensayos y artículos* (Santo Domingo: Ediciones de la Fundación Corripio, 1991), p. 76.

19 Some Puerto Ricans also migrated to the Dominican Republic for political reasons, such as Ramón Emeterio Betances and Eugenio María de Hostos. Betances became active in the movement against the U.S. annexation in the 1870s, while Hostos made a significant contribution to the intellectual life of the country. See Andrés A. Ramos Mattei, *Betances en el ciclo revolucionario antillano: 1867-1875* (San Juan: Instituto de Cultura Puertorriqueña, 1987), and Emilio Rodríguez Demorizi, ed., *Hostos en Santo Domingo*, 2 vols. (Ciudad Trujillo: Imprenta Vda. García, 1939).

20 These Serrallés were the same family that owned Central Mercedita in Ponce, Puerto Rico. See Ramos Mattei, *La hacienda azucarera*. 

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bring several contingents not only for the sowing of sugar cane, but also for employment in the cultivation of other tropical fruits.  

In fact, Sánchez said he wrote his book convinced that Puerto Ricans and Cubans would migrate to the Dominican Republic, "if they had news of what has been done in agriculture."  

By 1899, a report by U.S. consuls in Santo Domingo and Puerto Plata counted 1,142 Puerto Ricans in San Pedro de Macoris, 144 in Santo Domingo, 35 in Puerto Plata, 15 in Azua, and 10 in Sánchez. Just one year earlier, 48 had written the U.S. consular agent in San Pedro de Macoris to volunteer for service in the Spanish-Cuban-American War. The group, all members of the "Sons of Lares" club, said it was following the lead of the Puerto Rican chapter of the Cuban Revolutionary Party, and offering to enlist "as volunteers in the files [sic] of your powerful Army, vowing to die fighting in defense of your glorious FLAG."  

Puerto Ricans began to migrate in large numbers at the turn of the century amid the crisis caused by U.S. government policies and devastation after hurricane San Ciriaco in 1899: "Most of them have gone to Honolulu, some thousands have gone to Cuba, and a few to Santo Domingo." Puerto Rican workers traveled to the Dominican Republic to work in sugar as well as in cocoa, coffee and banana industries:

Every steamer coming from Porto Rico brings its full complement of immigrants. They say that since the hurricane, there is very little work to be got, and as most of their

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21 Sánchez, La caña, pp. 80-81. (My translation)  
22 Sánchez, La caña, p. 11.  
23 C. L. Maxwell, Consul General, Santo Domingo, to David Hill, 26 September 1899, RG 84, F 87176, B 636, NA.  
24 [To the] U.S. Consular Agent at San Pedro de Macoris, 20 April 1898, RG 84, F 87176, B 636, NA. The club was named after a Puerto Rican mountain town where a failed pro-independence uprising took place in 1868.  
cropswere destroyed, they are coming here to work on the sugar estates . . . 26

Early in 1902, 22 Puerto Ricans living in San Pedro de Macoris wrote to Luis Muñoz Rivera, Puerto Rico’s resident commissioner in the U.S. Congress, that they had been “forced by necessity to leave our beaches,” and hoped that the new year brings “happy days” to “our patria now suffering humiliation and ignominy from those hidden under the stars and the stripes.” 27

The social composition of the Puerto Rican migration was mixed. Puerto Rico’s colonial governor, Charles Allen, said “most...are of the poorest class of laborers... Very few of them have the least rudiments of education.” 28 Yet, Puerto Rican newspaper La Correspondencia contended that “not only are laborers migrating, but also professionals and men with a trade. They are small property owners that abandon their country estate and go to another country to look for what is lacking here.” 29

Still, the Canary Islanders and Puerto Ricans did not remain long as rural workers, but moved to urban areas. Bass started importing cocolos, “those natives of the English, Danish, Dutch, and French Windward Antilles”. 30 By the end of the century, cocolos were the main field labor

28 First Annual Report, p. 75.
29 La Correspondencia, 1 April 1901. Quoted in Rosario Natal, Exodo, p. 33.
30 Later, in 1917, with U.S. purchase of the Danish Virgin Islands, cocolos from St. Thomas, St. Croix, and St. John would be from the U.S. Virgin Islands.
force for sugar properties around San Pedro de Macorís." In 1907, noted journalist and intellectual José Ramón López wrote that

...during the recent years, they have been an essential and indispensable resource for the ingenios. In times of peace, the Dominican campesino does not like to be a professional jornalero, but only by chance, when he does not have anything to do in his conuco. In times of war, he does not venture to work through the woods for anything in the world. So, if there had not been people from the Lesser Antilles in this country, cane harvests would have been impossible during these years of upheavals and revolts.32

The United States was the market for the revived Dominican sugar during the nineteenth century. The Dominican Republic was the ninth largest U.S. supplier, exporting 16.4 million pounds.33 Like other sugar cane producers in the Caribbean and worldwide, the Dominican Republic was allowed to export only lower-grade sugar that did not compete with the refined product made by the U.S. Sugar Trust. In 1888, the Spanish author José Ramón Abad, then based in the Dominican Republic, deplored this reality in a book commissioned by the Dominican government:

Our market is the American Union, and so, despite huge capital investment in mill equipment, we don’t produce sugar directly for consumers. Instead, we make products at the mercy of another powerful industry: the sugar refiners.

32 López, "La caña de azúcar," p. 78.
They enslave us and monopolize at will, because they are strong enough to force artificial declines in the price of what should be a final product, which we sell as raw material in the market.34

The United States imposed tariffs to encourage entry of low-grade sugars and block imports of refined sugar. The Dominican Republic and Spain tried unsuccessfully to negotiate a free trade agreement with the United States as early as 1884 to gain tariff-free access for refined Dominican and Puerto Rican sugar. Only when President McKinley temporarily exempted sugar from all U.S. duties between 1891 and 1894 did Dominican sugar expand significantly and centrales started to be built. In 1892, Cuban-born Juan Fernández Castro began building Central Quisqueya in San Pedro de Macoris; in 1893, Hugh Kelly and Franklin Farrell bought the mill Carlota in Azua and changed its name to Ansonia; and in 1894, Juan Bautista Vicini built Central Azuano, also in Azua.35 After the reinstating of U.S. tariffs, Dominican expansion again slowed. They established only another central factory during the rest of the decade. It was Ingenio Amistad, built in Puerto Plata in 1899, with the participation of Italian-born Rodolfo and Augusto Bentz, Juan N. Folch and Juan Martínez.36

35 Concessions were also granted, with no results, to Enrique Henríquez and Arturo Damirón to build Central Pacíficador in Azua and to Luis Lamar to build a central factory in the middle of the Cibao. See “Núm. 3193-Resolución del C.N. concediendo a los Sres. Enrique Henríquez y Arturo Damirón el derecho de establecer un ingenio central en Azua,” and “Núm. 3194-Resolución del C.N. aprobando las franquicias concedidas por el P.E. al Sr. Luis Lamar para establecer un ingenio de caña en el centro del Cibao,” Colección de leyes... 1891-1892, vol. 12, pp. 366-368, 368-369, and “Núm. 3410-Concesión otorgada por el P.E. al Señor Juan B. Vicini para establecer un ingenio central en la común de Azua,” Colección de leyes... 1893-1894-1895, vol. 13, pp. 273-276.
Dominican efforts to gain tariff-free entry to the U.S. market were dealt a further blow after the Spanish-Cuban-American War ended in 1898. As the United States took possession of the Philippines and Puerto Rico, it gave those territories free entry for their sugar cane products. Later, the United States also signed a reciprocity treaty with Cuba, giving the world's largest sugar producer preferential access as well.

Even repeated bids by U.S.-owned firms in the Dominican Republic failed to sway the U.S. government to give free entry to the Dominican products. The companies' spokesperson, William L. Bass, known as "Dutch Standard Bass," went as far as to write a book, Reciprocidad, advocating a reciprocity treaty with the United States. 37 He said of the crisis affecting the Dominican sugar industry then, "only a few sugar mills survived, and those that did were on the verge of bankruptcy." 38 The Cuban Reciprocity Treaty of 1903 was judged to be "the deathblow to the sugar industry in Santo Domingo." 39

With the 1902 signing of the Brussels Convention limiting subsidies on beet sugar production, world sugar prices rose slightly for the first time in half a century. As a result, the world cane sugar industry, including the Dominican industry, started to revive, with new investments and increased production. 40 The relative share of cane in world sugar production rose from 35 percent at the turn of the century to almost 50 percent in 1910.

Meanwhile, Dominican producers also received a national boost. In 1902, they obtained full tax exemptions on their exports of sugar. The government reversed the incentives in 1903, but after a tug-of-war with business, it finally reinstated the incentives in 1909 to stimulate Dominican sugar development. 41

37 See Bass, Reciprocidad.
38 Bass, Reciprocidad, p. 39.
40 The Brussels Convention, which stipulated the suppression from 1 September 1903 of all direct and indirect bonuses benefiting sugar production, affected solely beet sugar. For details, see Chalmin, "The Important Trends...," pp. 9-19.
41 See "Núm. 4253-Decreto del C.N. que declara libre de derechos la exportación del azúcar," Colección de leyes... 1902-1904, vol. 17, pp. 5-7, and
In 1907, 14 sugar mills operated in the Dominican Republic. Four belonged to the inheritors of Juan Bautista Vicini’s estate and were organized under the New Jersey-incorporated General Industrial Company. Bartram Brothers owned three; Hugh Kelly, of New York, three; one to the Cuban Nariño Sisters living in Paris; and Puerto Rico’s Serrallés and Michelenia families, one each. Foreign capital, principally U.S.-based, held more than 60 percent of sugar cane land. The axis of the sugar industry remained unquestionably in San Pedro de Macorís; its seven mills represented 67 percent of the total cultivated sugar lands.42

5.1. The Michelenia-Bellvé y Pou-Cardona Family, photo taken in Germany, 1910: (Sitting from left to right) Avelinita, Don Santiago, and Evangelina. (Standing from left to right: Santiaguito, Doña Avelina and Oscar. [CSM, CIH/UPR/RP]


42 del Castillo, "The Formation...," p. 220.
In general terms, the Dominican industry was not up to par in machinery and techniques. The renowned Dutch sugar specialist, H. C. Prinsen Geerligs, gave this description:

The factories are still installed in a rather old-fashioned way. In most cases, cane is only crushed once, and even should it be crushed more often, maceration is dispensed with. The juice is purified by clarification and by subsiding; filter-presses are seldom used, and for want of them, the mud is simply caused to run off. The juice is evaporated and treated in triple-effects and vacuum pans. The sugar, a first product of 95-97 polarization, is packed in bags; while the seconds of 86° polarization are sometimes remelted. The exhausted molasses is used either for manufacture of rum or is thrown away.43

5.2. Residence of Santiago Michelena, Gazcua, suburb in the city of Santo Domingo, Dominican Republic. [Blue Book of Santo Domingo/Libro azul de Santo Domingo, New York, Klebold Press, 1920, 41]

Dominican producers did not immediately feel the impact of U.S. tariff-free entry for Puerto Rican, Philippine and Cuban sugar. With world prices high and European beet sugar exports down, they found an alternate market in Canada. Between 1902 and 1909, Dominican raw

sugar exports more than doubled, from 45,000 tons to 93,000 tons. Yet, by 1910, only 2 percent of the Dominican sugar went to the U.S. market. Table 5.1 shows that the primary market became Europe. José Ramón Abad was partly right when he had predicted back in 1888 that “the sugar market of the United States is a half-open door that for us will never open, and that probably, will close suddenly and abruptly over our heads.”

Table 5.1
Sugar Production in the Dominican Republic
for Season Ending July, 1910

<table>
<thead>
<tr>
<th>Estates</th>
<th>Sacks</th>
<th>Pounds</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Isidro Central</td>
<td>314,185</td>
<td>10,939,000</td>
<td>870 sacks of 300 lbs went to London, balance for home consumption</td>
</tr>
<tr>
<td>San Luis Central</td>
<td>14,200</td>
<td>4,115,094</td>
<td>Destination of three centrals, 14,596 sacks of first quality and 319 of second to Canada, most of rest to England Some lots to Belgium</td>
</tr>
<tr>
<td>Yngenio Italia</td>
<td>35,448*</td>
<td>11,166,120</td>
<td></td>
</tr>
<tr>
<td>Central Azuano</td>
<td>24,863*</td>
<td>7,381,845</td>
<td></td>
</tr>
<tr>
<td>Yngenio Ocoa</td>
<td>9,988*</td>
<td>3,146,220</td>
<td></td>
</tr>
<tr>
<td>Yngenio Angelina</td>
<td>125,082*</td>
<td>39,400,830</td>
<td>15,000 sacks to Belgium; 89,699 to England</td>
</tr>
<tr>
<td>Central Ansonia</td>
<td>28,339</td>
<td>9,068,480</td>
<td>Europe</td>
</tr>
<tr>
<td>Consuelo</td>
<td>136,000</td>
<td>43,520,000</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Cristobal Colón</td>
<td>89,500</td>
<td>28,640,000</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>73,700</td>
<td>23,584,000</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Quisqueya</td>
<td>61,000</td>
<td>19,520,000</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Porvenir</td>
<td>48,500</td>
<td>15,520,000</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Total</td>
<td>680,805</td>
<td>216,451,789 or 99,630 tons (long)</td>
<td></td>
</tr>
</tbody>
</table>

*Sacks contained 315 lbs. each. All others 320 lbs., except those of San Luis Central.

Source: RG 350, E 10. B SD1-469 to SD-66-20, D SD-55-3, NA.

46 Abad, La República Dominicana, p. 320.
The U.S. presence in the Dominican Republic extended beyond sugar production to other sectors as well, including finance, trade and shipping. In the 1890s, holdings of U.S.-owned Santo Domingo Improvement Company “included the national bank, one of the country’s two railroads, and most of the national debt, the latter secured by a lien on Dominican customs revenues.” For many years, U.S.-based Clyde Line operated a steamship service to the Dominican Republic with a monopoly concession. Despite cuts in sugar sales to the U.S. market, the United States still accounted for 62 percent of Dominican exports in 1910.

The establishment of U.S. receivership over Dominican customs in 1905 was a prime example of increasing U.S. control of Dominican finances. Justified in Washington by the Roosevelt Corollary to the Monroe Doctrine, the receivership allowed U.S. customs agents to take over collection of Dominican customs duties, keeping 55 percent of revenues to pay foreign claimants and giving the remaining 45 percent to the Dominican government. In 1907, both governments agreed to convert the accord into a treaty. The Bureau of Insular Affairs of the U.S. War Department assumed the administration of the receivership.

U.S.-based sugar producers in the Dominican Republic backed the U.S. intervention in custom duty collection. Hugh Kelly & Co. wrote directly to President Theodore Roosevelt, noting it had investments of “vast economic importance to the welfare of Santo Domingo itself,” and urging the president to “exert all the influence and authority” of his “exalted office” and to “Cubaize” the Dominican Republic when possible. The firm was worried because a blockade of Dominican ports had been proclaimed just as its cane was being harvested. William L. Bass also

48 The Division of Customs and Insular Affairs was established in the Office of the Secretary of the War on 1898 to administer all matters relating to customs and civil affairs in the island territories acquired by the United States because of the Spanish-Cuban-American War. They later changed their name to Bureau of Insular Affairs.
repeatedly requested intervention, even hinting that Dominican authorities were pro-German. Elías A. de Lima, president of the Battery Park National Bank of New York and son of a Dominican father, further asked that the United States guarantee peace and stability in the country.

Despite these growing ties, the U.S. market was inexorably closing to Dominican sugar. Neither the Dominican government nor U.S. sugar interests in the country had sufficient influence in Washington to overcome special interest groups opposed to their duty-free entry into the U.S. market, namely the U.S. beet and cane sugar producers as well as Cuban, Puerto Rican, Hawaiian and Philippine sugar interests.

While sugar flourished in other areas of the Dominican Republic, the province of El Seibo, in the country’s southeastern region, depended on cattle raising as its prime economic activity into the late nineteenth century. The province had exported mainly to the French colony of Saint Domingue, but lost that market when Haiti declared independence. Still, exports played a role for the area that included the towns of Hato Mayor, Higüey, Jovero, La Romana, Ramón Santana and Seibo. In 1877, the Dominican government decreed La Romana as a port for exports of bovine cattle. Indeed, throughout the Heureaux dictatorship in the 1880s and 1890s, the most prominent man in the province was rancher Tomás Demetrio Morales, a “regional cacique,” who reportedly “benefitted from the best that the Liliís regime bestowed to a politician.”

50 In 1870, a journalist of The Herald wrote: “In this province, the principal source of revenue is cattle-raising, though considerable quantities of mahogany are also cut.” DeB. Kiem, San Domingo. Pen Pictures and Leaves of Travel, Romance and History, From the Portfolio of a Correspondent in the American Tropics (Philadelphia: Claxton, Remsen & Haffelfinger, 1870), p. 311.
51 “Número 1631-Decreto del P.E. habilitando los puertos de la Romana y puerto viejo de Azua, exclusivamente para la exportación de ganado mayor de pata hendida”, Colección de leyes... 1876-1880, vol. 7, p. 259.
53 Rufino Martínez, Diccionario biográfico-histórico dominicano 1821-1930 (Santo Domingo: Editorial de la Universidad Autónoma de Santo Domingo, 1971), p. 331. Morales is named governor of El Seibo because he did not want to leave the province. During the Liliís regime, he headed nearly all ministries. At one point, he led the Interior and Police (Interior y Policía) and War and Navy (Guerra y Marina) by appointment and three others on an interim basis, while their full-
La Romana traditionally ranked behind San Pedro de Macoris as the second largest trading post in eastern Dominican Republic. Some claim it got its name—meaning steel yard—from a place called La Cueva, on the Romana River, which featured a steel yard and a small wharf. Exports from El Seibo, including hides, wax, honey, cocoa, and minor crops were weighed at that wharf and shipped to Santo Domingo, San Pedro de Macoris and occasionally, to other countries. In 1873, U.S. visitor Hazard observed, "The products of this section [Seibo] are shipped at the romantic port of Romana on the coast, which is capable of being made into a good harbor for the extended agricultural products."

In 1893, export commercial agriculture in El Seibo made inroads before the cultivation of sugar cane. Historian Juan J. Sánchez claimed cocoa planted in El Seibo and Higuéy was "known as the best on the island; its demand is increasing from Europe." Yet, overall, Dominican cocoa was of poor quality and fetched low prices on the world market. Some coffee also was raised in El Seibo and tobacco in Higuéy, but they too were of low quality and commanded low world prices. As of 1888,

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54 The most respected local historians reject this claim, citing writings before the steel yard that already refer to the river as Romana. See Félix María Piña, "Reseña histórica de La Romana," La República (San Pedro de Macoris), no. 18 (26 May 1953), pp. 22-23, and Vetilio Alfau Durán, "La Romana: evaluación histórica," Boletín del Archivo General de la Nación, vol. 30, no. 111 (enero-abril 2005), p. 58. Alfau Durán's study is the most complete work on the history of La Romana and the basis for other studies such as Rafael Jarvis Luís, La Romana: origen y evolución (República Dominicana, Comisión Presidencial de Apoyo Desarrollo Regional, 1999), and Fausto B. Ramírez y Victoriano P. Ramírez, Historia y leyendas de La Romana, vol. 1 (Santo Domingo: Impresiones Ureña, 2005).

55 Hazard, Santo Domingo, p. 208.

56 In 1907, José Ramón López observed that, excepting La Romana where the top soil too thin, good for cane, "the El Seibo soil is appropriate for tropical crops that are more demanding in fertility, as cocoa is." López, "La industria cañera," p. 125.

57 Sánchez, La caña, p. 9.


59 Muto, "The Illusory Promise," p. iii.
more than 800,000 coffee bushes and 450,000 cocoa trees were estimated
to be producing in the province.\textsuperscript{60}

The “best quality cacao” of El Seibo was concentrated in the comunes of Seibo, Higüey, Jóveroa, and Hato Mayor. Some also came from the area around Sabana de la Mar, on the south coast of Samana Bay. The plantations in Higüey and Sabana de la Mar, “controlled by foreigners, Swiss and French,” managed to improve cocoa quality, commanding a better price than cocoa from the Cibao, the country’s largest cocoa producing region.\textsuperscript{61} In 1892, 200,000 cocoa trees were reportedly in production in El Seibo.\textsuperscript{62} By 1901, however, F. Goussard’s plantation Gascogne and Champaign in El Macao, Higüey, were considered one of the largest nationwide. In 1907, Deschamps reported in El Seibo, “the huge amount of 4 million cocoa trees that are in full fruition and of excellent quality for the Dominican trade.”\textsuperscript{63}

In Seibo, family labor mostly cultivated cocoa, a “poor man’s crop,” in small plantations.\textsuperscript{64} Its culture permitted growing of ancillary crops (corn and bananas). In practice, nevertheless, cocoa cultivation might lead to neglect of other crops:

The ease with which cacao is planted and the profits to be derived from it often cause the small farmers to neglect everything else for cacao and purchase articles of food that they

\textsuperscript{60} José María Beras, “La Romana III,” El Orden, 1 May 1887, reproduced in Alfau Durán, “La Romana,” p. 103. See also Boin and Serulle, El proceso, vol. 2, El proceso, p. 216. The cocoa tree starts to bear four years after its seed is planted and reaches full production in the eighth year.


\textsuperscript{63} Quoted in Boin & Serulle, El proceso, vol. 2, El proceso, p. 257.

\textsuperscript{64} Theodor de Booy tells of the “small cacao plantations...found here and there, and one is apt to see an enormous ox with large pendant alforjas..., loaded down with two 150-pound bags of cacao beans.” Theodor de Booy, “Eastern part of the Dominican Republic,” Bulletin of Pan American Union, (September, 1917), pp. 319-320.
could themselves raise. The consequence is that when the cacao crop fails, there are widespread want and discontent.65

Even so, cocoa production did not extend throughout the province. Many lands remained undeveloped. Noted Dominican intellectual Pedro Francisco Bonó explained one reason for limited development. He said in 1885 that unlike tobacco crops, cocoa required more capital, less labor, more years for cultivation, and did not allow for production of other side crops. He wrote:

The cultivation, harvest and sales of cocoa are exclusive. Our rancher and three or four more laborers employed in the gathering, shelling, fermenting, and drying are all that they need for cocoa, while in tobacco, they are all workers in action, all earning, all producing and consuming domestic products, and thus, enlivening society.

Bonó, as Dutch Caribbeanist Harry Hoetink has noted, predicted Cuban sociologist Fernando Ortiz in capturing the essence of social and economic relationships of major commercial crops. Bonó wrote: "...cocoa is oligarchic and tobacco is democratic."66 It was nearly 50 years, in the 1930s, that Ortiz described sugar as the oligarchic crop par excellence. The oligarchic nature of sugar also limited its early development in El Seibo. Sugar was planted in La Romana as early as 1879, but efforts by planters Eduardo Calderón and Manuel Richiez failed because of their limited resources.67 Sugar was not yet planted on a large scale.

65 Otto Schoenrich, Santo Domingo: A Country with a Future (New York: The Macmillan Company, 1918), p. 155. José Ramón López argues that the character of the Dominican peasant is incompatible with cocoa production in a large scale. The peasant lacks “patience and foresight... an individual so impatient and haughty, that I have known of cocoa trees cut down by their owners in years when prices were so low because of the high export taxes that burdens the export of the almond.” López, “La industria cañera,” pp. 76-78.
66 Emilio Rodríguez Demorizi, ed., Papeles de Pedro F. Bonó 2nd. ed. (Barcelona: Gráficas M. Pareja, 1980), p. 363. See Hoetink, El pueblo dominicano, pp. 66-69. However, a caveat must be made. Bonó was writing of the Cibao region, where the small peasant producer ruled, while in El Seibo, particularly Higüey and Sabana de la Mar, several large plantations were present.
In the mid-nineteenth century, La Romana began to emerge as an urban unit. In 1852, Britain’s consul to Santo Domingo described it as "a little hamlet," with potential as a port.68 That same year, the government designated the port for international trade, recognizing its growing importance for domestic commerce.69 Yet, amid political instability and declining trade in the mid-1850s, La Romana faced spotty times. The port was closed in 1855, in 1858, and again in 1861.70 It reopened in 1879, only to be closed again four years later because it "fell into disuse as no imports ever came through it."71

In the 1880s, initial steps were taken to establish La Romana as a township. An 1882 law noted that some lands in the area had been selected by nationals and foreigners “in remote times” to develop agriculture and build a town.72 In 1883, two surveyors named Gerardo Jansen and Domingo Morcelo measured and divided Chavón Abajo, where the town of La Romana was to be located. By 1884, the area of the ejido had been determined. Later, adjacent landowners donated about 373 acres

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69 “Núm. 251-Decreto del C.N. declarando el puerto de La Romana habilitado para el comercio extranjero,” Colección de leyes... 1848-1854, vol. 2, pp. 265-266.
72 The law granted property rights to anyone building a wooden or rubblework house at the mouth of the Romana River. “Núm. 2032-Resolución del C.N. protegiendo la construcción de casas en La Romana,” Colección de leyes... 1881-1883, vol. 8, pp. 262-263.
to house the town. Donors included dictator Heureaux, Andrés Beras, Miguel Febles, Enrique J. de Castro, Lorenzo de Castro, Agustín Pérez, Nicanor Pérez, and Juan Bautista Morel.73

Soon after, the Dominican government granted tax concessions to develop a railroad as well as a tourism and agricultural complex in La Romana. On 7 February 1887, the Dominican Congress also granted a 10-year concession to U.S. investors Charles W. Tibbets and Hiram Newcomb to establish “large hotels destined to serve as mansions to rich North Americans” on the Romana, Cumayasa and Chavón river banks. The concession further authorized the cultivation of tropical fruits (bananas, coconuts, oranges, pineapples, and lemons) and exploitation of fancy woods for export. The concessions for La Romana’s development were extremely generous; they allowed “towns and cities” to remain under the concessionaire’s possession in “perpetual property.” They also granted the right to cultivate any plant for export or local consumption; the right to bring immigrants; the right to introduce all articles for agriculture exempt of duties; authorization to establish a steamship and sailing ships lines under any flag for commercial operations, if they would sail from Boston to the Dominican Republic, without making any port of call in the state of New York; the right to construct the piers necessary for embarking or disembarking its products, produce and other merchandise; tax exemption to all landed properties for 24 years; and construction and operation of a railroad and tramway line.74 For these extensive rights, the Congress required only a deposit of $5,000 or purchase of a minimum 4,663 acres.

73 See Francisco Richiez Dicoudray, “Registro de La Romana,” p. 5. Richiez Dicoudray kept a register of what he regarded as the main events in the history of La Romana. His first note was recorded on 1 April 1897. The work spanned until 19 August 1928. This register has been a major source and is hereafter referred to as “Registro.” Richiez Dicoudray died on 31 March 1945. The author thanks Dr. Frank Moya Pons for lending him a copy of the register.

74 “Núm. 2513—Concesión otorgada por el P.E. a los Señores Charles W. Tibbets e Hiram Newcomb para establecer en las márgenes de los ríos La Romana, Cumayasa y Quibón, fondas y otros edificios grandes, etc.,” Colección de leyes... 1887-1888, vol. 10, p. 18.
The Heureaux government was so anxious for investors to develop La Romana that in 1888, it opened talks with a representative of H. Newcomb to authorize purchase of 4,463 acres for $10,000 and renew Newcomb’s concessions. In 1889, the Congress even ordered the creation of a technical commission to prepare “a geographic, geologic, and paleontological description of the zone, with an accompanying map” to ease development there. The congressional order noted the “increase in agricultural production” in El Seibo, particularly in La Romana, and “the concern of large capitalists that have fixed their eyes there to establish themselves.”

Tibbets and Holcomb’s never acted on their generous concession, so on 7 May 1890 Congress approved a similar concession to a British citizen, Edward Woolf Abrams. It gave a 50-year concession to establish all types of buildings for board and lodge on the Romana, Cumayasa and Chavón river banks for “foreigners that...will come during the difficult times of the year.”

Heureaux’s concern for La Romana was not limited to economic growth, however. In 1897, by an administrative order, the dictator granted La Romana a special status, comisaria especial, and exercised his political control by appointing the local officials. On 1 April 1897, Heureaux designated Francisco Richiez Dicoudray as Comisario Especial del Gobierno, a position he created with the same powers of the Jefes Comunales in other districts. Richiez Dicoudray held the post until July 1899, when they named him Gobernador of San Pedro de Macoris. However, he resigned

75 Hoetink, El pueblo dominicano, p. 25.
76 “Núm. 2788-Resolución del C.N. autorizando al P.E. para que envie a ‘La Romana,’ jurisdicción de la provincia del Seybo, una comisión técnica que formule una descripción geográfica, geológica y paleontológica de aquella zona, acompañada del mapa correspondiente,” Colección de leyes... 1889-1890, vol. 11, pp. 184-185.
that job and resumed the La Romana post six months later. Thanks to his work, La Romana moved up the administrative ranks to become a Puesto Cantonal in 1901, with Richiez Dicoudray serving as its Jefe Cantonal. The Romana cantón had three sections under its jurisdiction: Cayacoa, Chavón Abajo and Los Arados.

Richiez Dicoudray has been recognized as the true founder of La Romana. Born in 4 October 1857 in neighboring Hígüey, he occupied several important local political positions in Hígüey, including president of the town government (Ayuntamiento) and the Jefatura Comunal. He also was elected in 1886 and 1904 as Diputado to Congress. From 1908 to 1914, he represented El Seibo in the Senate, where he was pivotal in approving the law that eased SPRSCO/NJ’s establishment in La Romana.

Despite earlier initiatives, in 1896, efforts to develop La Romana took off under concessionaire Enrique Dumois, a French Cuban. In 21 November that year, the Heureaux government granted a 25-year concession to plant bananas, coffee and cocoa; to establish a petroleum refinery in La Romana; and to build a pier to load and unload materials for the projects. The Dumois family had ample experience in planting bananas in Cuba. They moved to the Dominican Republic only after the burning of their properties to the ground during Cuba's second independence war, which began in 1895. By May 1897, construction of the refinery was

78 See “Núm. 4029-Resolución del C.N. que eleva a la categoría de Cantón la sección de La Romana,” Colección de leyes... 1900-1901, vol. 16, pp. 172-173.

79 Richiez Dicoudray had been a delegate to the Constitutional Convention of 1908, where he served as vice-president. See Meriño, Elementos, p. 131, and Vetilio Alfau Durán, “Una gloria nacional, General Francisco Richiez Dicoudray,” CVAD.

80 “Núm. 3696-Resolución del P.E. concediendo al señor Enrique Dumois el derecho por 25 años de establecer plantíos de guineos, de piñas, de café y de cacao en terrenos de La Romana,” Colección de leyes... 1896-1897, vol. 14, pp. 327-330.

81 Two other brothers, Hipólito and Simón, obtained in the same year a concession for the cultivation and export of tropical fruits in Sosúa, district of Puerto Plata. See “Núm. 3758-Resolución del C.N. modificando la concesión de franquicias otorgada por el P.E. á los señores F. Simón e Hipólito Dumois en fecha 29 de julio de 1897,” Colección de leyes... 1896-1897, vol. 14, pp. 492-496.
nearing completion, while the La Romana Fruit Company had planted 50,000 banana trees.82

The Dominican newspaper *Listín Diario* reported on 25 August 1897 that both enterprises employed carpenters, office staff and peons, of which three were Americans, 14 Cubans, 14 Dominicans, 12 Puerto Ricans, and 37 *cocolos*. It is significant that on the eve of the 1900s, *cocolos* were the largest immigrant group in La Romana’s work force, with no Haitians appearing in the count. As the banana venture expanded, Dumois sought 500 *braceros* for felling trees and other heavy work. He tried to import 350 *braceros* from Cuba and the Canary Islands “to remedy the evil of the *cocolo* gang.” He sought only 150 Dominicans for the plantation work, however, because lighter “field work...is more to their liking.”83

On 6 June 1897, the Norwegian steamship *Bratton* brought the first petroleum shipment to La Romana and four days later, oil refining began there. The refinery produced a gas product, known for its purplish color as *gas morao*. It found a ready market throughout the country because it was cheaper than imported products. Even so, Dumois’ La Romana business did not perform as well as he had hoped. In July 1898, he sold out to Pedro Antonio Lluberes, a wealthy Dominican.84 E. Dumois & Co. had invested a total $190,000 in businesses in La Romana.85

In August 1898, Lluberes began clearing trees for large scale banana cultivation.86 The government, buoyed by its success in promoting

83 Quoted in del Castillo, *La inmigración*, p. 37.
84 In October, the Dumoises returned to Cuba where they combined with the United Fruit Company in the development of the sugar industry in eastern Cuba, particularly Central Boston. However, their relationship with the United Fruit did not last long; in 1903 the company bought all their interests in Cuba, and eventually too their Sosúa plantations. Still, in mid-1912, Francisco Dumois was coming from New York to the Cibao region “with plans to build an ingenio.” Francisco Dumois, Sosúa Plantations Company, New York, to Francisco J. Peynado, 1 August 1912, P&P, ED/UPR/RP. See also James, *Banes*, pp. 92, 94.
“large agricultural enterprises,” soon after designated La Romana as “an agricultural zone.” It gave cattle breeders one year to move their livestock elsewhere, decrying:

Those lands that have been appropriately measured for the development of agriculture are engaged in a paltry livestock industry, belonging to persons that do not own the land; that industry not being well managed does not contribute in any way to increase the wealth of the region.87

The developments also drew attention beyond government. Archbishop Meriño, a former president, described La Romana in 1898 as “a developing village, called to be something in the not too distant future.”88 Another contemporary Dominican writer, Enrique Deschamps, noted the construction of the refinery, the agricultural activities and “the efforts and capital of Pedro Antonio Lluberes.” He predicted the “village is ready to take the importance it merits, for which its hard-working inhabitants have sighed and labored incessantly.”89

Lluberes was one of Heureaux’s trusted men and one of his principal lenders (with Juan Bautista Vicini).90 The connection helped business. In 1899, the dictator banned certain types of petroleum imports to favor the refinery.91 Indeed, when a notary conducted an inventory of the dictator’s

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88 Meriño, Elementos, p. 131.
90 Rufino Martínez wrote that during “the tyranny of Lilís,” he was “more loyal than necessary,” Diccionario, p. 294. See also Sang, Ulises Heureaux, p. 160, and “Pedro A. Lluberes: Político, municipe y millonario,” Suplemento de El Caribe, 28 August 1982, p. 12.
properties after Heureaux’s death, Lluberes personally presented documents to dispel rumors that Heureaux had shares in the refinery and owned a third of ‘La Romana’ banana enterprise.92

Even so, refining failed to prosper for Lluberes. In 1901, the steam-
er Cherokee unloaded 5,000 boxes of crude petroleum in La Romana.93 Yet, the refinery closed within years, “an event that affected notably the growth of the village and weakened the enthusiasm of its inhabitants...but urbanization, although slower, continued.”94

The banana venture also proved unprofitable initially. Lluberes cul-
tivated “large banana plantations” in El Higüeral.95 In 1900, his company loaded the first shipment of 1,609 bananas bunches in the Cherokee ship, but business suffered from limited transport facilities.96 Indeed, Lluberes made his money by starting to import building materials and processed wood. Cattle ranchers reacted to the failures by unsuccessfully petitioning Congress to modify the ruling on the “agricultural zone.”97

Railroad projects that finally surfaced reflected two different views of development for El Seibo province and, consequently, La Romana. One view saw the railroad linking La Romana, Seibo and Higüey, with the port of La Romana serving as the outlet for commercial agriculture for the province. That vision had the backing of the local government in El Seibo. It asked Congress for a concession to establish a line from Seibo to La Romana.98 In February 1901, Congress granted the concession, which

92 See Resumen general del activo y pasivo de la Sucesión Heureaux hecho por el Notario Miguel Alfau á requerimiento de la Comisión Judicial designada para la formación del inventario, 2nd. ed. (Santo Domingo: Sociedad Dominicana de Bibliófilos, 1974), pp. xxxix, 22.
96 Richiez Dicoudray, “Registro,” pp. 14-15. In 1902, Bass wrote: “...the business of bananas in the Dominican Republic has declined greatly, and in truth more so than the sugar industry, and this is so because the selling of this product, bananas, is monopolized as soon as it arrives to the American shores, even before it is put on sale to the American people.” Bass, Reciprocidad, p. 81.
97 Bass, Reciprocidad, p. 15.
halved export duties for agricultural, industrial, and wood products transported by train. The railroad was to pay only half of the export duties. The concessionaire was to build customs and port facilities without any cost to the central government.99

On 27 June 1901, El Seibo’s local government transferred the railroad concession to Olof Zetterlund. Zetterlund was the general manager of a $3 million, Omaha-based concern that was to foment immigration and to cultivate export crops.100 He transferred the port related part of the concession to Manuel de J. Lluberes, until Lluberes could negotiate his own concession.101 Yet Zetterlund got to work on the railroad. On 2 February 1902, El Seibo’s mayor, Manuel de J. Tejeda, took part in an official groundbreaking for the project. In April 1902, after one of his frequent trips, Zetterlund brought an engineer from the United States, Thomas Shaw, to oversee construction of both projects. But in mid-July of that year, Shaw again left for the United States. Richiez Dicoudray recorded in his diary: “...news less than satisfactory was received on the railroad enterprise.”102 The project was dead.

The other view of railroad development saw the province of El Seibo as ancillary to the sugar producing area of San Pedro de Macoris. In the early 1900s, William L. Bass proposed to expand Ingenio Consuelo’s

100 The officials of the firm were James Brown, president; H. H. Baldridge, David C. Patterson, David A. Brown, and Joseph A. Fradenburg. Richiez Dicoudray, “Registro,” p. 26.
101 In 1899, Lluberes had obtained a concession to construct a wharf in La Romana. See “Núm. 4172-Resolución del C.N. que aprueba el traspaso de la concesión otorgada al Ayuntamiento del Seybo para establecer un ferrocarril de La Romana al Seybo (traspaso hecho a OLAA Teterlaurd[sic]),” Colección de leyes... 1900-1901, vol. 16, pp. 453-454, and “Núm. 3885-Resolución del C.N. aprobando la concesión otorgada por el P.E. en fecha 11 de abril del corriente año a los señores M. de J. Lluberes y Compañía para construir un muelle y una enramada en La Romana,” Colección de leyes... 1898-1899, vol. 15, pp. 206-214; “Núm. 4212-Concesión otorgada por Olof Zetterlund para el establecimiento de un muelle en La Romana,” Colección de leyes... 1900-1901, vol. 16, pp. 519-525; and Richiez Dicoudray, “Registro,” p. 17.
102 Richiez Dicoudray, “Registro,” p. 28.
cane fields further eastward, combining railroad and river transportation, and consolidating the position of San Pedro de Macorís as the prime sugar port for eastern Dominican Republic.103

A Dominican propagandist, P. Mortimer Dalmau, praised the expansion of Ingenio Consuelo’s railroad to Monte Coca in the province of El Seibo, and suggested its further extension to Hato Mayor, Seibo and Higüey.104 Extolling Bass’ entrepreneurial qualities, he saw “sugar cane as a new commercial crop that would give movement to many motionless hands, while giving happiness to many homes without fire or bread.” In a letter to the press, Bass welcomed Dalmau’s proposal: “I am ready to contract and lay miles and miles of rails provided that the government supports this project with funds.”105

Bass’ interest was not limited to incorporating El Seibo cane lands to Ingenio Consuelo. As far back as 1893, he expressed his intention of installing a “great sugar central” in La Romana, “where the fertility of the lands, particularly those in the interior, has been inviting work for a long time.”106 To that end, he acquired approximately 11,190 acres in the eastern side of the ejido of La Romana.

Another concession for railroad construction, a compromise between the two earlier and antagonistic views, was granted in 1906 to Cuba-born Pedro Marin, who was connected with the Vicini enterprises.107 This time, the project was to join La Romana, Seibo and San Pedro

103 William L. Bass received Consuelo as a gift from his father Alexander in the late 1880s. Bass made Consuelo the most productive and efficient central of its time. For more information, see José del Castillo, “Consuelo: biografía de un pequeño gigante,” Inazícar 6, no. 31 (May/August, 1981), pp. 33-38.
104 Dalmau’s view was partly contested in the press by Fidel Ferrer, who argued what was needed was a railroad linking La Romana, Higüey, Seibo and Hato Mayor. See Fidel Ferrer, “Sobre el folleto de Dalmau,” Listín Diario, 24 February 1910, p. 1.
105 P. Mortimer Dalmau, William L. Bass y el ferrocarril del Este (Santo Domingo: Imp. La Cuna de América, 1909), pp. 18, 24. P. Mortimer Dalmau put together all his articles and other relevant documentation in this pamphlet. A year later, he renewed his campaign by publishing another pamphlet: Vía ferro-fluvial (Santo Domingo: Imp. La Cuna de América, 1910).
106 Sánchez, La caña, p. 57.
107 Pedro Marin was born in Camagüey, Cuba. In 1904, he was president of the General Industrial Company of Santo Domingo. By 1915 he had married
de Macorís. Work started in January 1907, but by December the project had stopped.¹⁰⁸ The project would have benefited the Vicini-controlled General Industrial Company, which already held substantial land holdings in La Romana acquired from the estate of the late Heureaux.¹⁰⁹ Before obtaining the concession, in 1905, the General Industrial Company had sent a surveyor to measure and take possession of the lands.¹¹⁰

5.3. La Romana harbor, 1908 [Personal Files, Humberto García Muñis]

The Vicinis were putting in place two important elements to develop the sugar industry in La Romana: land for planting cane and a railroad to transport cane to the mill. No reference has been found of Vicini's interest in building a mill in La Romana, but the land and concession points to plans for a central. Reports circulated bringing into the

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109 Indeed, at the time of his assassination in 1899, Heureaux owned lands in La Romana’s Chavón Abajo area totaling 194 caballerías, valued at $22,000. Originally Heureaux held 219 caballerías, but he sold 25 to Alfredo Deetjen. See Resumen general, p. 12.
limelight the interest of one important sugar investor in Puerto Rico. Alfredo Dalmau, an important colono of Ingenio Santa Fe and former Governor of the San Pedro de Macoris province, said that planter Carlos Cabrera, one of SPRSCO/NJ’s early shareholders, intended to build a sugar factory in nearby Bayahibe because of the advantageous conditions of its lands and port.\footnote{Mortimer Dalmau, 
Via, pp. 15-16. A few years later, Bayahibe was described as a town with almost 50 houses, two rural schools, and lacking means of communication. See Celio Estruch, Dr., “Carretera de Higuéy,” Renacimiento, 1, no. 2 (17 March 1915), p. 85.}

Meanwhile, new governments in Santo Domingo continued to put forth plans to develop El Seibo province, now by appropriating resources procured by the port of La Romana. In 1901, Congress approved a law allocating 30 percent of custom duties originating in the port of La Romana to promote immigration to the province of El Seibo.\footnote{“Núm. 4173-Decreto del C.N. que destina el 30\% de las entradas aduaneras del puerto de La Romana, para el fomento de la inmigración,” Colección de las leyes...1900-1901, vol. 16, pp. 454-455.} Recognizing that El Seibo was in a “state of decadence, due mainly to depopulation,” the

5.4. La Romana wharf in construction, 1908 [Personal Files, Humberto García Muñiz]
decree was modified later to assign the 30 percent to the Ayuntamiento del Seibo, so that they take care of immigration contracts.  

Yet port facilities in La Romana left much to be wanted. In 1901, Congress ordered the pier built when railroad construction got underway. That decree proved meaningless, however, because the railroad project did not materialize. In 1907, in a revision of the Customs Law, La Romana was made a point of entry, and construction started on a building to be used as a customs office, warehouse, and office for the port captain. In the following two years, budget provisions were made for salaries of customs personnel, but in fact, neither the pier formally opened nor appointments made. The Customs Law of 1910 omitted La Romana as an entry port, thus repealing the previous law. As a result, the best port of El Seibo province was not operating at the top of its capabilities, limiting the volume of maritime transportation.

113 See "Núm. 4202-Resolución del P.E. que pone a disposición del Ayuntamiento del Seybo el 30% de las entradas aduaneras de La Romana para los fines del Decreto del 25 de junio de 1901," Colección de las leyes...1900-1901, vol. 16, pp. 504-505.
114 J. H. Edwards, Deputy General Receiver, Dominican Customs, to Chief, BIA, WD, 15 December 1910, RG 350, E 10, B 22356 to 27413-8, D 22413, NA.
Government plans also failed regarding land transportation within the province. They stopped a long projected road to be constructed in 1906 from Seibo, on the plains in the interior, to the port of La Romana for lack of funds. According to an informed author, "This region, excellent adapted to cocoa raising and sugar planting, has been kept secluded by bad roads."\(^{115}\)

As seen in Appendix 5.1, urban La Romana more than tripled its population from 1897 to 1902, to 488, coinciding with the cultivation of bananas, establishment of the refinery, and construction on the stillborn railroad. In 1898, when at least two of these projects were underway, 141 people, overwhelmingly male, were recorded as "floating population." Most of these itinerants likely were cocolos.

Overall, most residents were Dominican, but between 1900-1902, as seen in Table 5.2 more than 10 percent were non-Dominican, reflecting a significant foreign presence. Puerto Ricans were the largest group of non-Dominicans. The most prominent Puerto Rican was French-born Dr. Teófilo Ferry, who came to La Romana with his wife, Nicolasa Beiso, of Cabo Rojo, Puerto Rico, in 1874.\(^{116}\) Dr. Ferry brought some Puerto Ricans to work for him, including a José Torres who took care of his cattle.\(^{117}\) In 1903, Puerto Rico's Pedro Sierra was appointed as the sub-delegate of the Dominican Treasury and mail agent, under the provisions of a law that allowed foreigners to hold Dominican government posts.\(^{118}\)

The cocolos were listed within the category of British. Only in 1902, when the railroad project was underway, there was a marked increase in their number. It can be speculated that they did not reside in urban La Romana, but in its rural areas. The census also shows no Haitians at that time.

\(^{115}\) Schoenrich, Santo Domingo, p. 215.
\(^{116}\) Dr. Ferry bought a piece of land that now serves as the mill yard of Central Romana. He dedicated himself to carre raising, herding of colts and to the cutting of fancy woods. He also had several oxcarts to transport merchandise to Seibo and to La Romana for shipping. Piña, "Reseña histórica," p. 23.
\(^{117}\) See Angela Peña, "Describen cómo vivian los puertorriqueños en La Romana a principios de este siglo," El Siglo (Dominican Republic), 18 August 1989, p. 8B.
\(^{118}\) Richiez Dicoudray, "Registro," p. 30.
Table 5.2
La Romana: Population by Nationality: 1900, 1901, 1902 and 1918

<table>
<thead>
<tr>
<th>Years</th>
<th>1900</th>
<th>1901</th>
<th>1902</th>
<th>1918</th>
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<tbody>
<tr>
<td>Dominicans</td>
<td>388</td>
<td>334</td>
<td>416</td>
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<tr>
<td>Puerto Ricans</td>
<td>18</td>
<td>36</td>
<td>25</td>
<td>-</td>
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<tr>
<td>Cubans</td>
<td>10</td>
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<td>-</td>
</tr>
<tr>
<td>Spanish</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Islanders (isleños)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>British</td>
<td>5</td>
<td>4</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td>North Americans</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Dutch</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Arabs</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chinese</td>
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<td>-</td>
</tr>
<tr>
<td>Danish</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>French</td>
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<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Italians</td>
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</tr>
<tr>
<td>Totals</td>
<td>435</td>
<td>388</td>
<td>484</td>
<td>7,799</td>
</tr>
</tbody>
</table>

Source: Francisco Richiez Dicoudray, “Registro de la Romana,” 12, 18, 25, and “La Romana: el censo en su jurisdicción,” Listín Diario, 13 June 1918, 1.

In the six-year period from 1897-1902, La Romana underwent an accelerated process of urbanization (see Appendix 5.1). The number of zinc houses, sheds (ranchos), and thatched huts (bohios) augmented tenfold. By 1902, several businesses - shoe and carpenter shops as well as bakeries- indicated the establishment of a small service sector. Also three government buildings operated, showing that the national government was making its presence felt on the local scene. Two public schools - one for boys (named La Precursora and directed by Francisco X. del Castillo Márquez, the correspondent of Listín Diario) and another for girls (named La Trinitaria and directed by Miss A. Dalila Richiez) - confirmed that a community was in the making.\textsuperscript{119} On 1909, La Dominical, a night school,

\textsuperscript{119} La Romana, Comisión Local de Estudios, Asiento de matrículas correspondientes a los alumnos inscritos en las escuelas de esta localidad, pp. 1, 27, L 4,407, AGN.
was started, with Ernesto Cambier as the first teacher. A society called The Philharmonic (La Filarmónica) opened a school of music under the direction of Alfredo E. Sánchez. In 1908, Higuey-born Heriberto Payán formed the first musical group of La Romana.

The rise of commercial agriculture in El Seibo had social as well as political consequences. In 1909, leading Dominican lawyer Francisco J. Peynado, contrasted the political results of the export commercial agriculture in the provinces of El Seibo and Monte Cristi. He said:

Thirty years ago, when the Seibo province exclusively of free breeding, the seibano was known for his willingness to initiate or support all revolutions, and the group of guerrilleros that first arrived to the environs of the Capital always came from the East; by that time, almost, Monte Cristi was at the peak of its prosperity that logwood caused, and obtaining the cooperation of its inhabitants for the task of depositing governments was very difficult. Later, El Seibo, hopeful about the future of cocoa, surrendered heart and soul in agricultural work, kept itself aloof from our disastrous civil wars. Meanwhile Monte Cristi, which now lives almost exclusively from breeding in the open fields, has become the cradle of the countless conflicts that have bloodied the country in the last ten years.

Although precise figures are unavailable for El Seibo, cocoa production clearly increased tremendously throughout the Dominican Republic, particularly in the Cibao. Cocoa remained second to sugar in value,
except in 1908, when 19 million kilos of cocoa, valued at about $4.2 million were exported, compared with 49 million kilos of sugar, valued at $3 million. In 1906, the Dominican consul in New York reported that cocoa was "the most important Dominican product of all coming to this market." In 1910, a British vice-consul said: "Cocoa plantations have grown considerably in number and extension, and thousands of new cocoa trees have been planted on previously uncultivated lands in the Cibao and in the plains of El Seibo."

Cocoa and other traditional exports of El Seibo sustained the economic and business life of La Romana. In 1907, during cocoa crop time (of which there are two annually), more than 50 droves of mules came into the village laden with the fruit. Three years later, in 1910, it was reported that "cocoa, which little by little is entering this village, is bringing life again to business, which was a little dreary."

Despite Peynado's view of the pacification effect of cocoa, sociopolitical turmoil continued to some extent in El Seibo. For example, in 28 December 1909, a "band of gavilleros attacked La Romana," forcefully extracting $100 from German-owned Van Kampen & Co. and $52 from Dominican Luis J. Ricart, the two leading merchants. The assaulting gang, led by Enencio Guzmán and Militon [sic] Ruiz, numbered more than 30 men.

125 He urged that the quality be improved and that Trinidad's processing methods be adopted. Fabio Fiallo, Informe del Consulado General de la República Dominicana en Nueva York por el año 1906 (s.l.: n.p., 1906), p. 5.
129 Hans A. Van Kampen & Co. to W. Thormann, Consul General del Imperio Alemán, 3 January 1910, Secretaría de Estado de Hacienda y Comercio, L 148, AGN. See also El Corresponsal, "Ataque a La Romana," Listín Diario, 30 December 1910, p. 2. Gavilleros was the Dominican word for a rural bandit. Van Kampen was held in "high esteem" in La Romana because he was "one of the factors contributing to the actual progress of this town." Francisco X. del Castillo Márquez, "De La Romana," Listín Diario, 30 April 1910, p. 2.
By 1909, La Romana had grown to 2,316 people, with 728 living in the urban zone and 1,688 in the rural areas of Cayacao, Chavón Abajo and Cumayasa. Compared to 1902, the urban population had increased by 49 percent. Dominica residents mostly had come to La Romana from other areas of the country; a visitor to the village in 1907 observed that it “could be said to be essentially mixed because people from the capital, Macoris and Seybo mainly comprise it.” The non-Dominican population continued to top 10 per cent. Contrast between urban and rural areas for literacy was enormous, with 77 percent literate in the village against two percent literate in the ruralcy.

In 1909, La Romana had eight streets and two plazas. The number of houses had more than doubled to 92 compared with 1902. A jail and a Catholic church had been built. Social life included drama and poetry evenings as well as a carnival celebration. The business sector was lively and varied. It included 13 variety stores, 13 grocery stores, three warehouses, two dairies, one barbershop, one tailor shop, one drug store, and one restaurant with a billiard table. The only businesses that could be catalogued as manufacturing were a trunk factory and four bakeries.

Despite the failures of banana cultivation, railroad construction, and petroleum refining, La Romana continued to grow into a small community, with a busy port exporting the province’s products. Of the import and export businesses operating in La Romana, the largest belonged to Hans Van Kampen, who in 1909 had left Carl Quentin in charge while he traveled to Germany. Four Spanish trading houses were present; they belonged to Francisco Beltrán, Victor Barrios, Miguel Pons, and Amador

130 Evidence of the increase in population and the resulting need for housing can be noted when in 1907 they authorized the Ayuntamiento de La Romana to sell 100 lots. See “Núm. 4735–Resolución del C.N. que autoriza al Ayuntamiento de La Romana a vender 100 solares,” Colección de leyes... 1905-1907, vol. 18, pp. 338-339.
Pons & Co. The Dominican trading houses included Luis José Ricart (in representation of Pedro A. Ricart, of Santo Domingo), Santiago Ribert, H. Du Breil & Co., and Francisco Richiez Dicoudray. Several Arab businesses were also present, such as Juan Félix and Nicolás Garib. In sum, Félix María Piña, a local chronicler, observed that the "town was virtually formed in 1909... There was a perfectly constituted society, and this society was essentially Dominican with some exceptions."134

Until 1910, the town of La Romana experienced three short phases in its development. In the first one, it was a hamlet that depended on its livelihood on traditional exports from the province of El Seibo. At the end of the nineteenth century, spurred by Heureaux' policies, it became a flourishing village with several important projects, such as banana cultivation, petroleum refining, and railroad construction. Yet none of the projects proved viable. No real plans were delineated for the development of the sugar industry, though William L. Bass and the Vicinis acquired large expanses of land. The Vicinis even acquired a concession for railroad construction, but never uttered a word about the building of a sugar factory. Later, during the first decade of this century, La Romana remained an important exporter of products of El Seibo, but a new commercial crop, cocoa, took precedence over other export products.

Consequently, on the eve of SPRSCO/NJ's establishment in the Dominican Republic, Government-backed foreign and local capital had attempted, and failed, in the cultivation and export of a plantation crop, bananas, with Caribbean migrant labor, and in the establishment of a railroad and a petroleum refinery. By 1910, the province of El Seibo, particularly the comuntes of Higüey, Seibo, and Hato Mayor, was becoming cocoa territory cultivated in large foreign-owned plantations and

Dominican small farms. La Romana, the natural outlet of this commercial crop, was growing at a slow pace, synchronized with the growth of cocoa culture and export.

Bonó’s counterpoint of cocoa vs. tobacco in the Cibao of the late nineteenth century lost its pertinence in the southeastern Dominican Republic with the development of sugar cane as the leading commercial crop. In 1910 U.S.-appointed Receiver General of Dominican Customs, William E. Pulliam, posed another counterpoint when he observed that “unquestionably cocoa is destined to be the mainstay of the country and the income from the sale of this product creates wealth more widely distributed among the people than is true of the principal product, sugar.” Pulliam was mistaken. In the next decade, as sugar and cocoa met face to face in the province of El Seibo, Central Romana Inc. settled the score, in favor of sugar cane, once and for all.

5.6. Central Romana, La Romana, Dominican Republic, ca. 1920 [Personal files, Humberto Garcia Muñiz]

5.7. A view of Central Romana's and La Romana's coastline photographed from a boat in Romana River. The residence of the administrator, eng. Ernest L. Klock, is pointed out in the picture, ca. 1920 [Personal files, Humberto Garcia Muñiz]
5.8. Residence of the administrator, eng. Ernest L. Klock, Central Romana, ca. 1920 [Personal files, Humberto García Muñiz]

5.9. Main office building, Central Romana, ca. 1920. [Personal files, Humberto García Muñiz]
5.10. Coastal road, Central Romana. (To the left: houses of the U.S. and other white (excluding Hispanic Caribbean) personnel) [Personal files, Humberto García Muñiz]

5.11. Stevedores quarters, including bunks, Central Romana, ca. 1920 [Personal files, Humberto García Muñiz]
5.12. The Club House and sleeping quarters for U.S and other single white (excluding Hispanic Caribbean) personnel employed for administrative or mill work, Central Romana, ca. 1920 [Personal files, Humberto García Muñiz]

5.13. Lawn tennis court, beside the Club House, Central Romana, ca. 1920 [Personal files, Humberto García Muñiz]
5.14. Guanica golf team, ca. 1925. U.S. and other white (excluding Hispanic Caribbean) personnel and families from Guanica Centrale, Puerto Rico, travelling in the *Irene* to Central Romana, Dominican Republic, to play in a golf tournament. [Personal files, Humberto García Muñiz]

5.15. Wireless station, Central Romana, ca. 1920. [Personal files, Humberto García Muñiz]
5.16. Cocolo workers in the interior Central Romana’s electric plant, ca. 1920 [Personal files, Humberto García Muñiz]

5.17. Cocolo workers in the Central Romana’s forge room, ca. 1920 [Personal files, Humberto García Muñiz]
5.18. Central Romana's hospital, ca. 1920. [Personal files, Humberto Garcia Muñiz]

5.19. Frank Gonzalvo, Dominican medical doctor of Puerto Rican parents, and an unidentified American nurse, ca. 1925 [Personal files, Humberto Garcia Muñiz]
5.20. Company store and houses in the Buena Vista hato, Central Romana, ca. 1920. [Personal files, Humberto García Muñiz]

5.21. School building, El Higueral, Central Romana, ca. 1920 [Personal files, Humberto García Muñiz]
5.22. Central Romana’s stock farm, El Higueral, ca. 1920 [Personal files, Humberto García Muñiz]

5.23. Loading sugar canes into ox-carts, Central Romana, ca. 1920 [Personal files, Humberto García Muñiz]
5.24. Peon quarters (barracón) for workers in the sugar cane fields, Central Romana, ca. 1920 [Personal files, Humberto García Muñiz]

5.25. Two black females outside the kitchen for peon houses, Central Romana, ca. 1920 [Personal files, Humberto García Muñiz]
When SPRSCO/NJ looked beyond Puerto Rican green cane fields for expansion in 1910, it was attracted to neighboring Dominican Republic, both for its agricultural potential and its relative political stability. Since 1904, Ramón Cáceres, one of the assassins of dictator Ulises Heureaux, had run the Dominican Republic.¹ Cáceres’ administration supported U.S. interests. In 1906, it favored the sugar industry by approving tax breaks on exports, and in 1907, it signed the Dominican-American Convention formalizing U.S. administration of Dominican customs.² Indeed, it would be his signature of a June 1910 law that would prove decisive for Dominican sugar industry development and specifically, for SPRSCO/NJ’s establishment in La Romana.

Key to Cáceres’ attractiveness was his efficient administration, championed by Secretary of Treasury and Commerce Federico Velázquez

¹ For a biographical study see Troncoso Sánchez, Ramón Cáceres.
y Hernández.³ Velázquez brought a new style to a public administration long characterized by prevalent corruption and graft of government officials. His work has been described as “having a social transcendence ...the notion started to filter down to all Dominicans that to rob from the State was a larger crime than to steal from individuals.” Velázquez was reputed to have created a real “Finance Ministry, and in that cyclopean task he did not spill one drop of human blood.”⁴

The efficient public administration did not last, however. Cáceres' assassination on 19 November 1911 brought an era of political instability, with eight presidents in nearly five years. In May 1916, the U.S. Marines began an occupation of the nation and on 29 November 1916, a U.S. military government was officially proclaimed. In the five-year period, in an attempt to install “a stable, representative and cooperative government,” the United States had “intervened in Dominican affairs ever more frequently, often on a daily basis, and with increasing belligerence.”⁵

Still, the U.S. military occupation did not stabilize the country. The eastern part of the Dominican Republic, the base for the sugar industry, found itself embroiled in a guerrilla war which pitted U.S. Marines against the rag tag packs of combatants known as gavilleros. SPRSCO/NJ would expand operations to include a sugar factory during this period of instability.

SPRSCO/NJ's took a calculated risk in expanding to the Dominican Republic, given its history of political instability and the travails of the sugar industry in the first decade of the century. In 1912, renowned sugar expert Prinsen Geerligs blamed political instability for backwardness in the industry: “Owing to lack of funds, installations are behind the times, and the combination of an unstable government and everlasting internal trouble tends to keep foreign capitalists away.”⁶

³ There is ample correspondence of sugar companies (e.g. Consuelo and Central Azuano) claiming exemptions under the law on different matters and of the replies of Velázquez y Hernández refusing these demands. See Secretaría de Estado de Hacienda, L 127, 1909, AGN.
⁵ Calder, The Impact of Intervention, p. 5.
SPRSCO/NJ began its odyssey in the Dominican Republic on 7 November 1910, with a La Romana visit by two Guanica Centrale’s officials: Factory Superintendent Hubert Edson and Cultivation Superintendent P. M. Todd. A British steamship and general agent, H. H. Gosling, who first brought the property to SPRSCO/NJ’s attention, met them. The group aimed to survey a tract that extended from La Romana eastward along the sea and northward toward the central mountain range. The team feasibility study concluded that a cane plantation and a sugar mill could be developed in the site, including the building of a sugar mill at the Romana site on a later date. However, it warned that political instability in the country “should be fully considered before venturing into further investment.”

On 25 November 1910, two weeks after the team left La Romana, two competing sugar industrialists from Puerto Rico, Enrique Bird and

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8 The following paragraphs are based on Edson’s account in his book Sugar, and the “Registro” of Richiez Dicoudray.

9 Edson, Sugar, p. 102.
Antonio Pérez Pierret, docked Bird’s yacht Segached in Romana River and expressed interest in buying lands in the region.\(^{10}\) Bird, linked to Central Fajardo, and Pérez Pierret, linked to other centrales, surely had the means to develop a plantation in the country.\(^{11}\)

Yet no one contemplated a revolutionary project as shipping Dominican sugar cane to Puerto Rico for milling. An official of Guanica Centrale, G. V. Long, explained in 1914 that the main reason behind the project was insufficient cane supply in Puerto Rico. Long said there was not enough cane within a 50-mile radius of Guánica to meet capacity during the milling season, and imports were the most feasible way to fill the gap.\(^{12}\) In 1950, SPRSCO/NJ also noted that the company’s rapid growth had required a search for “sugar lands elsewhere because of the natural limits on sugar lands and thus the ever-increasing costs of lands and leases in Puerto Rico.”\(^{13}\)

SPRSCO/NJ was probably driven as well by the Underwood bill, a U.S. law that sought to allow U.S. duty-free entry of raw sugar. Industrialists in Puerto Rico feared the law would undercut sales to the States, because of lower production costs elsewhere. By entering Dominican Republic, SPRSCO/NJ was hedging its own bets and lowering its own raw sugar prices. If the Underwood bill prevailed, it too would be positioned to export raw Dominican sugar stateside.

To undertake the high-risk project, SPRSCO/NJ had to be confident that La Romana met three requirements: fertile cane lands, adequate port facilities, and suitable geographical location. The area selected was virgin land, of great fertility. José Ramón López noted that La Romana soils were “good for cane.”\(^{14}\) Also, many had long recognized La Romana’s

\(^{10}\) Bayoán Hostos, the Dominican-born son of Puerto Rican patriot and scholar Eugenio María de Hostos, also accompanied Bird and Pérez Pierret on the yacht. Richiez Dicoudray, “Registro,” p. 51.

\(^{11}\) Years later, cane was shipped by barge from Vieques, an island east of Puerto Rico, to Central Fajardo and Central Pasto Viejo in Humacao, both in eastern Puerto Rico.


\(^{13}\) South Porto Rico..., 50th Anniversary Report, p. 4.

undeveloped port as the best in the eastern region. It offered SPRSCO/NJ a fine base to collect cane and ship it to Guánica, located just 150 kilometers across the Mona Channel. The company could easily arrange ocean transport and radiotelegraphic communication. Constant intra-company communication was a real possibility.

Immediately after completing the feasibility report, SPRSCO/NJ turned to the Washington scene to seek support for its La Romana venture. On 7 December 1910, an assistant secretary of the Navy wrote a letter of introduction to Secretary of State Philander Knox, noting that Frank A. Dillingham, president of Guanica Centrale, “the second largest, if not indeed the largest sugar centrale in the world,” was “anxious to see you with reference to investments in Santo Domingo which his company contemplates making.”15 No records have been found confirming Dillingham’s meeting with Knox, but clearly, SPRSCO/NJ lobbied in government circles to obtain backing for its project.

Its competitors were not supportive. Sugar interests both in the Dominican Republic and the United States voiced opposition or reservations. They included Puerto Rico’s Serrallés, Cuba’s Nariño Sisters, and some U.S.-owned firms.16 (See Table 6.1) These interests also lobbied in Washington to derail SPRSCO/NJ’s plans. On 11 January 1910, Frank Schaffer, of Hugh Kelly & Co., wrote Washington attorney Hammond Kennedy to prepare a schedule of appointments with U.S. officials to lobby against SPRSCO/NJ’s plans. Schaffer claimed the plan was “unjust” and “unlawful” because

the cane produced in Santo Domingo, although manufactured into sugar in Porto Rico is...the product of Santo Domingo...it has only undergone a process of manufacture in Porto Rico, and therefore cannot claim exemption from import duties on same for delivery in the United States,


16 In Table 6.1, Morewood & Co. appeared as owner of Cristóbal Colon and L. W. & P. Armstrong of Ingenio Puerto Rico, although they were not. Probably Kennedy listed their law firms or brokers in the United States.
even though they pay an import duty in Porto Rico on the sugar cane, which is 20% ad valorem, and we believe they would invoice this cane at $1.00 per ton, which would make the duty 20¢ per ton, which is so low that it is far below the price that they must pay for their own cane in Porto Rico.

Schaffer also noted that Guanica Centrale, which he described as “financially very strong,” reportedly had offered $500,000 to the Dominican government in exchange for the privilege of exporting cane from La Romana without paying export duty.17

Table 6.1
U.S. SUGAR INTERESTS IN THE DOMINICAN REPUBLIC OPPOSED TO SPRSCO’s PROPOSAL, 1911

<table>
<thead>
<tr>
<th>Firm</th>
<th>Representing</th>
<th>Location</th>
<th>Capacity in Bags of 320 Lbs.</th>
<th>Value $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bartram Brothers</td>
<td>Santa Fe Plantations &amp; Sugar Co.</td>
<td>San Pedro de Macoris</td>
<td>50,000</td>
<td>750,000</td>
</tr>
<tr>
<td></td>
<td>Quisqueya Sugar Co.</td>
<td>San Pedro de Macoris</td>
<td>45,000</td>
<td>650,000</td>
</tr>
<tr>
<td></td>
<td>Estate San Isidro</td>
<td>Santo Domingo City</td>
<td>45,000</td>
<td>650,000</td>
</tr>
<tr>
<td>Hugh Kelly Co.</td>
<td>The Porvenir Sugar Co.</td>
<td>San Pedro de Macoris</td>
<td>50,000</td>
<td>750,000</td>
</tr>
<tr>
<td></td>
<td>Central Ansonia Sugar Co.</td>
<td>Azua</td>
<td>50,000</td>
<td>750,000</td>
</tr>
<tr>
<td>Morewood</td>
<td>Estate “Cristobal Colon” &amp; Co.</td>
<td>San Pedro de Macoris</td>
<td>50,000</td>
<td>750,000</td>
</tr>
<tr>
<td>L.W. &amp; P. Yngo.</td>
<td>Puerto Rico Armstrong</td>
<td>San Pedro de Macoris</td>
<td>35,000</td>
<td>350,000</td>
</tr>
</tbody>
</table>

Source: [F. Schaffer], Hugh Kelly & Co., to Hammond Kennedy, 11 January 1911, RG 350, E 5, B 22356 to 22413-8, D 22413-8, NA.

17 [F. Schaffer], Hugh Kelly & Co., to Hammond Kennedy, RG 350, E 5, B 22356 to 22413-8, D 22413-3, NA.
Attorney Kennedy wrote the chief of the U.S. Bureau of Insular Affairs, Brig. Gen. Clarence R. Edwards, that Schaffer, of Hugh Kelly & Co., and Percy Bartram, of Bartram Brothers, wanted to discuss the project informally.\textsuperscript{18} No records have been found to confirm the meeting, but the Dominican-based sugar interests clearly were turning to the right channels to voice their opposition. One of the Bureau’s roles was to serve as the liaison in Washington with U.S. island territories and occupied countries.

As SPRSCO/NJ lobbied in Washington, it also began to lay the groundwork for the venture in the Dominican Republic. In early December 1910, Adrian J. Greif, general manager and vice-president of Guanica Centrale, and his lawyer from Ponce, F. Manuel Toro, joined sugar agent H. H. Gosling and spent four days “looking for suitable sugar land in La Romana District.”\textsuperscript{19}

Greif then traveled to Santo Domingo to talk with Secretary Velázquez y Hernández. He suggested that the government make La Romana an entry port to ease the shipment of cane to Puerto Rico and reduce fees of 20 cents per ton of export cargo. Velázquez y Hernández was “naturally...very much interested and wants the Sugar people to establish new plantations in Santo Domingo, but he wants the sugar made here.”\textsuperscript{20} The Treasury official also rejected reductions in port fees.

SPRSCO/NJ’s officials took a break from lobbying during Christmas season, but by mid-January were back in the Dominican Republic. On 18 January 1911, lawyer Ralph S. Rounds, together with attorney Toro, his daughter Tedy, and sugar agent Gosling disembarked in La Romana for a two-day stay.\textsuperscript{21} Rounds became SPRSCO/NJ’s main

\textsuperscript{18} Hammond Kennedy to Brig. Gen. Clarence R. Edwards, Chief, BIA, WD, RG 350, E 5, B 22356 to 22413-8, D 22413-4, NA.
\textsuperscript{19} J. H. Edwards, Deputy General Receiver, Dominican Customs, to the Chief, BIA, WD, 15 December 1910, RG 350, E 10, B 22356 to 22413-8, D 22413, NA.
\textsuperscript{20} Edwards to Chief, BIA, WD, 15 December 1910, RG 350, E 10, B 22356 to 27413-8, D 22413, NA. Greif also talked with the influential William E. Pulliam, U.S.-appointed general receiver of Dominican Customs, during the visit.
\textsuperscript{21} While working for SPRSCO/NJ, Gosling, watching his own interests, placed an ad in the press informing that he was selling lots in La Romana. See “La Romana,” Listín Diario, 1 March 1911, p. 2.
negotiator with the Dominican government. He went on to Santo Domingo where he held talks with Dominican officials. His top priority was to secure passage of an incentive’s act for agricultural companies. He negotiated with Velázquez y Hernández and other officials and also repeatedly sought Pulliam’s advice.

Rounds stayed several months in Santo Domingo negotiating the 1911 agricultural franchises law that proved key to foreign sugar interests in the Dominican Republic. In April 1911, Dillingham traveled to Santo Domingo with draft legislation for agricultural franchises that his law firm Rounds, Hatch, Dillingham and Debovoise had prepared. He met with Francisco J. Peynado, of the reputed corporate law firm Peynado & García Mella with offices in Santo Domingo. He likely sought Peynado’s counsel on the legislation, and also contracted the firm’s services on an annual basis. The Dominican government accepted the draft as its own.

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23 W. E. Pulliam, General Receiver, Dominican Customs, to Gen. Edwards, Chief, BIA, WD, 5 May 1911, RG 350, E 5, B 22356 to 22413-8, D 22413-7, NA.


26 Central Romana sent the law firm a contract for legal services copied from the form in use by Guanica Centrale in Puerto Rico with its lawyers in Ponce and Mayagüez. The contract was to be renewed annually if the two parties so wish. A year later it was extended. See Van Allen Harris to Francisco J. Peynado, 12 April 1911, and Harris to Peynado, Peynado & García Mella, 1 April 1912, P&P.
law and submitted it to Congress where they approved it, with only minor revisions. They approved the bill without amendments, in 25 April, and signed into law by President Cáceres on 26 June 1911.

<table>
<thead>
<tr>
<th>1932</th>
<th>1933</th>
<th>1934</th>
<th>1935</th>
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<tbody>
<tr>
<td>SELLO</td>
<td>SELLO</td>
<td>SELLO</td>
<td>SELLO</td>
</tr>
<tr>
<td>Apellido</td>
<td>Richiez Ducoudray</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nombre</td>
<td>Francisco</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nacionalidad</td>
<td>Domi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profesión</td>
<td>Agricultor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estado</td>
<td>Canado</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domicilio</td>
<td>La Romara</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residencia</td>
<td>La Romara</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edad</td>
<td>72 años</td>
<td></td>
<td></td>
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<tr>
<td>Color</td>
<td>Barco</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Señas Particulares</td>
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</tbody>
</table>

6.2. Identity card, Francisco Richiez Ducoudray, 13 August 1933 [Personal Files, Humberto García Muñiz] Note: In this card his surname is spelled Ducoudray, but in all other documents his surname is spelled Dicoudray.

In the Senate debate, two major issues surfaced: taxing of unused land and sugar cane exports to Puerto Rico. Multifaceted José Ramón López proposed that agricultural franchises which did not cultivate all their lands in five years (10 years for sugar cane) must pay 50 cents per hectare annually. López said his amendment could not impede land monopolization or non-cultivation, but it could “tend to see that the property contributed directly to the maintenance of the State, even if it is out of production.”

Senator Francisco Richiez Ducoudray, representing El Seibo province, was the leading voice favoring approval of the law without changes. He strongly objected to López’s amendment, arguing that no “gigantic
enterprise can judge the extension of its business within a certain time limit and, consequently, cannot determine beforehand its field of action." He also noted that large and small firms need cultivated lands and unused lands for expansion.


SPRSCO/NJ’s plan to export cane for milling to Puerto Rico was the only specific business project raised in the parliamentary debate. Voicing opposition of Cibao interests, Senators López and Dr. José Lamarche argued that the Dominican Republic was dedicated to the sugar cane industry and not just cane production. Lamarche went further by proposing that cane be excluded from the list of products exempted from export taxes. He denounced that his country would become “an agricultural colony of that North American possession,” Puerto Rico. Yet Richiez Dicoudray came forward to defend the bill. He claimed that

the rapid growth of Macoris is owed to sugar cane production and it will be richer the more its production increases, even if only for export, as that circumstance would not harm the colonos, who will receive the same benefit by delivering the cane to the mill yard or to the wharf.28

SPRSCO/NJ deliberately drafted the Agricultural Franchises Law to include incentives not only for sugar cane, sugar and molasses, but also for coffee, cotton, cocoa, tobacco, resins, firewood, cabinet wood, construction wood, sleepers for railways, nut fibers and turpentine. It defined “agricultural enterprises” broadly as all those, natural or legal, whose purpose was the cultivation of lands. The wide scope of the law ensured that SPRSCO/NJ obtained backing from many interests, including foreign or Dominican-based sugar concerns.

Opposition by other foreign sugar interests apparently fizzled. Pulliam, the U.S.-appointed general receiver of Dominican Customs, reported that he did not receive confirmation of any complaint to the “innovation...of growing sugarcane to be exported to Porto Rico.” He was very satisfied with the result:

The law, as drafted by the American lawyers, and subsequently revised to suit the wishes of Secretary Velázquez, is the most liberal and complete of anything I know in this section, and I think the success in obtaining it will act as

28 “Sesión del día 27 de abril,” Gaceta Oficial, 14 June 1911, p. 5.
an opening wedge in the future development of Santo Domingo.²⁹

The only attack came from William L. Bass, “the well-known Santo Domingan [sic] planter who enjoys some of his leisure in sugar politics in Washington.” Bass knew SPRSCO/NJ’s plans, having visited La Romana in November 1911. His stay elicited rumors of his plans to build a sugar mill in La Romana.³⁰ They proved unfounded: Bass had just sold Ingenio Consuelo to the Bartram Brothers and was leaving the sugar business in the Dominican Republic for good.

6.5. Cartoon by William L. Bass depicting Guanica Centrale as a dog attacking other U.S. sugar interests in the Dominican Republic, with the support of the U.S. Embassy and the indifference of the Dominican Government [The Gator, vol. 1, no. 1, 1912, 18]

²⁹ Pulliam to Chief, BIA, WD, 15 December 1910, RG 350, E 5, B 22356 to 22413-8, D 22413-7, NA.
Bass showed his ingenuity by publishing three amusing cartoons in The Washington Times. The first showed the Sugar Trust clad in women's garb and somewhat hidden behind Uncle Sam, procuring a law from the Dominican Congress that allows sugar cane export to Puerto Rico. In the second, the Sugar Trust is securing a promise from the Dominican Congress not to interfere with cane export to Puerto Rico. In the third cartoon, a tow of barges is en route from the Dominican Republic to Puerto Rico. Signs note that a ton of Dominican cane enters Puerto Rico for 25 cents, and that duty on resulting milled -about $4.04 on 240 pounds-is saved by converting the cane into sugar under the U.S. flag in Puerto Rico. The upshot: additional Sugar Trust profits of about $3.70 per ton. The cartoon shows Louisianians and beet sugar producers, Hawaiians and Filipinos standing by and looking with trepidation at this new scheme.31

U.S.-based sugar interests in the Dominican Republic soon realized, however, that the law was in their benefit. Ten U.S.-incorporated sugar enterprises took advantage of the law within a year, even though the unstable administration of President Eladio Victoria was under strong political pressure from practically all sides, including the United States. (See Appendix 6.1)

The law includes incentives for most major aspects of a sugar plantation complex. On the agricultural side were the right to cultivate, manufacture, store, purchase and sell, transport and export sugar canes, molasses and sugar, as well as the right to take, pump and distribute unlimited amounts of sea or river water to its own or rented lands. On the industrial side, companies gained rights to construct any type of factory and related buildings and to build and operate an electricity-generating system. In transport, they had rights to install railways and operate a railroad, to build bridges and wharves, and to use foreign vessels for export and import. In communications, franchises could construct and operate a radiotelegraph system for their own exclusive use, plus install telephone and telegraph lines within its own, rented or occupied lands.

The only legal limitation for a national or foreign entity ready to engage in sugar cane cultivation was a requirement to own or rent a minimum of 100 hectares, for at least 10 years. The enterprises also could not introduce migrants other than those of “white race,” unless the government determined that “immigration from any other race from neighboring islands” was necessary because only for that year “zafras...might be ruined for lack of braceros.”

On 7 January 1911, six months before approval of the Agricultural Franchises Law, Central Romana Inc. bought 2,611 acres in La Romana from Pedro Marín. It made the purchase under the name of Central Romana, Inc., an entity incorporated in Connecticut in 1910, with a capital of $450,000. Rounds served as first president of Central Romana, Inc. The Dominican government authorized Central Romana to operate in the country on 16 March 1911.

33 See “Núm. 5076-Resolución del P.E. que autoriza a The Central Romana Inc. a entrar en el goce de las franquicias agrarias acordadas por la Ley del 26 de Junio de 1911,” Colección de leyes... 1912, vol. 21, pp. 62-63.
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In May 1911, a month before the Agricultural Franchises Law passed, SPRSCO/NJ appointed civil engineer Van Allen Harris to run Central Romana. He settled in La Romana with field overseer (mayordomo de campo) Sebastian H. McDowell; another civil engineer, S. R. Ginsburg; and his secretary, Luis Cid. He immediately ordered the clearing of land to start that month. In July, Harris traveled to the United States and returned with his wife, Edith T., at the end of November. He found a "beautiful chalet" of stone work with cement (mamposteria) ready for occupancy.

Francisco X. del Castillo Márquez, local teacher and poet, eloquently expressed his happiness over Central Romana in Listín Diario newspaper in 1911:

The hour of redemption undoubtedly always arrives for all towns...Today La Romana has great hopes for progress. At last, a powerful Company has come to this común. What will

34 Little is known about Harris, except that he graduated as civil engineer at Princeton University, New Jersey, worked and served in the board of directors of Central Juncos, and appraised the properties of Compagnie des Sucrières de Porto Rico for Guanica Centrale. This job was probably his last in Puerto Rico before taking over Central Romana in the Dominican Republic.
they say now, those implacable and unwarranted detractors of the fertility of these lands, of the importance of its port and of other sources of wealth existing in this comien.

Not much information circulated locally about the plans for Central Romana. It was assumed SPRSCO/NJ would build a sugar factory, and speculation surfaced on the location of the future mill yard (batey). Among those conjecturing were a Santo Domingo-wholesale and retailer importer, José F. Cassá, and his business associate in San Pedro de Macoris, Francisco Aníbal Roldán. They had been closely watching Central Romana with hopes of starting a business in La Romana if economic conditions improved there. Roldán’s brother-in-law, Virgilio Boz, lived in La Romana and kept him informed of developments. In April 1911, a Puerto Rican merchant in La Romana, Antonio Gonzalvo, wrote Roldán that “the work of the central is taking on some character. They have employed about 40 men in the gauges.” That same month, discussing the possible mill yard site, Cassá wrote Roldán that

it is impossible for them to situate the batey in town ...though they might place some offices and warehouses there, which will be the office batey. My belief is that the milling batey will never be built in the town.

37 Francisco X. del Castillo Máquez, “La Romana,” Listín Diario, 12 May 1911; p. 3.
38 In July 1912, Cassá purchased a house in La Romana from Virgilio Perdomo for $350. See Arturo Pellerano Castro, Protocolos notariales correspondiente al año 1912, vol. 2, pp. 541-544, L 30, AGN.
39 In 1910, Roldán rented some land from Pedro Marin and kept some oxen in ‘La Rusia,’ a pasture ground, also owned by Marin. ‘La Rusia’ had been a property of Heureaux. In 1912, he purchased two plots of land, each of 200 tareas in Chavón Abajo. See Augusto Chottin to Francisco Aníbal Roldán, 1 July 1910, RPP, UF/G; Resumen general, pp. x-xii; and Juan Francisco Mañón, “Escritura no. 24,” and “Escritura no. 32,” No. 2 Orígenes y actos notariales. Protocolo de instrumentos públicos correspondientes de 1908-1912, pp. 111-114, 129-130.
40 Antonio Gonzalvo to Roldán, 29 April 1911, RPP, UF/G.
41 José F. Cassá to Roldán, 21 April 1911, RPP, UF/G.
In May 1911, Cassá wrote back, reporting that Puerto Rico-born Santiago Michelena, a banker, merchant and sugar mill proprietor, had told him "still no decision had been made whether the batey would be in town or in the countryside." Speculation became moot when the Senate debate revealed that despite its name, Central Romana had no

42 Cassá to Roldán, 25 May 1911, RPP, UF/G. Michelena owned Ingenio San Luis in the Santo Domingo province. San Luis had been "almost rebuilt in the last couple of years, the latest installation having made by the Krajewski-Pesant Corporation." "Santo Domingo," LPSM, 50, no. 22 (31 May 1913), p. 346.
immediate plans to build a factory, but would ship cane to Puerto Rico for milling there.

On 13 May 1912, Central Romana received authorization to operate under the Agricultural Franchises Law. One month later, La Romana port was opened to foreign commerce. The customs office opened in a warehouse provided by Central Romana. In October 1912, the company received permission to take water from Romana River for any agricultural or industrial purposes, and to build a railroad and telephone lines from La Romana up 14 kilometers to the north to a place known as El Higüeral.

Expansion came at a rapid pace. In November 1912, the first rails arrived in the steamer Seminole. In December, Central Romana was authorized to construct a pier for “private use.” By 1915, under the Agricultural Franchises Law, Central Romana was already extending the piers.

43 See “Núm. 5076-Resolución del P.E. que autoriza a The Central Romana Inc. a entrar en el goce de las franquicias agrarias acordadas por la Ley del 26 de Junio de 1911,” Colección de leyes... 1912, vol. 21, pp. 62-64.
44 See “Núm. 5113-Ley que reforma la de Aduanas y Puertos,” Colección de leyes... 1912, vol. 21, pp. 139-140.
45 Thomas Pearson, Deputy General Receiver, to Chief, BIA, WD, 8 November 1938, RG 350, E 10, B SD-170-2 et seq. to SD-172-257, NA.
46 “Núm. 5161-Resolución del P.E. que autoriza a The Central Romana Inc. a tomar agua del Río Romana de acuerdo con la ley de franquicias agrarias y el reglamento de la misma”; “Núm. 5165-Resolución del P.E. que autoriza a The Central Romana Inc. a establecer un ferrocarril de acuerdo con la ley de franquicias agrarias del 26 de junio de 1911”; and “Núm. 5165-Resolución del P.E. que autoriza a The Central Romana Inc. para establecer un teléfono de acuerdo con la ley de franquicias agrarias del 26 de junio de 1911,” Colección de leyes... 1912, vol. 21, pp. 249-251, 253-254, 255-256.
47 See Richiez Dicouray, “Registro,” p. 60.
48 Part of the land for the wharf had been purchased from the Government. “Núm. 5260-Resolución del C.N. que autoriza al P.E. a vender al Central Romana un área de terreno para un muelle,” Colección de leyes... 1913, vol. 22, p. 156.
In February 1913, two Norwegian steamers, Viking and Vitalia, brought machinery and tools for Central Romana and some merchandise for the business sector of town.\textsuperscript{50} By August 1913, the first section of the railroad was completed and administrator Harris gave a ride to the town's public officials.\textsuperscript{51} In December 1913, the company signed an agreement with the town government to install a public water fountain.\textsuperscript{52}

That same year, SPRSCO/NJ also built wireless stations in Guanica Centrale in Puerto Rico and in Central Romana in the Dominican Republic.\textsuperscript{53} The only other wireless station with a radius to communicate with Puerto Rico was located in Santo Domingo.\textsuperscript{54} By September, the wireless telegraph was losing money, with operations costing between $225-250 monthly. The company considered shutting it down except during crop time, unless an alternative could be found to raise revenue from the plant. As a result, the company petitioned Dominican President José Bordas Valdés to declare the wireless plant at Central Romana a public station, noting "this place has been without telephone communication with other parts of the Island" for more than a year.\textsuperscript{55}

\textsuperscript{50} Richiez Dicoudray, "Registro," p. 61.
\textsuperscript{51} Richiez Dicoudray, "Registro," p. 63.
\textsuperscript{52} "Sesión extraordinaria, 26 de diciembre de 1912," Asiento de las Actas del Ayuntamiento de La Romana, 1911-1913, L 4,407, AGN, and Richiez Dicoudray, "Registro," p. 60.
\textsuperscript{53} "Núm. 5192-Resolución del P.E. que autoriza a The Central Romana a establecer un radio-télégrafo de acuerdo con la ley de franquicias agrarias del 26 de junio de 1911," Colección de leyes... 1913, vol. 22, pp. 30-31.
\textsuperscript{54} Another small apparatus was located in San Pedro de Macoris, but was used for local purposes. See Samuel Guy Inman, Through Santo Domingo and Haiti. A Cruise with the Marines. Report of a Visit to then Island Republics in the Summer of 1919 (New York: Committee on Cooperation in Latin America, 1919), pp. 26-27.
\textsuperscript{55} Harris to Sr. General José Bordas Valdés, President, 17 October 1913, and Harris to Peyrado & García Mella, 17 October 1913, P&P, ED/UPR/RP. Even though Manuel de J. Troncoso had established telephone communication with San Pedro de Macoris, Seibo, Higüey, and Santo Domingo since 1905, the service had not been functioning well. See Richiez Dicoudray, "Registro," p. 37, and LPSM, 51, no. 4 (30 August 1913), p. 155.
Central Romana’s first harvest began in late 1913. The first cane wagon arrived in La Romana in 19 December, and cane was shipped to Guanica Centrale in the chartered Norhilda vessel three days later. Sugar cane exported to Puerto Rico in the 1913-14 crop totaled 28,134 tons, with a value of $62,575. Carrying the cane across 130 nautical miles,

a 12-hour trip, were two chartered steamers, which made four voyages a week.⁵⁸ (See Map 6.1)

As Central Romana’s inaugural crop ended and the first dead season in La Romana set in, the stage was being set for World War I. The war affected the international sugar market by closing Great Britain’s market to the beet sugar from its main suppliers, now its enemies: Germany and Austria-Hungary. As the world’s largest consumer market, Britain was forced to look elsewhere for supplies. It found raw sugar in Cuba, Java and its own Caribbean colonies. It also imported refined sugar from the United States. Cuba before World War I had been almost exclusively the domain of U.S. refiners. Yet, in the mid-1910s, it became the center of attention for both Allied and neutral governments. After exporting an average of just 143,824 raw sugar tons to Great Britain in the 1909-1913 period, Cuba exported 956,175 tons in 1917 and 1,200,000 tons in 1918. The Dominican Republic was tapped only in 1914-15 and merely for 3,459 tons.⁵⁹

On the eve of war in 1913, the Dominican Republic faced a weak season both in terms of production and prices. Drought had dramatically hurt production, especially in the southern region. Notwithstanding, sugar companies spent around $2 million clearing land to be devoted to sugar cane, installing new machinery, and improving railroad facilities. Ingenios Consuelo, Porvenir, and San Luis were rebuilt. Nearly every estate increased milling capacity from 25 percent to 75 percent.⁶⁰ The companies expected elimination of the U.S. sugar tariff in 1914 would enable them to crack the U.S. market at last.⁶¹

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The tariff cut never materialized, but Dominican producers profited instead from price increases caused by the war. Production rose slightly but income soared. In the 1912-13 season, a total 78,849 tons fetched $3.6 million. The following year, 101,329 tons commanded $4.9 million, and the next year, just over 100,000 tons brought in a whopping $7.7 million, more than twice the amount garnered two years earlier.

Sugar had been the leading Dominican export crop in terms of value, followed by cocoa from 1905 to 1914, with the exceptions of 1907, 1908 and 1913. By the mid-1910s, the Dominican Republic ranked as the world's fourth cocoa exporter, behind Brazil, Ecuador and São Thomé. The main buyer of Dominican cocoa was the United States. Germany and France took turns for second and third position. Germany was the principal taker of tobacco, honey, and wax. German investment in the Dominican Republic totaled a slightly more than $1 million. However, with the outbreak of World War I and the boom of sugar prices, raw sugar took a commanding lead over all exports, and Germany's privileged position as second trading partner of the Dominican Republic was doomed.

Dominican raw sugar exports to the United States rose from approximately 47.6 million kilos, valued at $2.2 million in 1913, to 75.6 million kilos, valued at $5.7 million two years later. The raw sugar

63 A dramatic shift in the world's production of cocoa took place in the following decades as Africa became the major producer and exporter. See Muto Jr., "The Illusory Promise," pp. 51-52.
65 Germany held the third place position as a capital exporting economy in 1914. The United Kingdom and France occupied first and second place, respectively. German investment in Latin America amounted to about $900 million, representing about 16 percent of total German investment, its highest for any region in the world. See George F. W. Young, "German Capital Investment in Latin America in World War I," Jahrbuch für Geschichte von Staat, Wirtschaft und Gesellschaft Lateinamerikas, 25 (1988), pp. 215-239.
66 Harris, The West Indies, p. 199.
entered the U.S. market as “in order” to be sold to Great Britain and Canada. Britain became the main market. Indeed, when sugar trade normalized in the 1920s, sugar sales between Dominican Republic and Great Britain continued on a more direct basis. From about 1913 to the late 1920s, Dominican raw sugar constituted 10 percent to 20 percent of total Canadian sugar imports.  

World War I prompted a rapid expansion at Central Romana. The company expanded land under cultivation for the 1914-15 crop from 2,000 acres to an estimated 3,500 acres. Production rose to 81,127 tons, with a value of $195,695. That year, the company chartered three tramp steamers, each weighing about 1,000 tons. Two flew the British flag and one the flag of Norway. They made eight trips a week to Ensenada from December to June. Cultivation area more than doubled through the 1916-17 season to 7,300 acres, with annual sugar cane exports reaching about 140,000 tons, and the value of the 1915-16 crop hitting $295,622.  

SPRSCO/NJ paid duties on the cane in Puerto Rico. From 1916 to 1919, the duty was determined by agreement between the Collector of U.S. Customs in San Juan and SPRSCO/NJ itself. The amount was based on Central Romana’s average sugar cane production cost of sugar cane plus a percentage of profits from the cultivation. Average production costs for the 1916-17 season was $2.02 per ton and 50 percent of the cost was determined as a percentage of the profit. As a result, the duty was set at $3.03 per ton for those three years. In March 1919, the duty was

68 Harris, The West Indies, p. 199.
69 Mathews, “Report of Commerce and Industries in 1915,” to KMKUK, 9 February 1915, RG 84, CC, NA. These steamers connected with Santo Domingo. The U.S. consul wrote the Postmaster in New York asking all mail addressed to him in Santo Domingo be forwarded through Ensenada, Puerto Rico. See Mathews to Postmaster, New York, 26 February 1915, RG 84, CC, NA.
71 [French T. Maxwell], Vice President & General Manager, to The Secretary of the Treasury, c/o Hayden L. Moore, Collector of Customs, San Juan, n.d. [1919], TDBJrPP, LSAU.
increased to $3.72 per ton. Before the year end, on 19 December 1919, it was increased again, to $4.05 per ton.  

By the 1916-17 crop season, SPRSCO/NJ expanded its steamship charters to four, three American and one British, meaning that “there will be two steamers leaving this Port practically every day from about December 1st,” giving Guanica Centrale’s mills two loads daily from La Romana. The steamers carried Turk Islanders as deckhands, though they were not legally considered seamen. In 1917, a commercial publication noted that shipping cane to Puerto Rico was “an indication of the low cost of production” in the Dominican Republic. One year later, five SPRSCO/NJ-chartered cane steamers were running between La Romana and Ensenada. (See Table 6.2)  

Business life in La Romana thrived with the opening of Central Romana’s sugar plantations in 1911. Merchants prospered in meeting the import needs of the company and the increased population, in exporting cane to Puerto Rico as well as cocoa, hides, honey and wax to the United States and Germany. On 24 January 1913, the German steamer Crasedent stopped in La Romana en route to St. Thomas to pick up cocoa from the plaza. That month, the Seminole also docked to take cargo to New York. In 1914, La Romana exported $156,231 worth of cocoa, being the fifth
port of importance in the trade, following Sánchez, Puerto Plata, Macoris and Santo Domingo.80

Table 6.2
SPRSCO’s Chartered Cane Ships for Crop 1917/18:
Name, Owner, Tonnage, Dates, Cost, and Other Information

<table>
<thead>
<tr>
<th>Name of ship</th>
<th>Owner</th>
<th>Tonnage</th>
<th>Dates</th>
<th>Cost $</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gross</td>
<td>Net</td>
<td>From</td>
<td>To</td>
</tr>
<tr>
<td>Florence Olson</td>
<td>Oliver J. Olson</td>
<td>1185</td>
<td>604</td>
<td>15/12/17</td>
<td>15/6/18</td>
</tr>
<tr>
<td>Mukilteo</td>
<td>The Charles Nelson Co.</td>
<td>1230</td>
<td>690</td>
<td>1/12/17</td>
<td>n.a.</td>
</tr>
<tr>
<td>Claremont</td>
<td>Hartwood Lumber Co.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>1/11/17</td>
<td>1/6/18</td>
</tr>
<tr>
<td>Paraiso</td>
<td>J. G. Rainwater Lumber Co., New Orleans, La.</td>
<td>1383</td>
<td>855</td>
<td>15/12/17</td>
<td>10/3/18</td>
</tr>
<tr>
<td>Siskiyou</td>
<td>E. K. Wood Lumber Co.</td>
<td>884</td>
<td>523</td>
<td>10/12/17</td>
<td>1/6/18</td>
</tr>
</tbody>
</table>

n.a. = not available  C = charterer  O = owner  d. = daily  p.c.m. = per calendar month
Source: TDBJrPP, LSUA

The growing importance of La Romana’s port won early recognition from the U.S. Department of Commerce. A U.S. consular office opened in April 1914. Its offices—first, temporary and later, permanent—were housed in buildings belonging to Central Romana. In his first report, U.S. Consular Agent Clarence J. Mathews noted La Romana “is practically a new Port and has but one important concern, namely, Central Romana. This is an American Company, growing sugar cane.”81 He said principal imports were iron and steel, and manufactures of cotton goods, rice, flour, common soap, beer and foodstuffs. All came from the United States.82

80 In 1915 and 1916, $156,231 and $260,889 worth of cocoa, respectively, was exported via the port of La Romana. In 1916, La Romana moved to a close third place in cocoa dollar value, second to Santo Domingo with $269,462. See Harris, The West Indies, p. 172, and Britton, comp., DC1 Commercial Santo Domingo in 1916, p. 15.
81 Mathews to KMJUK, 9 February 1915, RG 84, CC, NA.
82 Mathews to KMJUK, 9 February 1915, RG 84, CC, NA.
In 1916, Central Romana had 15 kilometers of railroad line, four locomotives and 80 wagons. That year, authorization was granted to further extend the railroad from El Higüeral to San Morano. In 1916, Central Romana had 15 kilometers of railroad line, four locomotives and 80 wagons. That year, authorization was granted to further extend the railroad from El Higüeral to San Morano. A railroad line brought cane from the fields to be loaded on steamers and shipped overnight to Puerto Rico. The railroad line divided Central Romana's grounds from the town of La Romana.

The company also had about 400 work animals hauling cargo, plus 160 kilometers of feeder roads crossing its property. Also José Ginebra brought 5,000 heads of cattle by land to Central Romana.

Word spread in September 1916 in the Dominican Republic and beyond that SPRSCO/NJ was "very soon to start the assembly of ingenio Central Romana." The building of the factory was not an isolated event.

83 "Número 5482-Resolución del C. de S. de Estado que autoriza a The Central Romana a establecer un ferrocarril de acuerdo con la ley de franquicias del 26 de enero de 1911," Colección de leyes... 1914-1916, vol. 23, pp. 261-262.
84 In late 1916, following the dismissal of the Dominican Congress, U.S.-educated Ginebra, Horacista deputy from Puerto Plata, came to La Romana at the invitation of fellow deputy Ramón Morales. See José Ginebra Jr., interview with author, Santo Domingo, Dominican Republic, 19 May 1991.
The boost given to the Dominican sugar industry by World War I continued with the U.S. military government. The policy of the military regime reinforced the expansion of the sugar industry; the building of raw sugar factories was its natural sequel.


6.13. Inauguration of Central Romana Railroad, April, 1915 [Personal Files, Humberto García Muñiz]
Eight new centrales started production in the Dominican Republic from 1915 through 1922. Dominicans or Dominican-based capital owned six of them; U.S. capital owned the other two. The local factories included two established in the southeast, near San Pedro de Macoris, and four in northern Puerto Plata. The U.S.-owned units were built in southeastern La Romana and in southwestern Barahona.

In the southeast, Dominican-owned factories included centrales San José, later known as Bocachica, and Las Pajas. San José, with one six-roller 32-inches x 64-inches Birmingham cane mill and Corliss engine, started milling near the Bocachica seashore during the 1915-16 crop season. Its principal owner was Juan Parra Alba, a Spanish merchant and longtime resident in San Pedro de Macoris, whose company was called “La Industrial y Comercial.” Also participating in the venture was Rafael Fabián, the Spanish-born sugar magnate living in Puerto Rico, who also owned several centrales.

86 By January 1916, Central San José secured some 27,000 acres of land, part of which was planted. See “Progressive Santo Domingo,” LPSM, 56, no. 5 (29 January 1916), pp. 74-75, and “Estimates on the New Dominican Sugar Crop,” Commerce Reports, 25 September 1916, p. 1149.
Plans for Central Las Pajas, to be developed by Macoris Sugar Co., were first announced in 1916. Macoris Sugar Co. was incorporated in Delaware, with capital of $400,000. Its president was Juan M. Santoni and its treasurer, Swiss-German Gaetán Bucher, both Dominican residents. They signed a contract for a 29-year rental of approximately 6,000 acres of virgin land at the fork of the Higuamo and Casui Rivers; another 2,400 acres were to be purchased. In 1917, Macoris Sugar Co. bought the machinery of former Central San Cristóbal in Puerto Rico for $150,000. It dismantled the factory by early 1917 and likely began production in time for the 1917-18 harvest, when it produced 6,938 tons.

The other four Dominican-owned enterprises-Monte Llano, Mercedes, San Carlos, and Cuba-developed in northern Puerto Plata. "La Empresa Monte Llano," owned by the merchant firm of Bentz Brothers, initially consisted of about 6,000 acres in the Bergantin port, six miles east of Puerto Plata. In 1918, plans for building a mill, with a daily grinding capacity of 1,000 to 1,500 tons, were scaled down, and a 600-ton plant was built instead. The first crop was in 1919.

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90 In the 1890s, Santoni had been a colono (in charge of sugar cane cultivation) at Central Quisqueya and Central Consuelo. In 1916, he was still a colono of the latter. See Sánchez, La caña, pp. 51, 55; "La caña en Macoris," Listín Diario, 13 October 1916, p. 1; and "Sugar Notes," LPSM, 56, no. 23 (3 June 1916), p. 361.
94 For further information, see Compañía Biográfica, "Bentz Hermanos," Libro azul=Blue Book, pp. 122-123.
95 The Bentz Brothers also owned Ingenio Amistad, located 12 miles south of Puerto Plata. Amistad, the largest sugar plantation in northern Dominican Republic, sold its production locally. Reportedly, some Americans offered the Bentz Brothers $500,000 for Amistad and all their lands in the Pérez area. See "Actividad nacional: Compra de ingenio," Renacimiento, III, no. 59 (3 February 1917), p. 166; "New Sugar Plantation in the Dominican Republic," Commerce Reports, 18 April 1918; and "Santo Domingo," LPSM, 62, no. 9 (1 March 1919), p. 137.
96 Dirección General... de Información y Prensa de la Presidencia, Evolución de la industria, p. 41.

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Carlos, located near Puerto Plata, was owned by Divanna, Grisolia & Co. Its main stockholders were Carlos and Juan Grisolia, and capital stock totaled $500,000.97 Its first crop appears to have been milled in 1918/19.98 Ingenio Mercedes, with a paid up capital of $320,000, started grinding in 1920. It was located in San Marcos, two kilometers from Puerto Plata. Its principal officers were Carlos Grisolia and Luis Ginebra. In 1920, it had 3,000 acres cultivated in cane.99 Ingenio Cuba, belonging to Brugal & Cia., obtained its franchise in 1913, but apparently took time to begin operations. It likely began grinding during the 1918/19 crop season.100

Other publicized ventures never got off the ground, however. In 1916, Dominican General Alfredo Victoria was said to be interested in building a sugar factory in Saona Island, located a mile from the coast in the southeast, near La Romana port.101 In 1917, Luis Felipe Vidal, a politician-turned-sugar entrepreneur, visited Puerto Rico and formed "a connection" with sugar industrialist Ramón Aboy Benitez "for the purpose of growing sugar cane in Santo Domingo."102 Engineer J. D. Sulsona also announced plans for three other ventures in Cibao in 1917. Rum-producer A. Bermúdez & Co. was to build a factory in Santiago, Emilio Jiménez in La Vega, and General Manuel Sánchez in Monte Cristi.103

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97 Divanna, Grisolia & Co. also exported sugar and tobacco and it owned a stearine candle factory and a cotton gin. See Compañía Biográfica, "Divanna, Grisolia & Co.," Libro azul=Blue Book, p. 124.
99 See Compañía Biográfica, "Ingenio Mercedes," Libro azul=Blue Book, p. 120.
100 Its founder, Andrés Brugal, a Catalan, migrated to Cuba in 1868 and moved his business to Puerto Plata during the war of independence in the late 1890s. See "Sugar Statistics of the Dominican Crop...,” p. 60; Compañía Biográfica, "Brugal & Co.,” Libro azul=Blue Book, p. 126; and José Chez Checo, El ron en la historia dominicana, vol. 1, Desde los antecedentes hasta finales del siglo XIX (Santo Domingo: Ediciones Centenario de Brugal & Co., 1988), pp. 221-224.
102 Arthur Yager, Governor of Porto Rico, to Harry S. Knapp, Military Governor, 10 July 1917, RG 38, E 6, B 1, NA.

At least one foreign-owned venture also failed to materialize. The American Dominican Sugar Company planned to build a $3 million-sugar factory near Jovero, in El Seibo province in 1920. Its main partners were Col. George R. Shanton, chief of the Insular Police of Puerto Rico, and Hugo Friedheim, a German landowner living about 30 years in the country, whose earlier attempts at sugar also apparently faltered.104 (See Appendix 6.1) The company had contracted 8,000 acres for planting by colonos. It hoped to start “operations and grind cane in 1922 or 1923.”105

But all these ventures paled next to the two new U.S.-owned sugar factories that were to become the country’s largest producers. Central Barahona was built in Barahona, a province bordering Haiti in

104 As owner of extensive pasture lands and bovine cattle, Friedheim was placed together with the sugar estates Consuelo, Porvenir, Quisqueya, Angelina, Cristóbal Colón and Porvenir, as well as with Juan M. Santoni, Rafael Corso, and Coiscou Brothers. See J. M. B., “Los potreros en S. Pedro de Macoris,” Renacimiento, III, no. 81 (21 July 1917), p. 10.
105 Geo. R. Shanton, Chief, Insular Police of Porto Rico, to Admiral Thomas Snowden, Military Governor of Santo Domingo, 3 September 1920, RG 38, E 6, B 22, NA.
the southwest region. Its saga is long and complicated. In brief, it was acquired in 1917 by the West Indies Sugar Finance Corp. [hereafter referred to as WISCO], but several costly complications delayed its milling until 1921.106

In April 1917, Central Romana started construction of its factory. The company said it “expected that this factory will be ready to grind during the crop of 1918.”107 SPRSCO/NJ contracted the Honolulu Iron Works Company for the job, with completion slated for November 1918.108 Some construction employees were brought from the United States.109 As the project proceeded, “the coincidence of a notable increase in local and provincial commerce and the bulky importation by Central Romana of materials and merchandise of all kinds” forced Central Romana to temporarily close its pier to local businesses. Local firms faced a desperate situation because the government wharf was in “a state of deterioration that made it useless.”110

Three principal reasons can explain for the construction of the sugar factory in La Romana. First, cultivation had expanded so quickly in La Romana during World War I that the cane exceeded the milling capacity available at Guanica Centrale. Central Romana increased its acreage under cane ten fold from 1912 to 1920 and its cane tonnage 15 times. Second, Central Romana, like other investors, perceived that the U.S. military occupation would increase political stability in the Dominican Republic: “...there is every likelihood of a stable government being established.”111

106 WISCO was formed initially to finance sugar operations. An affiliated firm, West India Management and Consultation Co., presided by Hubert Edson, took over management of sugar installations. A detailed, personal account of the Barahona experience is given by Edson, Sugar, pp. 169-184. See also “Memorandum: Information Given by J. J. Seip, Factory Superintendent of Barajona [sic],” TDB]rPP, LSUA.
109 Mathews to Edwards, 6 February 1918, RG 84, CC, NA.
110 “Informe [de la Junta Comunal],” Listín Diario, 1 May 1917, p. 6. The board members were Luis J. Ricart, H. Du Breil, Max Ramos Camacho, Miguel A. Saviñón, and Guy H. Lippitt. All were Dominican with the exception of Ramos Camacho, who was Puerto Rican, and Lippitt, a U.S. lawyer representing Central Romana.
111 “Porto Rico,” LPSM, 58, no. 8 (24 February 1917), p. 120.
Both reasons, in addition to SPRSCO/NJ’s financial solidity and competent management, attracted the attention of Horace Havemeyer. Havemeyer became an important shareholder in 1915 and a member of its board of directors in 1916. At his urging, the decision was taken to build "the most modern raw sugar mill in the world, one capable of producing 100,000 tons per year." His biographer says Havemeyer’s concern led to his traveling to La Romana “himself either in 1916 or 1917 and personally chose the exact site.” The prosperity of the times allowed SPRSCO/NJ to finance internally the entire factory construction, excepting a loan for $550,000 by Havemeyer to the company in the spring of 1918, just before the mill started grinding.

112 Catlin Jr., Good Work Well Done, p. 129.
113 Catlin Jr., Good Work Well Done, p. 130.
114 By year’s end, the loan had been repaid. Catlin Jr., Good Work Well Done, p. 133.
The construction of the mill transformed Central Romana from a sugar cane plantation to a fully coordinated agricultural and factory operation. It changed SPRSCO/NJ's operations as a multinational company, as well as its relations with the Dominican town and countryside. Beyond shipping cane duty free from a foreign soil to a U.S. territory, the company now entered the business of selling raw Dominican sugar to the local and world markets.

Honolulu Iron Works Co.'s engineer, James Scott, who oversaw the construction, was so proud of the mill project that he wrote a detailed article for a specialized journal, *Sugar*.

He noted that some buildings and machinery had been part of Central Fortuna, which had been dismantled. In October 1918, SPRSCO/NJ Vice-President French T. Maxwell informed General Superintendent T. D. Boyd Jr. that

Mr. Dillingham and I decided [to] cut down the steel building over the small boiler plant at Fortuna and prepare it for shipment to Romana as soon as the cane boats start running. We talked this with Horace Havemeyer and he fully agreed.

Honolulu Iron Works completed the sugar house on schedule. Central Romana ran its first tests on 4 October 1918, and it milled its first crop during the 1918-19 crop season. On 19 March 1919, in mid-crop, Central Romana sent “some of its newly made white sugar” to the U.S. Military Governor Thomas Snowden. He remitted $7.00, noting that “my insistence in paying will not offend...the Company towards whom I have the most kindly feeling.”

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115 See Scott, “Central Romana,” pp. 93-100. The journal said “few times or never has appeared in a sugar publication such a complete description as the one included in this number of Central Romana.”

116 French T. Maxwell to T. D. Boyd Jr., 5 October 1918, TDBJrPP, LSUA. The complete boiler shed was shipped in December in the S.S. *Claremont*. See “Minutes of a Meeting of the Executive Committee of South Porto Rico Sugar Company...on December 13th, 1918,” CCG, AACUPR.


118 Guy H. Lippitt to Snowden, Military Governor, 14 March 1919, and Snowden to Lippitt, 19 March 1919, RG 38, E 6, B 13, NA.
The factory project meant additional investment in Central Romana beyond the sugar house itself. The company expanded its railroad network to include 25 miles of railroad, built new buildings for workshops and to house employees, and also expanded its sugar plantation. More technical and professional personnel were also imported, while greater communication was developed with Guanica Centrale.

The extensive private development contrasted with weak infrastructure elsewhere in the province. The local council pleaded with provincial authorities in 1917 to build a macadam road connecting Seibo “a center, great Cocoa producer...to its port La Romana,” a distance of only 44 kilometers. Commerce was interrupted because of the bad conditions of roads during the rainy season from May to December, “affecting at the same time credit, profits and capital.”\(^{119}\) In 1918, Lt. Comm. C. C. Baughman, director of Agriculture, commented that Seibo and Hato Mayor hosted “a great deal of old cacao plantations, most...not yielding to their full capacity, the growth being wild and no attempt made to exercise

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proper cultivation methods neither by caring for the soil nor the trees.”

In fact, cocoa and other traditional crops stagnated between 1917 and 1922, because of poor cultivation practices, weak transportation systems, and the guerrilla war affecting the region.

SPRSCO/NJ’s expansion in the Dominican Republic brought change in management and organizational practices. Its growth in La Romana appears to have had little impact on headquarters in New York office. Top management remained the same in the early 1910s. William Schall Jr. supervised SPRSCO/NJ’s finances from his post at Muller, Schall & Co. and Frank A. Dillingham, “a millionaire,” handled his business interests, including SPRSCO/NJ, from the Rounds, Hatch, Dillingham & Debevoise law firm. Dillingham took all final decisions on the business and maintained regular contact with management in the Caribbean. SPRSCO/NJ’s chief in the Caribbean, French T. Maxwell, for example, wrote “long detailed weekly letters and later when air mail service between the island and New York was in effect he reported more frequently.” Dillingham also took annual trips to the islands, visiting both Ensenada and La Romana operations.

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120 In 1918, only two apiaries of any importance were left: one in Higuín and the other in La Romana. The most prosperous landholders had horses and cattle and 10 to 50 areas planted with food crops. Rice was planted only for home consumption not for “business.” Memorandum, C.C. Baughman, Lt. Comm., U.S.N., Officer Administering the Affairs of the Dept. of Agriculture and Immigration, to Head of Military Government, 9 April 1918, MGP, L 49, AGN.

121 No documentation on the operations of SPRSCO/NJ’s New York office has been found. My writing is based on correspondence and documentation found at Guanica Centrale in Ensenada, now in custody of CCG, AACUPR, and at the private papers of T. D. Boyd Jr., LSUA.


123 Grace Guidry Gianelloni, who served as Maxwell’s private secretary in the 1930s, adds: “An amusing note to the office staff was the fact that Mr. Maxwell always insisted that a carbon copy of the air mail letter be mailed by surface mail—he didn’t trust those airplanes.” Grace Guidry Gianelloni, “Questionnaire 1, 5 November 1981,” Author’s Files.

124 In 1919, he jumped to Haiti, probably to visit A. J. Greif, who was general manager of the Haitian American Sugar Corporation. In 1915, Haitian American started operations, but with much trouble. See Clarence I. Mathews to Immigration and Customs Authorities, Guanica, 14 March 1919, RG 84, CC, NA, and Edson, Sugar, pp. 153-160.
New York office was the naming of Frank Lowry as the company's broker. With the exception of Rounds, fellow attorneys at Rounds, Hatch, Dillingham & Debevoise also served as officials or directors in SPRSCO/NJ subsidiaries, but appeared to have little interest in the sugar business.

ANNUAL SUGAR CANE MEETING
MEEKER SUGAR COOPERATIVE, INC.
Meeker, Louisiana
THURSDAY, FEBRUARY 10, 1966
P.M.

ERNEST L. KLOCK
Past President
Will Be Honored by the White Growers
12 NOON

6.20. Ernest L. Klock, Louisiana-born and LSU-educated, was manager of SPRSCO’s properties in the Dominican Republic from 1916 to 1940. He returned to Louisiana and served as president of the Meeker Sugar Cooperative until 1965. [Courtesy of John C. Clock]

In the Caribbean, however, SPRSCO/NJ management and operations changed dramatically with the development of Central Romana, particularly so with the building of the sugar factory. As in Cuba and Puerto Rico, a large part of sugar company management and technicians came from the United States. H. C. Prinsen Geerlings noted in 1912 that, "with the exception of the Cristóbal Colón factory, which belongs to the Cubans, all...sugar factories are under American management."126 In 1913,

a *Louisiana Planter and Sugar Manufacturer* correspondent observed that "there is quite an American colony there at present time: sugar engineers, sugar makers and sugar chemists."\(^{127}\) (See Table 6.3) In 1917, George M. Rolph, a high executive of the U.S. western sugar refining industry, noted that "almost all of the factories are managed by Americans."\(^{128}\)

The building of the Romana sugar factory brought major management changes, with Louisiana-trained sugar technicians playing a major role. In June 1916, Van Allen Harris resigned with Louisiana-trained chemical engineer Ernest L. Klock appointed administrator to supervise factory construction and manage field and factory operations. SPRSCO/NJ also named Louisiana-trained T. D. Boyd Jr. general superintendent of Guanica Centrale in October 1918.\(^{129}\)

The Louisiana link also surfaced in the Dominican Republic. (See Table 6.3) John M. Dardis, "one of the best engineers Louisiana ever produced," was chief engineer at Central Consuelo, working with Thomas J. Burke, who managed the sugar department, and two centrifugal men, Vollrath and Yeager.\(^{130}\) George M. Lear served as chief engineer in Ingenio Angelina for at least two seasons.\(^{131}\) At Ingenio Porvenir, a Mr. Windgrave was the chief engineer, and James Fleetwood, sugar maker, in 1913. Louisiana technicians also included Overton F. Boyd, younger son of the president of Louisiana State University, and Stanley A. Miller, murdered by the *gavilleros* while employed by Central Romana.

\(^{127}\) "Santo Domingo," *LPSM*, 50, no. 3 (18 January 1913), p. 38. That year, the correspondent reported that Santiago Michelena's son "will soon go to the Audubon Sugar College to complete his education, begun in the best schools in England and Germany, and by the time he is ready to take charge of his plantation he will find one of the best and most complete plants of its kind in the world." Observer, "Santo Domingo," *LPSM*, 50, no. 20 (17 May 1913), p. 316.


\(^{129}\) "South Porto Rico..., Minutes of Adjourned Special Meeting of Board of Directors, 27 September 1918," CCG, AACUPR.


\(^{131}\) Lear had been chief engineer for some years at L. M. Soniat's Cedar Grove plantation in Iberville Parish. See "San Domingo," *LPSM*, 51, no. 23 (6 December 1913), p. 378.
Table 6.3
Louisiana Sugar Men Working in the Sugar Industry in the Dominican Republic, 1912-21

<table>
<thead>
<tr>
<th>Name</th>
<th>Position or Affiliation</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRAL ANSONIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lewin, M.</td>
<td>n.a.</td>
<td>1914</td>
</tr>
<tr>
<td>Wadennhul, M</td>
<td>n.a.</td>
<td>1913</td>
</tr>
<tr>
<td>CENTRAL SAN ISIDRO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goller, John</td>
<td>Sugar Boiler</td>
<td>1912</td>
</tr>
<tr>
<td>Hanaway, S. J.</td>
<td>n.a.</td>
<td>1912</td>
</tr>
<tr>
<td>CENTRAL ROMANA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goller, John, Jr.</td>
<td>n.a.</td>
<td>1920</td>
</tr>
<tr>
<td>INGENIO ANGELINA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lear, George M.</td>
<td>Chief Engineer</td>
<td>1913</td>
</tr>
<tr>
<td>Lejeune, H. E.</td>
<td>n.a.</td>
<td>1914</td>
</tr>
<tr>
<td>INGENIO CONSUELO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boyd, Overton</td>
<td>n.a.</td>
<td>1917</td>
</tr>
<tr>
<td>Burke, Thomas</td>
<td>Sugar Boiler</td>
<td>1913</td>
</tr>
<tr>
<td>Dardis, John</td>
<td>Chief Engineer</td>
<td>1913</td>
</tr>
<tr>
<td>Vollrath</td>
<td>Centrifugals</td>
<td>1913</td>
</tr>
<tr>
<td>Yeager</td>
<td>Centrifugals</td>
<td>1913</td>
</tr>
<tr>
<td>Williams, W. J.</td>
<td>n.a.</td>
<td>1921</td>
</tr>
<tr>
<td>INGENIO PORVENIR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fleetwood, James</td>
<td>Sugar Boiler</td>
<td>1913</td>
</tr>
<tr>
<td>Goller, John</td>
<td>Assistant Superintendent</td>
<td>1920</td>
</tr>
<tr>
<td>Searight, F. A.</td>
<td>Chief Chemist</td>
<td>1920</td>
</tr>
<tr>
<td>Spiller, T. D.</td>
<td>Superintendent</td>
<td>1920</td>
</tr>
<tr>
<td>Windgrave</td>
<td>Chief Engineer</td>
<td>1913</td>
</tr>
<tr>
<td>INGENIO SANTA FE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ong, L.</td>
<td>n.a.</td>
<td>1913</td>
</tr>
<tr>
<td>UNKNOWN CENTRAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flanagan, Thomas J.</td>
<td>n.a.</td>
<td>1917</td>
</tr>
</tbody>
</table>

Source: *Louisiana Planter and Sugar Manufacturer*, various years.
Klock took over Central Romana on 5 June 1916. Born in Ontario, Canada in the late 1880s and raised in a plantation in Cheneyville, Louisiana, Klock came from a sugar background. In 1888, his father, John C. Klock, a sugar planter, developed the first mechanical cane-loader in the Cheneyville area, which he later patented. Ernest L. Klock studied at Louisiana State University. In 1908, he received degrees in mechanical engineering and in sugar chemistry. In 1905, he worked as chemist in the Shadyside Sugar Factory in Franklin, Louisiana, and in 1906 at the El Dorado Sugar Co. in Mexico. Klock then moved for several seasons to Cuba, working as superintendent in Central Vertientes and Central Nicuero. Like other so-called “sugar tramps,” he returned to Louisiana for the crop there. In 1909, for instance, he was assistant fabrication superintendent of the Gramercy plant of the American Sugar Refining Co. in St. James Parish.

An experienced sugar house superintendent, Klock was persuaded by Maxwell to leave Cuba and join Central Romana for the construction of the sugar mill at La Romana. He arrived, at age 38, with his wife Hazel Sewell, two sons, and a servant, Mrs. Ida June Drew. Mrs. Klock, born in New Orleans in 1888, had attended the Presbyterian Hospital School of Nursing in New Orleans for three years and graduated in 1914. Klock’s brother Arthur joined the family in Central Romana in 1915 to work at the company.

The appointment of T.D. Boyd Jr. as general superintendent perhaps best personifies the Louisiana connection, however. Hubert Edson,

134 Gumbo 1906-1907 (Baton Rouge: Louisiana State University, 1907), p. 108.
135 See LPSM, 47, no. 1 (1 July 1911), p. 9; LPSM, 49, no. 5 (3 August 1912), p. 82; 51, LPSM, no. 21 (22 November 1913), p. 353; and LPSM, 55, no. 3 (3 July 1915), p. 9; and “Louisiana Sugar News,” LPSM, 57, no. 7 (12 August 1916), p. 106.
137 Mathews to J. H. Edwards, 16 June 1919, and Mathews to Consul, Santo Domingo, 6 August 1919, RG 84, CC, NA.
president of West India Management and Consultation Co., had tried to lure Boyd Jr. in 1915 to work in the construction of central factories in Cuba and the Dominican Republic. He considered the offer “an excellent one,” but voiced reservations: “I have visions of spending 4 years in the tropics if I join them. This—I am not at all willing to do.” Still, by 1918, Boyd Jr. was working with SPRSCO/NJ in the tropics, under Maxwell and with responsibilities in Puerto Rico and the Dominican Republic. Edson himself noted that SPRSCO/NJ’s Dillingham “did not hesitate to pay any sum required if he was sure the services to be rendered justified the expenditure.” It seems Dillingham made Boyd Jr. an offer he could not refuse.

Boyd Jr. was very well known and respected in sugar circles in the Caribbean, Central and North America. It helped that he was the oldest son of T. D. Boyd, president of Louisiana State University, who had given ample support and promotion to the Audubon Sugar School. Yet, in a short time, Boyd Jr. had created an independent name for himself. Born in Baton Rouge, on 3 November 1882, he graduated from Louisiana State University with a bachelor of science degree in 1901. He completed four full years in general science, specializing in chemistry. After graduation, between sugar seasons, he also studied mechanics and chemistry related to the manufacture of sugar and alcohol at the Audubon Sugar School, Cornell University, and the Fermentation Institute in Berlin, Germany. His first job came as an assistant chemist, working under French T. Maxwell on the plantation of James A. Ware, of Louisiana’s Iberville Parish. He also worked in laboratories at Calumet and Shadyside plantations. The profession also took him to Central Tinguaro in Cuba, Ingenio San Antonio in Nicaragua, and Central Constancia in Mexico.

Boyd Jr. settled in Mexico for five years. He was engaged by the United Sugar Companies, running two sugar factories in Los Mochis in Sinaloa, and earning a salary of $10,000, plus living and traveling expens-

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139 Edson, Sugar, p. 94.
es and a commission on the factories' output. When he resigned in 1916, he formed his own firm, the Mexico-Arizona Trading Co., a mercantile and commission business that exported sugar and other Mexican products and imported U.S. merchandise to Mexico. In 1917, he went to the Officers' Training Camp at Presidio, California, but resigned to accept an SPRSCO/NJ's proposal in early 1918.


In April 1918, Boyd Jr. offered a field position to a friend working with his former employer in Mexico, United Sugar Companies. His offer to Ross L. Page reflects his perception of SPRSCO/NJ and its environs at the time: "Our organization is changing very fast, due to the drafting of the younger men, and the unsettled conditions generally, and we do not know at this time at what point we will need you most."

Within SPRSCO/NJ's Caribbean operations, Boyd Jr. became the most important official after Maxwell. Maxwell assigned all his tasks and

141 Most of this information has been taken from letters of recommendation from R.G. Pleasant, Governor of Louisiana, 30 June 1917; William C. Stubs, 8 July 1917; Charles E. Coates, 15 May 1917; and Robert Oxnard, all deposited in TDBjrPP, LSUA.
142 See T. D. Boyd to L. S. Boyd, 8 November 1917, TDBPP, LSUA.
143 Thomas D. Boyd Jr. to Ross L. Page, 29 April 1918, TDBjrPP, LSUA.
had total confidence in him. Boyd Jr. dealt with a wide range of areas including factory maintenance and operations, colonos’ contracts, cane diseases, information gathering about other sugar corporations, wage reductions, and personnel recruitment. He was authorized to issue checks and make company deposits at the company in banks in Puerto Rico and New York City. When Maxwell was absent, he delegated inspections at Guanica Centrale and Central Romana in Boyd Jr.

Boyd Jr. handled jobs in Puerto Rico and in the Dominican Republic. For instance, in February 1920, after studying payment programs on Dominican sugar estates, he wrote Klock that “all the estates in Santo Domingo pay their colonos in sugar instead of money, with the exception of ‘San Luis.’” In 1918, 1919 and 1920, Boyd Jr. supervised field experiments at Central Romana. Conscious of the devastation caused by the mosaic disease in SPRSCO/NJ’s cane fields in Puerto Rico, he wanted to conduct small experiments on varieties “so as to carefully guard against introduction of harmful diseases into the fields of Central Romana.” He hoped to find a successful cane variety that could withstand a drought. Not always were his recommendations followed:

I have brought this question up so often and have talked about it so much that I hesitate to mention it again, and would not do so were it not for the firm conviction I have that the Company is making a mistake in not giving more attention to this phase of the agricultural problem at La Romana.

144 See “Resolution of the Executive Committee of the South Porto Rico Sugar Company of 13 March 1918,” TDBJrPP, LSUA.
145 French T. Maxwell to T. D. Boyd, 26 August 1918, TDBJrPP, LSUA.
146 Reference is made in some SPRSCO/NJ and Guanica Centrale papers to a H. S. Brandon occupying the position of general superintendent from 1904 to 1912. No replacement was appointed when he left. Apparently, the position was necessary during Greif’s expansive tenure and later lost its importance until the decision was made to construct a sugar factory in La Romana.
147 Boyd to E. L. Klock, 12 February 1920, TDBJrPP, LSUA.
148 T. D. Boyd Jr. to F. T. Maxwell, New York City, 14 October, 1920, TDBJrPP, LSUA.
With the start of Romana operations, SPRSCO/NJ needed more frequent and reliable communication between Central Romana and Guanica Centrale. Movement of managerial, technical and skilled personnel, equipment and parts could not be limited to harvest season, but was required year-round. In late 1920, to upgrade transportation, SPRSCO/NJ purchased an H 56 steam trawler from the Canadian government, to be called Romanita. The ship was converted to burn oil, and passenger accommodations were added.149

Boyd Jr. spent four years at SPRSCO/NJ’s service, leaving in 1922 to accept a more important position in Cuba. He became supervising manager of the centrales that the National City Bank took over and managed under Cuban Sugar Plantations, Inc.150 Still, Boyd Jr. kept in touch from his new job, corresponding with Maxwell on latest developments in the sugar industry.

Maxwell maintained his position as SPRSCO/NJ’s key man in the Caribbean. He was vice-president and general manager of Guanica Centrale. He kept a close watch on Klock in Central Romana; Klock “had frequent visits from Mr. Maxwell who used to come over on the Romanita about once per month and stay at our house.”151 Puerto Rican sources confirmed Maxwell’s authority over Klock, noting that Maxwell lay off Romana laborers not needed for the dead season.152

During the inaugural milling season at Central Romana, Maxwell traveled regularly to La Romana: once in January, three times in February, twice in March and once in May. Chemical engineer J.J. Magill and technical

149 French T. Maxwell, Terre Haute, Indiana to T. D. Boyd, General Superintendent, re: Cane Steamers, 5 October 1920, TDBjrPP, LSUA.
151 Guidry Gianelloni, “Questionnaire 2, 2 November 1984,” Author’s Files. Grace Guidry Gianelloni, writes that “Mr. Klock and Mr. [William] Hennessy of Santa Fe were nominally independent managers but Mr. Maxwell kept in very close touch with letters and memos.”
engineer Arthur L. Adams accompanied him in March and May. In his biography of Horace Havemeyer, Daniel Catlin Jr. said:

The entire Romana enterprise was the responsibility of French Maxwell, who had already run the Guanica Central for some years. Maxwell was by far the best American manager in Puerto Rico, and he was as good as any in Cuba. He was an excellent administrator and a good judge of people, personally hiring the men who built and then ran Romana.

Central Romana’s 1918-19 inaugural crop of 22,552 tons was second only to Central Consuelo, which milled 35,760 tons that season. Yet like its elder sister in Puerto Rico, Central Romana took only one crop season to become the leading raw sugar factory in the Dominican Republic. By the 1919-20 crop, Romana outstruck Consuelo by 1,109 tons -29,697 tons to 28,588 tons- despite cane fires in La Romana that weakened production that year. Central Romana clearly dominated the Dominican sugar industry, accounting for an estimated 20 percent of lands owned by sugar estates, 37 percent of land cultivated with sugar cane, and 20 percent of Dominican sugar production. (See Table 6.4)

By the 1920-21 crop year, Central Romana boasted the largest harvest of any Dominican sugar company in history -with more than 42,700 tons of cane milled. Central Romana outraced Consuelo by more than 13,000 tons, 43,644 tons to 30,045 tons. Cane exports to Puerto Rico also continued, reaching about 118,000 tons during 1918-19 crop season.

153 According to his daughter, Magill was “closely identified with the management of both Santo Domingo operations (La Romana and Santa Fe) and traveled frequently between S.D. [Santo Domingo] and P.R. [Puerto Rico].” Florence Magill to Humberto García-Muñiz, 25 March 1983, Author’s Files.
154 Catlin Jr., Good Work Well Done, p. 131.
155 Geo. A. Makinson, “Results of the Sugar Season in the Dominican Republic,” LPSM, 65, no. 16 (1920), p. 249.
and 150,000 tons in 1919-20 season. Again, the company showed an impressive ranking in the Dominican sugar industry: 22 percent of total sugar production, 19 percent of cane milled, 20 percent of total bag production, and 21 percent of sugar locally consumed.

In 1921, even with world sugar prices falling to record lows, William Schall Jr., chairman of SPRSCO/NJ’s board of directors, proudly told his stockholders that

There is no record of results at any factory in the West Indies equaling those obtained at the La Romana factory during the last season; the low cost of sugar produced at this factory is also contributed to by the comparatively low cost of cane grown in Santo Domingo.

The Dominican sugar boom did not end with the signing of the Armistice on 11 November 1918. The defeated Central Powers and victorious Allies opened their markets until their own war devastated; sugar beet industries could be rebuilt. Caribbean producers benefited because Javanese products could not reach European markets due to inadequate transport and high freight costs.

The two-year period from 1919 to 1920 has gone down in history with the Cuban-coined name, the “Dance of the Millions” (Danza de los millones). At that time, WISCO reorganized as the Cuban Dominican Sugar Development Syndicate to take over Bartram Brothers’ Consuelo and San Isidro centrales and to provide fresh capital to troubled Central Barahona. Sugar prices soared. Dominican sugar fetched an average of 5.78 cents per pound in 1919, more than doubled to an average of 12.94 cents per pound in 1920, and fell precipitously to 3.54 cents in 1921. In May 1920, prices on the New York futures market reached 22.50 cents per pound as European production came on stream. Prices on New York market plunged to 1.81 cents per pound in 1921. The boom ended in bust.

158 Mathews to Edwards, 14 June 1919, RG 84, CC, NA.
159 South Porto Rico..., Statements, September 30, 1921, p. 1.
<table>
<thead>
<tr>
<th>Central or Ingenio</th>
<th>Province</th>
<th>Owners</th>
<th>Capital $</th>
<th>Capital paid $</th>
<th>Value of land $</th>
<th>Value of improvements $</th>
<th>Tareas of land</th>
<th>Tareas of land under cultivation</th>
<th>Lbs. of sugar produced in 1920</th>
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<tbody>
<tr>
<td>Romana</td>
<td>Le Romana</td>
<td>South Porto Rico Sugar Co., corporation</td>
<td>50,000</td>
<td>50,000</td>
<td>3,302,609</td>
<td>5,594,605</td>
<td>855,891</td>
<td>91,495</td>
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<td>Santa Fe</td>
<td>San Pedro de Macoris</td>
<td>Ingenio Santa Fe, stock company</td>
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<td>602,700</td>
<td>1,536,328</td>
<td>2,093,396</td>
<td>268,519</td>
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<td>Mercedes</td>
<td>Puerto Plata</td>
<td>Ingenio Mercedes, stock company</td>
<td>320,000</td>
<td>320,000</td>
<td>47,291</td>
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<td>Ingenio San Carlos, stock company</td>
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<td>500,000</td>
<td>24,876</td>
<td>171,649</td>
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<td>1,274</td>
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<td>Boca Chica</td>
<td>Santo Domingo</td>
<td>Compañía Anónima Boca Chica, stock company</td>
<td>750,000</td>
<td>750,000</td>
<td>193,619</td>
<td>549,139</td>
<td>40,812</td>
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<td>Ingenio Porvenir, stock company</td>
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<td>203,000</td>
<td>403,709</td>
<td>1,543,358</td>
<td>57,279</td>
<td>24,734</td>
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<td>San Pedro de Macoris</td>
<td>Central Guisquera, stock company</td>
<td>1,200,000</td>
<td>1,200,000</td>
<td>360,497</td>
<td>1,373,383</td>
<td>55,713</td>
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<td>Las Pajas</td>
<td>San Pedro de Macoris</td>
<td>Macoris Sugar Company, stock company</td>
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<td>500,000</td>
<td>234,012</td>
<td>737,583</td>
<td>36,054</td>
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<td>San Luis</td>
<td>Santo Domingo</td>
<td>Santiago Michelsen, private owner</td>
<td>-</td>
<td>-</td>
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<td>745,474</td>
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<td>68,341</td>
<td>59,034</td>
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<td>Amistad y Monte Llano</td>
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<td>Bentz Hernandes, private ownership</td>
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<td>51,775</td>
<td>188,145</td>
<td>24,589</td>
<td>6,278</td>
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<td>Azua</td>
<td>Compañía Anónima de Explotaciones Industriales, stock company</td>
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<td>-</td>
<td>59,837</td>
<td>367,575</td>
<td>12,525</td>
<td>7,281</td>
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<tr>
<td>San Isidro</td>
<td>Santo Domingo</td>
<td>West Indies Sugar Finance Corporation, corporation</td>
<td>3,700,000</td>
<td>3,700,000</td>
<td>395,984</td>
<td>953,167</td>
<td>133,722</td>
<td>26,206</td>
<td>27,940,000</td>
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<td>Ansonia</td>
<td>Azua</td>
<td>Hugh Kelly</td>
<td>-</td>
<td>-</td>
<td>82,746</td>
<td>521,529</td>
<td>14,244</td>
<td>12,755</td>
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<td>Angélina</td>
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<td>Compañía Anónima de Explotaciones Industriales, stock company</td>
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<td>-</td>
<td>399,458</td>
<td>1,515,781</td>
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<td>44,779</td>
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<td>Cristóbal Colon</td>
<td>San Pedro de Macoris</td>
<td>Naino Sisters</td>
<td>-</td>
<td>-</td>
<td>457,906</td>
<td>-</td>
<td>110,708</td>
<td>33,100</td>
<td>21,000,000</td>
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<td>San Pedro de Macoris</td>
<td>West India Sugar Finance Corporation, corporation</td>
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<td>3,700,000</td>
<td>807,248</td>
<td>1,971,380</td>
<td>247,893</td>
<td>71,109</td>
<td>59,200,000</td>
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<td>The Barahona Company</td>
<td>Barahona</td>
<td>West India Sugar Finance Corporation, corporation</td>
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<td>2,000,000</td>
<td>485,824</td>
<td>3,237,306</td>
<td>319,200</td>
<td>15,833</td>
<td>No sugar in 1920</td>
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</tbody>
</table>

Note: 6 1/3 tareas = 1 acre
Source: Deputy Receiver of Dominican Customs to Chief, BIA, WD, 15 July 1921, RG 350, NA
The bust had a considerable impact on Dominican producers. A group of sugar estates, *colonos*, banks and entities concerned about the sugar industry sent an urgent petition to Military Governor Samuel S. Robison on 24 August 1921. Pointing to the “distressing condition of the sugar industry in the Dominican Republic,” they explained that their production costs ranged from 3 cents to 4 cents a pound of sugar, higher than the 2.25 cents per pound paid f.o.b. in Santo Domingo. The petition argued that the U.S. military occupation of the Dominican Republic meant that the United States had assumed full responsibility for Dominican economic and political welfare. It therefore criticized the increase in U.S. sugar duties from about 1.26 cents per pound to 2 cents per pound, “which is ruinous to the industry as it approximates an *ad valorem* duty of 100% of the selling price.”161 Moreover, petitioners denounced that Dominican sugar estates had lost about $1.125 million in 1920 because of the Military Government’s Food Control Order No. 10 commandeered 8 million pounds of sugar.162

The thrust of the petition was to urge the United States to grant the same preferential customs duties for Dominican sugar as those granted to Cuba. The U.S.-owned Dominican sugar owners lobbied hard in Washington for their long sought, unfulfilled goal. The Sugar Association of Santo Domingo, a group composed of nearly all the Dominican sugar estates with the significant exception of Central Romana, contacted the congressional ways and means committees as well as panels investigating

161 [Petition] to Honorable Samuel S. Robison, Rear Admiral, U.S.N., Military Governor of Santo Domingo, 24 August 1921, MGP, L 37, AGN. Among the signers were centrales Santa Fe, Porvenir, Cristóbal Colón, Angelina, Quisqueya, Barahona, Mercedes and San Carlos; Jorge A. Serrallés; Santiago Michelena; Juan M. Santoni, C. por A.; The Royal Bank of Canada; and International Banking Association.

162 Food Control Order No. 10 was part of the Military Government’s effort to control spiraling prices. The sugar was to be sold at controlled prices at food control stores set up by the government. Sugar estates were guaranteed 17.5 cents per pound (the equivalent price in New York being 18.5 cents), but later released the Military Government of the agreement, suffering the ensuing loss. See Calder, *The Impact of Intervention*, p. 71, and [Petition] to Honorable Samuel S. Robison, Rear Admiral, U.S.N., Military Governor of Santo Domingo, 24 August 1921, MGP, L 37, AGN.
affairs in Haiti and Santo Domingo. New York attorneys for Central Romana, Barahona Company and the Consuelo, San Isidro and Porvenir estates wrote to U.S. Secretary of State Charles Evans Hughes reiterating the request for the Dominican Republic and for Haiti, which also was under U.S. military administration at the time. Not even full endorsement of the Military Government and the Bureau of Insular Affairs led to granting of reciprocity by the United States.

The outlook for the Dominican sugar industry for 1922 was "very dark and discouraging." In August 1921, W. J. Williams, from Ingenio Consuelo, described sugar business in the Dominican Republic as "very much paralyzed, nearly dead down there." Central Romana was no exception. In July 1921, Central Romana was "reducing forces to a minimum; therefore the cane cannot be kept clean, which will greatly reduce the tonnage for the coming year." During the 1921/22 dead season, the company undertook no new field development or railroad construction.

SPRSCO/NJ's expansion to eastern Dominican Republic was a remarkable enterprise. No one had ever sought before to ship cane from the Dominican Republic for milling to Puerto Rico. SPRSCO/NJ looked at El Seibo province, an underdeveloped area because of government neglect.


164 The letter said: "The total from both Republics is...barely 200,000 tons...less than 10% of the amount exported from Cuba into the United States." [Unknown] to Charles E. Hughes, Secretary of State, 2 June 1921, MGP, L 37, AGN. The copy of the letter was signed by two New York corporate law firms represented sugar interests in the Dominican Republic: Armstrong, Keith & Kern and Rounds, Dillingham, Hatch & Debevoise.


167 "Louisiana Sugar News," LPSM, 67, no. 6 (6 August 1921), p. 91.


169 E. L. Klock to Military Governor S. S. Robison, 9 April 1922, RG 38, E 6, B 36, NA.
and earlier failures by private investors. Sugar cane was entering into El Seibo province through its western border. Sugar factories based on San Pedro de Macorís began extending their railroad lines into El Seibo. With the start of World War I and sugar price increases, it is likely that at least one sugar factory would have opened in El Seibo. La Romana was the most probable site because of rich lands and port potential.

SPRSCO/NJ’s expansion to the Dominican Republic was a two-stage process. The first stage, lasting from 1911 to 1918, involved the cane cultivation and export to Puerto Rico. Central Romana was a colonia de caña for Guanica Centrale. Despite opposition by established U.S. sugar interests, the Dominican government and the local leadership of La Romana effectively backed SPRSCO/NJ’ initiative.

World War I and the U.S. military regime of the Dominican Republic created the propitious conditions for the second stage: the construction of a sugar factory and the large expansion of the cane lands. Once its sugar factory was built, it had ample cane to feed both its mills and to keep shipping cane to Puerto Rico in profitable terms.

The building of the sugar factory had no serious impact in SPRSCO/NJ’s top management in New York. Not so in the Caribbean, where SPRSCO/NJ created new key management posts. The Louisiana link again provided the qualified and experienced personnel for these positions.

SPRSCO/NJ’s investment altered radically El Seibo province, starting with La Romana. The province obtained its long-awaited railroad but it served only one company: Central Romana. By 1923, the company operated about 60 kilometers of standard gauge railroad.170 Central Romana’s railroad expansion arrested road construction in the province. Within a decade, cocoa cultivation disappeared from Seibo. It took until 1928 for a highway to be built to the junction of the Higuéy-Seibo-Macorís. At that time, all cocoa produced in El Seibo could finally

170 See U.S. Consular Agency, “General and Commercial Information concerning the Port of La Romana, Dominican Republic, La Romana, August, 1923,” p. 2, RG 84, CC, NA.
be sent to the port of San Pedro de Macoris. A 1931 government report listed Central Romana as the sole exporter of La Romana port, shipping raw sugar, molasses and sugar cane.171

World War I, followed with U.S. military rule, provided the international and national conditions for sugar industry expansion in the Dominican Republic by national and U.S. capital. By 1920, U.S. companies accounted for 65 percent of Dominican sugar production, up by 13 percentage points from the 1910 total.172 José Ramón López commented that profits from expanded production and sugar prices increases “do not circulate in this country. Their proprietors live abroad, and it is there where they spent their profits...in a pleasant and luxurious life.”173 The Danza de los millones ended in a hop. Sugar producers in the Dominican Republic again failed to realize their long-standing goal of entering the U.S. market in the same terms as Cuba.

171 See “Nómina de las principales casas exportadoras de la República y clase de artículos a que se dedican,” Secretaría de Agricultura y Comercio, L 127, 1931, AGN.
172 Percentages estimated from Table 5.1 and Table 6.4. This percentage includes only companies incorporated in the United States by U.S. citizens. Not included are U.S. incorporated companies by non-U.S. citizens (e.g. Vicini) or companies owned by other foreign nationals (e.g. Natiño Sisters).
When the sugar industry revived in eastern Dominican Republic during the last third of the nineteenth century, the land tenure system could not easily accommodate commercial agriculture. It was a system molded by a history of cattle grazing, conuco agriculture-based society, which amid warfare, political instability, government inaction, inertia, increasing land pressure, and corruption culminated in precarious land proprietorship rights. The key weakness was insufficient land ownership documents because of the destruction of public records in many towns and the lack of a central office to keep land titles, property transfers, and other legal acts related to land transactions. The situation was particularly difficult for communal lands (terrenos comuneros). In 1888, José Ramón Abad urged “the disappearance” of communal lands and