

**THE HISTORY OF TOBACCO CULTIVATION IN  
PUERTO RICO, 1899-1940**

by

TERESITA A. LEVY

A dissertation submitted to the Graduate Faculty in History in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2007

UMI Number: 3283616

Copyright 2007 by  
Levy, Teresita A.

All rights reserved.

UMI<sup>®</sup>

---

UMI Microform 3283616

Copyright 2008 by ProQuest Information and Learning Company.  
All rights reserved. This microform edition is protected against  
unauthorized copying under Title 17, United States Code.

---

ProQuest Information and Learning Company  
300 North Zeeb Road  
P.O. Box 1346  
Ann Arbor, MI 48106-1346

© 2007

TERESITA A. LEVY

All Rights Reserved

This manuscript has been read and accepted for the Graduate Faculty in History in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

Laird W. Bergad

\_\_\_\_\_  
Date

\_\_\_\_\_  
Chair of Examining Committee

Joshua Freeman

\_\_\_\_\_  
Date

\_\_\_\_\_  
Executive Officer

Alfonso W. Quiroz

James Oakes

César J. Ayala

Herbert S. Klein

Supervisory Committee

**Abstract**THE HISTORY OF TOBACCO CULTIVATION IN  
PUERTO RICO, 1898-1940

by

Teresita A. Levy

Adviser: Professor Laird W. Bergad

This dissertation is a study of the tobacco-growing regions in the eastern and western highlands of Puerto Rico from 1898 to 1940. The American influx of capital and technology that began in 1899 set off a series of economic, cultural, and political processes that altered the existing patterns of life on the island. The inclusion of Puerto Rico within the tariff structure of the U.S. resulted in expanded opportunities for farmers to participate in the American market. In the highland regions, tobacco cultivation became the most important commercial crop.

The economic history of the tobacco-producing highlands provides a very different vision of early 20<sup>th</sup>-century Puerto Rican history than the one-dimensional agricultural narrative that has been created based principally on the development of the sugar industry. In contrast to the sugar economy, with its high degree of absentee ownership and concentration of production, tobacco cultivation was a Puerto Rican owner-operated, small-scale commercial enterprise, even in the face of massive influx of private and corporate American capital into the industrial portion of the tobacco sector.

This dissertation is a point for departure for the reinterpretation of several themes in Puerto Rican history from 1898 to 1940. First, the agricultural history of Puerto Rico must not be presented as a simple narrative of colonial abuse based on the development

of the sugar sector. The changes in the tobacco regions demonstrate that there were significant variations among the agricultural regions of Puerto Rico in terms of land use, social structure, and income possibilities. The debate over the effects of the U.S. occupation of the island must include these particularities.

Second, the well-documented efforts of Puerto Rican tobacco farmers to participate in the new colonial structures demonstrate that they were neither docile nor intimidated. Tobacco growers effectively manipulated the colonial system to effect changes that impacted their daily lives. The discussion of the effects of American colonialism on the people of Puerto Rico must acknowledge that, even though ultimate authority resided in Washington, Puerto Ricans actively challenged and redefined what colonialism meant in terms of their daily lives.

## Acknowledgements

Although writing a dissertation may be one of the most solitary processes I have ever experienced, it cannot happen without the collaboration and support of many people. I am blessed both professionally and personally in that I am surrounded by an incredibly supportive network of colleagues, friends and family that were present at every stage of this process with words of wisdom and encouragement.

At the Graduate Center, professors Alfonso W. Quiroz, José Luis Rénique, and James Oakes provided insights that improved this dissertation. I have been lucky to have their input. My colleagues in the History department, Dave Aliano, Ira Beltrán-Garibay, Kris Burrell, Dave Cuthbert, Sándor John, Alejandro Quintana, Adriana Pérez, and Christolyn Williams helped me think, laugh, and ask questions. Victoria Stone, who took over for me as Administrative Director of the Center for Latin American, Caribbean and Latino Studies, gave me the luxury of time to work on this dissertation. A very heartfelt thank you is due to César Ayala and Herbert Klein, who traveled from California to participate in the defense of this dissertation. Their interest was a confidence booster and their suggestions will undoubtedly make this study more profound, far-reaching, and interesting by the time it gets to a publisher.

Conducting research in Puerto Rico was easy because of people like Juan David Hernández and the rest of the staff at the Archivo Municipal de Caguas, who were intimately familiar with the collections and who took me to all the delicious local lunch spots. Attorney Nydia María Díaz, whose home is also the notary archive in Caguas, allowed me full access to the records I needed. I will never forget her hospitality. My

lifelong friends in Puerto Rico, who I am lucky to see regularly, were a constant reminder that I was not just writing about the “Puerto Rican people,” I was writing about them, their history, and their legacy, as well as mine, and that such an endeavor carried an enormous intellectual responsibility.

Laird W. Bergad, my advisor, mentor, boss, and friend read this dissertation almost as many times as I did. His intellectual generosity, our endless discussions about the particularities of Puerto Rican historiography, and his advice and encouragement made an enormous difference in the quality of this work. His “I’m not worried about your history, I’m worried about your math,” became my favorite dissertation mantra. Laird challenged me at every phase of research and through the writing process to think harder and more critically, to look at the big picture, and of course, to check my math. I am fortunate to have worked with him.

My family, both in New York and in Puerto Rico, provided much needed support. Steve, Shirley and Rachel Lapidus, Rafael Torruella and Debora Upegui, Isis Saenz, John Gutiérrez, Erica Bulos, Cindy Andujar, and Katrina Seals have all heard about this project for years and are now familiar with the intricacies of tobacco cultivation, even if they did not want to be. My mother, Teresita Solo and my brothers, Luis (and his wife Crissta), Francisco, and Alberto Levy made more phone calls than anyone should for the latest update in the dissertation saga. While I was conducting research in Puerto Rico, my mom and my brother Franky heard daily reports of the documents at the archives often over a delicious plate of *arroz con pollo* or *pasteles*. I can’t think of a better way to conduct historical research!

This work would not have been completed without the love, confidence, and unconditional support of my husband Benjamin Lapidus. Ben is a scholar and a musician, and his commitment to be the best at both of those often-difficult crafts inspired me to work hard. When it seemed like the data processing would never end or that there was always just one more article to read, Ben would tell me about his latest accordion find for playing *plena* or brainstorm about the next recording project, reminding me that life was music and joy. Our son Ari Miguel constantly reminded me that playing with cars and painting rocks was as important as calculating crop yields. There are not enough words to describe how grateful I am to have Ben and Ari Miguel in my life.

This dissertation is dedicated to the memory of my father, Luis Levy Fiol, who taught me the value of education and of perseverance. “*¡La nación en marcha!*”

## Table of Contents

Introduction.....	1
Chapter 1: Tobacco Cultivation in Puerto Rico.....	33
Chapter 2: The Tobacco Regions of Puerto Rico.....	81
Chapter 3: Agricultural Credit in Puerto Rico and Tobacco Cultivation.....	116
Chapter 4: Tobacco Growers and Agricultural Organizations in Puerto Rico.....	150
Chapter 5: The Science of Tobacco.....	186
Conclusion.....	214
Bibliography.....	222

## List of Tables

1.1 Tobacco Growing Regions in Puerto Rico, 1899-1940.....	38
1.2 Classification System for Puerto Rican Tobacco.....	45
1.3 Tobacco Cultivation in Cuerdas and Production in Pounds in Puerto Rico, 1910-1940.....	48
1.4 Tobacco Cultivation by Region, 1910-1940.....	50
1.5 Percentage of Tobacco Cultivation by Region, 1910-1940.....	52
1.6 Exports of Leaf Tobacco from Puerto Rico to the United States, 1900-1940.....	54
1.7 Sample Reports of Losses from Tobacco Farmers after Hurricane San Felipe II in 1928.....	63
1.8 Number of Puerto Rican Cigars According to Class for the United States, 1920-1935.....	66
1.9 Percentage of Puerto Rican Cigars According to Class for the United States, 1920-1935.....	66
1.10 Cigars Manufactured in Puerto Rico for Consumption on the Island and for Export, 1929-1935.....	68
1.11 Cigar Imports into Puerto Rico from the United States, 1925-1935.....	69
1.12 Consumption of Domestic Cigars versus American Cigarettes in Puerto Rico, 1929-1935.....	69
1.13 Cigarettes Manufactured in Puerto Rico for Consumption on the Island and Export, 1920-1935.....	70
1.14 Cigarette Imports into Puerto Rico from the United States, 1922-1935.....	71
1.15 Average Yield per Cuerda in Tobacco Regions, 1910-1940.....	78
2.1 Population in the Tobacco Regions, 1899-1940.....	84
2.2 Percentage Change in Population Growth in Tobacco Regions, 1899-1940.....	85
2.3 Yearly Rate of Population Growth in Tobacco Regions, 1899-1940.....	85

2.4 Population by Region, 1899-1940.....	87
2.5 Percentage Change in Population by Region, 1899-1940.....	87
2.6 Yearly Rate of Change in Population by Region, 1899-1940.....	87
2.7 Working Population by Region by Sex, 1899-1940.....	88
2.8 Percentage Change in Working Population, 1899-1940.....	88
2.9 Percentage Change in Male and Female Working Population, 1899-1940.....	89
2.10 Sex Ratio (Male to Female) of Working Population, 1899-1940.....	90
2.11 Yearly Rate of Change in Working Population, 1899-1940.....	91
2.12 Child to Woman Ratio per Region, 1899-1940.....	92
2.13 Weekly Income of Small Farmers by Region, 1936.....	94
2.14 Average Annual Income of Families by Source and by Type of Farm, 1936.....	94
2.15 Average Cultivation Income and Expenses in Tobacco Farms, 1937-1938.....	97
2.16 Value of Farm Products used by the Tobacco Farmers' Family, 1937-1938.....	98
2.17 Distribution of Expenses by Type of Farm, 1937.....	99
2.18 Number of Farms by Region, 1910-1940.....	101
2.19 Percentage Change in Number of Farms by Region, 1910-1940.....	102
2.20 Percent of Improved Farm Land Dedicated to Main Crops by Region, 1910-1940.....	104
2.21 Number and Percentage of Farms, and Percentage of Land Operated by Owners and Managers by Region, 1910-1940.....	106
2.22 Number of Farms by Size (in <i>cuerdas</i> ) and Percentage Change in Regions, 1910-1930.....	107
2.23 Farms Operated by Tenants by Region, 1910-1940.....	110
2.24 Number of Agricultural Laborers per Crop, 1910-1940.....	112
2.25 Percentage of Landless Families by Crop, 1910-1940.....	113

3.1 Federal Land Bank Loans, 1922-1926.....	127
3.2 Percent of Mortgages Held by Type of Lender, 1935.....	137
3.3 Percent of Mortgages Held by Type of Lender, 1937.....	138
3.4 Production Credit Associations established in Puerto Rico in 1934.....	140
3.5 Value of Loans Made by the Puerto Rican Production Credit Association, 1936-1938.....	142
3.6 AAA Acreage Allocation for Tobacco Farms, 1934-1939.....	145
3.7 Farm Price for Tobacco and AAA Payments, 1933-1940.....	146
4.1 Agricultural Leagues in Tobacco Regions, 1920.....	155
4.2 Membership and Capital Report of <i>La Marketing</i> , 1934-1940.....	163
4.3 Price Report of <i>La Marketing</i> , 1934-1940.....	163
4.4 Contributions for Expenses for Washington Trip, 1926.....	167
5.1 Lectures Held in Tobacco Growing Municipalities and Attendance, 1920.....	195
5.2 Yield per <i>Cuerda</i> in the Tobacco Regions, 1910-1940.....	200

## List of Figures

1.1 Tobacco Cultivation in <i>Cuerdas</i> by Decade in Puerto Rico, 1910-1940.....	36
1.2 Tobacco Production in Pounds by Decade in Puerto Rico, 1910-1940.....	37
1.3 Tobacco Cultivation in <i>Cuerdas</i> in Puerto Rico, 1930-1939.....	49
1.4 Tobacco Production in Puerto Rico, 1910-1940.....	49
1.5 Tobacco Cultivation in <i>Cuerdas</i> in Tobacco Regions, 1910-1940.....	51
1.6 Tobacco Production in Pounds in Tobacco Regions, 1910-1940.....	51
1.7 Export Price Per Pound of Tobacco Leaf, 1900-1940.....	55
1.8 Percentage of Cigars According to Class, 1920-1935.....	67
1.9 Cigarette Consumption in Puerto Rico, 1922-1935.....	71
1.10 Tobacco Cultivation in <i>Cuerdas</i> in Puerto Rico, 1930-1939.....	75
1.11 Tobacco Production in Pounds in Puerto Rico, 1930-1939.....	76
2.1 Population Growth in the Tobacco Regions, 1899-1940.....	85
2.2 Percentage of Average Annual Income of Families by Source and by Type of Farm, 1936.....	96
2.3 Number of Farms by Region, 1910-1940.....	101
3.1 Percent of Tobacco Farm Mortgages Held by Type of Lender, 1935.....	137
3.2 Percent of Tobacco Farm Mortgages Held by Type of Lender, 1937.....	138
3.3 Percentage of Production Credit Capital for Major Crops, 1934.....	141

## List of Maps

1.1 Tobacco Growing Regions in Puerto Rico, 1910-1940.....	39
1.2 Tobacco Cultivation in Puerto Rico in 1910 (in <i>cuerdas</i> ).....	56
1.3 Tobacco Cultivation in Puerto Rico in 1920 (in <i>cuerdas</i> ).....	57
1.4 Tobacco Production in Puerto Rico in 1910 (in pounds).....	58
1.5 Tobacco Production in Puerto Rico in 1920 (in pounds).....	59
1.6 Tobacco Cultivation in Puerto Rico in 1930 (in <i>cuerdas</i> ).....	73
1.7 Tobacco Cultivation in Puerto Rico in 1930 (in pounds).....	74
1.8 Tobacco Cultivation in Puerto Rico in 1940 (in <i>cuerdas</i> ).....	77
1.9 Tobacco Cultivation in Puerto Rico in 1940 (in pounds) .....	78
4.1 <i>Ligas Agrícolas</i> Active in Tobacco Regions, 1920.....	156

## Introduction

This dissertation is a study of the history of the tobacco-growing regions in the eastern and western highlands of Puerto Rico from 1898 to 1940. The economic history of the tobacco-producing highlands provides a very different vision of early 20<sup>th</sup>-century Puerto Rican history than the one-dimensional agricultural narrative that has been created based principally on the development of the sugar industry. In contrast to the sugar economy, with its high degree of absentee ownership and concentration of production, tobacco cultivation was a Puerto Rican owner-operated, small-scale commercial enterprise, even in the face of massive influx of private and corporate American capital into the industrial portion of the tobacco sector.

The changes found in the tobacco regions of the island between 1898 and 1940 add complexity to the simplistic interpretations presented by scholars who have either demonized or idealized the early years of the American colonial period. In so doing they have, perhaps unintentionally, eradicated the participation of Puerto Ricans in effecting or influencing changes in their daily lives. Puerto Ricans have been portrayed by the anti-colonial school, which has dominated historical interpretations since the advent of what has been called "*la nueva historia*" of the 1970s, as a victimized and docile population incapable of confronting a rapacious imperial control. Those who have idealized the post-1898 occupation and annexation of the island have seen Puerto Ricans as the grateful, yet, passive recipients of the material and political benefits derived from benevolent policies emanating from Washington. However, when examining the economic and political behavior of the small-scale tobacco growers a very different

image emerges. Puerto Rican tobacco growers were, perhaps surprisingly, involved in exerting pressures and influencing all levels of the colonial government, from the local *ligas agrícolas* to the hallways of the U.S. Congress, in defense of their self-defined economic and political interests.

The American influx of capital and technology that began in 1899 set off a series of economic, cultural, and political processes that altered the existing patterns of life on the island. In the agricultural sector, the inclusion of Puerto Rico in the tariff structure of the United States resulted in expanded opportunities for farmers throughout the island to participate in the American market with a distinct advantage: Puerto Rican products would be imported into the United States free of import taxes. For farmers in the highland regions of the island, the *cordillera central*, the cultivation of tobacco for the American market would become the most important economic activity during the first four decades of the 20<sup>th</sup> century supplanting the coffee sector which had dominated the mountainous interior in the late 19<sup>th</sup> century.

Tobacco was perfectly suited for cultivation in the mountainous terrain of the eastern and western highlands of Puerto Rico, where farms were smaller than in coastal areas. Tobacco could be grown successfully on small parcels of land and, because of its relatively low cultivation expense, was economically viable for farmers with limited capital resources. Puerto Rican tobacco was also well suited for the taste of the American consumer, who was accustomed to the mellow flavor and smooth aroma of Cuban tobacco. American manufacturers found the same characteristics in Puerto Rican tobacco, but because of its protected import status, it was less expensive than Cuban tobacco in mainland markets. The ecological suitability of tobacco cultivation to the

geography of the highlands, the economic interests of U.S. tobacco manufacturers, and the advantage that Puerto Rican tobacco had in the American market because of the inclusion of the island in the tariff ‘wall’ of the U.S., led to the fairly rapid expansion of the tobacco sector of the island. The number of *cuerdas* under cultivation and the total production of tobacco leaf in pounds increased steadily from 1899 to 1930.<sup>1</sup> After 1930, the tobacco market contracted due to external pressures resulting from the Great Depression, and by 1940 it began a permanent downward spiral. The number of farms and the population in the tobacco regions of Puerto Rico increased from 1899 to 1940, as people moved into the eastern and western highlands to take advantage of economic opportunities in the tobacco sector, even as the importance of tobacco as an export product declined during the last decade under study.

It is surprising, then, that even with empirical evidence of the profound impact that American economic policies had on the tobacco sector, the cultivation of tobacco has largely been ignored thus far by historians of early 20<sup>th</sup>-century Puerto Rico, except for its ritual mention in nearly all studies as Puerto Rico’s “second most important product.” Instead, historians have focused on the development of the sugar industry. The effects of the American occupation on the sugar sector have served as the analytical framework for all discussion of the agricultural development of the island from 1899 to 1940, without any systematic analysis of individual agricultural industries, like tobacco, citrus, cattle or dairy, or any of the products oriented toward domestic (Puerto Rican) markets. This “sugar narrative” is a story of victimization and imperial abuse, where economic, social and political decisions made by colonial administrators were designed to protect the

---

<sup>1</sup> One *cuerva* is equivalent to .9712 of an acre and was the standard unit of land area in Puerto Rico. The words “*cuerdas*” and “acres” were used interchangeably in all documents from 1899 to 1940.

capitalist interests of U.S. sugar companies. Insular officials were either unable to effect change on behalf of the island's farmers due to colonial structures, or were uninterested in the plight of poor Puerto Ricans, or so the story goes. The unscrupulous accumulation of land by large sugar companies destroyed the independent land-owning class and displaced the Puerto Rican *jibaro* (peasant), heretofore living an idyllic life in the mountains of the island. After 1898, according to this version of Puerto Rican history, these formerly independent small farmers were transformed into wage laborers living within the depersonalized confines of absentee-owned sugar *centrales*, industrial complexes for the refining of raw cane into sugar. These generalizations, however, do not hold up to a less politically motivated examination of Puerto Rican history and they certainly do not apply to the tobacco sector where a significant portion of the Puerto Rican population lived and labored during the early 20<sup>th</sup> century.

Tobacco farmers were neither victims of an abusive imperial power nor passive observers of the social, economic, and political processes which affected their lives. Tobacco farmers participated at every level in the expansion of the tobacco sector. To increase their possibilities of economic success, tobacco farmers organized cooperatives to participate in institutional credit structures, to purchase necessary cultivation supplies in bulk, and to sell their products in the market. They also supported scientific research to determine better cultivation methods. Some of the wealthier farmers donated land or money to the insular government for the establishment of agricultural research facilities that would be dedicated to the study of tobacco. Farmers who did not have the capital resources to invest in such institutions attended live demonstrations of new agricultural

techniques conducted on local tobacco farms or visited government-sponsored experimental farms to consult with agricultural agents.

Tobacco farmers participated in the political arena by joining local agricultural leagues as early as 1919 and the insular farmers' association, the *Asociación de Agricultores Puertorriqueños* (AAP), from its foundation in 1924. The AAP served as the advocate for all farmers on the island within the colonial administration, both in Washington and San Juan. With the support of tobacco farmers, the AAP challenged federal and insular policies that were deemed unfair and successfully lobbied for the extension of beneficial federal agricultural legislation to the island.

United States tobacco companies did not displace independent farmers in the tobacco regions of Puerto Rico after 1898. Although tobacco corporations did purchase some large farms, the percentage of the tobacco acreage under American control was minor. The bulk of American investment in tobacco production was in the industrial and marketing phases of tobacco production: establishing stemming plants and factories for hand and later machine-produced cigars and cigarettes, controlling packing and shipping facilities, and ultimately determining marketing strategies for the vast U.S. mainland consumer markets. It was not necessary for American investors to purchase land or dedicate capital to expensive processing equipment to participate in the tobacco sector. Because local farmers could produce enough raw tobacco to meet American demand, it was more cost effective to purchase tobacco leaf than to become vertically integrated; and it was more profitable to be the marketer of the finished product than a producer of the raw material. Tobacco cultivation, therefore, remained largely in the hands of independent Puerto Rican farmers who farmed predominantly small tracts of land.

The insular administration, despite its colonial structures, did not cower before imperial control nor did it act as an unwilling bystander to policies not deemed in the interests of Puerto Ricans. Instead, it was proactive in its support of farmers in general, and tobacco growers in particular. Modeled after programs established to benefit tobacco farmers throughout the United States, the insular administration founded banking institutions and credit agencies to address some of the financial problems faced by small tobacco growers in Puerto Rico. Insular government agencies such as the Department of Agriculture and Labor (established in 1917) were committed to the wellbeing of the Puerto Rican farmer. Institutional reports submitted to federal officials consistently and candidly documented the lower standard of living among Puerto Rico's rural population when compared to their counterparts in the United States. Correspondence and published reports of meetings with federal officials demonstrated that insular legislators and administrators were in constant negotiations with the federal government over colonial policies that affected agriculture. The insular government also funded the Agricultural Experiment Station (established in 1914), which was responsible for the dissemination of scientific advances in the cultivation of tobacco and other crops.

A review of both the historiography of Puerto Rico and of tobacco cultivation in the Spanish Caribbean will contextualize the arguments presented in this dissertation.

### **Historiography of Puerto Rico**

The scholarly literature of early 20<sup>th</sup>-century Puerto Rico has focused on the social, economic, and political impact of the U.S. occupation that began in 1898 on the lives of Puerto Ricans. These complex processes have been distilled into a simple

dichotomy. Some scholars have argued that American imperialism created economic and social dislocation, with one result being the pauperization of the small farmer who was rapidly converted into a rural proletariat after 1898 to serve U.S. companies that took over the economy of the island. Others have argued that the U.S. “saved” Puerto Ricans from the continuation of a backwards, inefficient, and ultimately dictatorial Spanish colonial system, making the ideals of democracy, freedom, and economic progress a reality for the people of the island. These neat, simplistic conceptualizations have portrayed Puerto Ricans as either victims of an abusive imperial power or passive observers of the monumental changes that occurred in their lives. A so-called American imperialism became the *sine qua non* of scholarly research.<sup>2</sup>

From 1899 to 1930, the history of Puerto Rico was a catalogue of “problems” narrated by American observers who were either government agents assigned to administrative posts or academics sent to the island on informational expeditions that would, when published, teach American administrators about their new subjects.<sup>3</sup> There were also many scientific studies that discussed everything from botanical typologies to

---

<sup>2</sup> For a sophisticated analysis of the historiography of Puerto Rico, see César J. Ayala and Laird W. Bergad, “Rural Puerto Rico in the Early 20<sup>th</sup> Century Reconsidered: Land and Society, 1899-1915,” *Latin American Research Review* 37, no. 2 (2001): 65-97.

<sup>3</sup> Henry K. Carroll, for example, was named Special Commissioner to Porto Rico. His *Report on the Industrial and Commercial Condition of Porto Rico* (Washington, D.C.: Government Printing Office, 1899) was a comprehensive study of the social, economic and political conditions of the island in 1900. For a discussion of the problematic nature of American involvement in Puerto Rico and the establishment of civil government on the island, see Leo Stanton Rowe, *The United States and Porto Rico. With Special Reference to the Problems Arising Out of Our Contact with the Spanish-American Civilization* (New York, NY: Longmans, Green, and Co., 1904). Rowe was a professor of Political Science and part of the Commission to Revise and Compile the Laws of the Porto Rico created in 1900. For a study of the problems of the rural population on the island see Fred K. Fleagle, *Social Problems in Porto Rico* (New York, NY: D.C. Heath and Co., Publishers, 1917). Fleagle served as the Dean of the University of Puerto Rico from 1907 to 1917.

agricultural methods.<sup>4</sup> It was not until 1930 that the systematic evaluation of the social or economic progress, if any, achieved under American rule was explored by American researchers, and this was related to the onset of the Great Depression.

That year the Brookings Institution in Washington, D.C. published *Porto Rico and Its Problems* by Victor S. Clark, a former Commissioner of Education in Puerto Rico.<sup>5</sup> The “Brookings Report,” as it became known, was a comprehensive study of the economic and social conditions on the island, from agricultural development to public health. After 30 years of American colonial rule, Clark argued, there were indicators that life for the rural inhabitant was indeed better than during Spanish colonial times: there were more students in schools, better housing, and improved transportation, and sewage and potable water systems.<sup>6</sup> Clark’s consideration of the island’s ‘problems’ or negative effects of U.S. control, such as the increase in commercial agriculture at the expense of subsistence production, poor living conditions among agricultural workers, and corporate investments in land that supposedly displaced local farmers, served as the foundation for later studies on the effects of American colonialism.<sup>7</sup>

---

<sup>4</sup> For an example, see Henry Allan Gleason and Mel T. Cook, *Plant Ecology of Porto Rico* (New York, NY: New York Academy of Sciences, 1927).

<sup>5</sup> Victor Clark, *Porto Rico and its Problems* (Washington, D.C.: The Brookings Institution, 1930). The Brookings Report was widely discussed in Puerto Rico. For example, an editorial in the *El agricultor puertorriqueño*, the publication of the insular farmers’ association, took offense that the report accused members of the elite of not supporting the education of the *jíbaro*. See “Amicus Plato, Sed Magis Amica Veritas,” *El Agricultor Puertorriqueño* 9, no. 11 (June 15, 1930): cover page. Several months before the publication of the Brookings Report, José Enamorado-Cuesta, a Puerto Rican scholar, published *Porto Rico, Past and Present. The Island after Thirty Years of American Rule* (1929; reprint, New York, NY: Arno Press, Inc., 1975). Although Enamorado-Cuesta made many of the same observations as Victor Clark, it was the Brookings Report that became a classic volume.

<sup>6</sup> Clark, “Problems,” xx-xxi.

<sup>7</sup> Clark calculated that approximately 70% of all custom duties collected were from imported food items. In addition, he utilized land use statistics to show that the amount of acreage planted in food crops was declining. See Clark, “Problems,” xviii. The social and economic conditions of agricultural laborers were discussed on page 561.

It was Justine and Bailey Diffie's *Porto Rico: A Broken Pledge* published in 1931 that offered the most outspoken indictment of American policies on the island. The Diffies argued that there had been no sign of social progress for most Puerto Ricans in the first three decades of the 20<sup>th</sup> century and that "absentee ownership has impeded economic prosperity and social progress of the majority."<sup>8</sup> The sugar areas of the island, with their high concentration of land and masses of unskilled laborers, were symbolic of the 'failures' of the colonial economic system. The United States had broken their pledge to lift Puerto Ricans out of a life of poverty and cultural darkness and instead had put in place economic policies that perpetuated the dreadful living conditions of the *jibaro*, sentencing the island to economic serfdom. Perhaps no other work has had a more pervasive effect on the historiography of Puerto Rico than the Diffies' study and scholars have felt compelled either to discredit or support the Diffies' theses ever since the book was published.

From the 1930s to the 1960s, Puerto Rican historiography followed several distinct but related paradigms, all concerned with the benefits or shortfalls of control by the United States. The first was the transformation of Puerto Rico from a "stagnant backward economy" in the 19<sup>th</sup> century to one defined by the "dynamic and efficient capitalism" of the United States.<sup>9</sup> The second was the transformation of Puerto Rico

---

<sup>8</sup> Harry Elmer Barnes, introduction to *Porto Rico: A Broken Pledge*, by Bailey W. Diffie and Justine Whitfield Diffie (New York, NY: The Vanguard Press, 1931), xxx.

<sup>9</sup> Werner Baer, "Puerto Rico: An Evaluation of a Successful Development Program," *The Quarterly Journal of Economics* 73, no. 4 (November 1959): 645. The characterization of the 19<sup>th</sup>-century Puerto Rican economy as "backward" continued into the 1970s in works such as Sol L. Descartes, *Puerto Rico: Trasfondo de su economía, fondo físico, histórico e institucional* (Hato Rey, P.R.: Inter-American University Press, 1973), 21; and Andrés Sánchez Tarniella, *La economía de Puerto Rico: Etapas en su desarrollo* (Madrid: Afrodisión Aguado, S.A., 1971), 27. The characterization of U.S. capitalism is from Gordon K. Lewis, *Puerto Rico: Freedom and Power in the Caribbean* (New York, NY: M.R. Pres, 1963), 89.

from a romanticized “traditional” 19<sup>th</sup> century economy, where paternal economic relationships protected even the poorest of the *jibaros*, to a colonial economy defined by the separation of land and labor. In the first paradigm, the United States brought order and logic to a chaotic and primitive economy. In the second, the United States destroyed, whether intentionally or not, a particular way of life and replaced it with one that was alien and damaging to Puerto Ricans.

An example of a study that fits within the first paradigm delineated above was the appropriately titled *Puerto Rican Paradox* by Vincenzo Petruccio published in 1947.<sup>10</sup> Petruccio argued that the case of Puerto Rico presented a paradox with respect to the resolution of social problems. Although major advances had been achieved in agriculture, transportation, sanitation and education during the first decades of American colonialism, Puerto Rico remained saddled with “insurmountable problems” such as geography, climate, and the Spanish cultural legacy.<sup>11</sup> The ‘Herculean’ efforts of the United States government, according to Petruccio, proved that they had fulfilled their promise: “with right good will we set about uplifting Puerto Rico.”<sup>12</sup> The accomplishments mentioned by Petruccio were indeed remarkable, but his conceptualization of Puerto Rico’s problems implied that there was nothing to be done which could effectively resolve them. Unlike Clark, who ended his volume with a list of suggestions for improving the social and economic conditions on the island, Petruccio ascribed the failures of the American colonial structure to factors that were uncontrollable

---

<sup>10</sup> Vincenzo Petruccio, *Puerto Rican Paradox* (Philadelphia, PA: University of Pennsylvania Press, 1947).

<sup>11</sup> *Ibid.*, 5, 8-9.

<sup>12</sup> *Ibid.*, 159.

or unavoidable such as climate and geography, as well as to a vague, highly distorted, and perhaps even racist culturally-conceived heritage visualized by the author.

Among the studies that fit into the second paradigm is *Transformation. The Story of Modern Puerto Rico* by Earl Hanson Parker. Parker argued that concentration of land into large estates “never amounted to much” under the Spanish Crown but that “as a result of American capital, *latifundia* became a marked feature of Puerto Rico’s culture.”<sup>13</sup> There are several glaring errors in this interpretation of Puerto Rican rural society. First, the existence of relatively large agricultural estates within the Puerto Rican context during the 19<sup>th</sup> century has been proven by scholars across the disciplines.<sup>14</sup> Second, *latifundia*, to use Hanson’s designation, were not a central characteristic of Puerto Rico’s agricultural landscape after 1898. Large commercial estates existed on the island, particularly in the coastal sugar regions, but a major share of agricultural production remained in the hands of Puerto Rican independent farmers well into the 20<sup>th</sup> century, a fact that has been by and large ignored.

Harvey S. Perloff’s *Puerto Rico’s Economic Future*, a study of the economic development of the island during the first half of the 20<sup>th</sup> century, was a departure from

---

<sup>13</sup> Earl Parker Hanson, *Transformation. The Story of Modern Puerto Rico* (New York, NY: Simon and Schuster, 1955), 29. Hanson served as the Executive Secretary of the Puerto Rican Reconstruction Administration, a New Deal agency established on the island in 1935 to administer federal relief funds allocated for agricultural rehabilitation. This publication was a result of a University of Delaware class that brought students to Puerto Rico to study the living conditions of the island.

<sup>14</sup> See Laird W. Bergad, *Coffee and the Growth of Agrarian Capitalism in Nineteenth-Century Puerto Rico* (Princeton, NJ: Princeton University Press, 1983). For more recent studies that deal with the issue of 19<sup>th</sup> and early 20<sup>th</sup> century commercial agricultural estates see César J. Ayala, *American Sugar Kingdom: The Plantation Economy of the Spanish Caribbean, 1898-1934* (Chapel Hill: University of North Carolina Press, 1999); and Teresita Martínez-Vergne, *Capitalism in Colonial Puerto Rico: Central San Vicente in the late Nineteenth Century* (Gainesville, FL: University Press of Florida, 1992).

either of the trends discussed above.<sup>15</sup> He agreed that the expansion of commercial agriculture occurred due to American investment, but argued that patterns of land utilization were well established during the 19<sup>th</sup> century. He also noted that the increase in the cultivation of export crops due to the protection of selected Puerto Rican products by inclusion into the tariff structure of the United States increased the island's dependency on imported foodstuffs and manufactured goods from the U.S. mainland.<sup>16</sup> Throughout his work, Perloff emphasized the expansion of the sugar sector as the defining element of Puerto Rican development during the early 20<sup>th</sup> century.<sup>17</sup>

Based on these studies and others, the sugar narrative and the history of the development of the sugar sector on the island became synonymous with the overall agricultural history of Puerto Rico. "Sugar was king, a sick king" and the ills of the coastal sugar economy described by scholars up to this time became the central characteristics of not only Puerto Rican agriculture, but of Puerto Rico as a whole.<sup>18</sup> The colonial political status of the island, manifested economically in the plantation system developed by American capitalists in the sugar sector, became the cause of every economic, social and political problem in Puerto Rico.

This occurred even after the publication of *The People of Puerto Rico: A Study in Social Anthropology*, the result of a collaborative project between the University of

---

<sup>15</sup> Harvey S. Perloff, *Puerto Rico's Economic Future* (Chicago, IL: The University of Chicago Press, 1950). Perloff, an urban planner and architect, conducted this study in collaboration with the University of Puerto Rico's Social Science Research Center.

<sup>16</sup> *Ibid.*, 83. Also in Harvey S. Perloff, "The United States and the Economic Development of Puerto Rico," *The Journal of Economic History* 12, no. 1 (Winter 1952): 48-50.

<sup>17</sup> Perloff, *Economic Future*, 26-30, 67-79.

<sup>18</sup> Ruth Gruber, *Puerto Rico: Island of Promise* (New York, NY: Hill and Wang, 1960), 32.

Puerto Rico and the University of Indiana conducted in 1947.<sup>19</sup> This study identified communities in all three major agricultural regions, sugar, coffee and tobacco, and analyzed the predominant culture of each community. The thoroughly researched qualitative and quantitative evidence presented by the authors clearly demonstrated that there were both similarities and differences among agricultural regions in terms of economic and social structures and living conditions. However, this important study was ignored by many subsequent scholars of early 20<sup>th</sup>-century Puerto Rico who were more interested in advancing an anti-colonial agenda than in presenting an unbiased account of events on the island.

Manuel Maldonado-Denis, a well-published and often cited Puerto Rican scholar who wrote during the 1960s and 1970s, argued that the colonial status of the island was “more obvious” under the American flag than it ever was during Spanish colonial times and that only Puerto Rico remained in “colonial bondage” in the Americas.<sup>20</sup> Like scholars before him, Maldonado-Denis decried the disappearance of the independent farmer who lost his land to “a monoculture and a plantation economy” and was “thrown into the labor market in the large absentee sugar factories.”<sup>21</sup>

Maldonado-Denis also borrowed from Antonio S. Pedreira’s *Insularismo*, a book published in 1957 that took the economic arguments of previous scholars and transformed them into a psychological indictment of sorts of the people of Puerto Rico.<sup>22</sup>

---

<sup>19</sup> Julian H. Steward, Robert A. Manners, Eric R. Wolf, Elena Padilla Seda, Sidney W. Mintz, and Raymond L. Scheele, *The People of Puerto Rico: A Study in Social Anthropology* (Urbana, IL: University of Illinois Press, 1956).

<sup>20</sup> Manuel Maldonado-Denis, *Puerto Rico: Mito y realidad* (Madrid: Ediciones Península, 1969), 5, 25.

<sup>21</sup> *Ibid.*, 49.

<sup>22</sup> See Antonio S. Pedreira, *Insularismo: Ensayos de interpretación puertorriqueña* (San Juan, PR: Biblioteca de Autores Puertorriqueños, 1957). Pedreira argued that American colonial policies created an

Maldonado-Denis, writing more than a decade after the publication of *Insularismo*, expanded Pedreira's argument and described the supposed inaction of Puerto Ricans in the face of colonial abuse as the result of the "colonial mentality," defined as "the attitude of submission and acquiescence characteristic of the Puerto Ricans."<sup>23</sup> Maldonado-Denis was critical of the insular administration and portrayed them as accomplices to the "American power elite" and to the "repressive tolerance" practiced by colonial authorities, where Puerto Ricans were allowed to voice their discontent with the colonial system "in so far as he does not endanger it."<sup>24</sup> Puerto Ricans, according to Maldonado-Denis, bought into the colonial mentality and accepted everything that "magnifies the power, wisdom and achievements of the colonizer while minimizing the power, wisdom and achievements of the colonized."<sup>25</sup>

In *The Long Uphill Path*, published the same year as Maldonado-Denis' work, David F. Ross argued that the occupation of the island by the United States caused the "deterioration of living conditions" in the rural areas of Puerto Rico.<sup>26</sup> According to Ross, miserable economic conditions were present throughout the countryside and the rural population was composed of "people who are too weak, too sick, and too hungry to care about anything."<sup>27</sup> Thus, it would be difficult to expect any involvement from such

---

"inferiority complex" in Puerto Ricans that resulted in the self-alienation from political processes that could have effected change (see pages 133, 217).

<sup>23</sup> Manuel Maldonado-Denis, "The Puerto Ricans: Protest or Submission," *Annals of the American Academy of Political and Social Science* 382 (March 1969): 26.

<sup>24</sup> *Ibid.*, 30. James Dietz was also critical of the local elite and argued that they "existed, and functioned, primarily to serve foreign interests." See James Dietz, "The Puerto Rican Political Economy," *Latin American Perspectives* 3, no. 3 (Summer 1976): 8.

<sup>25</sup> Maldonado-Denis, "Protest," 30.

<sup>26</sup> David F. Ross, *The Long Uphill Path: A Historical Study of Puerto Rico's Program of Economic Development* (San Juan, P.R.: Editorial Edil, 1969), 3.

<sup>27</sup> *Ibid.*, 6.

a malnourished and ill group. Maldonado-Denis and Ross made the supposed psychologically damaged Puerto Rican an integral part of the debate regarding the effects of American colonialism.

During the 1970s and 1980s, new methodologies for research and newly ‘discovered’ archival sources were utilized by historians who, reflecting trends in the historical profession internationally, shifted their focus toward studies of the everyday life of Puerto Ricans across the social class structure.<sup>28</sup> However, the debate over the effects of the American occupation continued along the conceptual frameworks proposed by earlier studies. Topics such as land concentration, the disappearance of the independent farmer, and the damages to the psyche of the Puerto Rican were conceived of as ‘facts’ despite the utilization of new sources and the emergence of new themes of study.

One of the best-known and still widely read works of the period was *We, the Puerto Rican People: A Story of Oppression and Resistance* by Juan Ángel Silén. Silén agreed with Maldonado-Denis’ thesis that the colonial structure had fostered inappropriate responses from the Puerto Rican political and economic elite and simply stated that “the weakness of our bourgeoisie toward imperialism is a fact.”<sup>29</sup> However, unlike Maldonado-Denis, Silén framed their inaction as “a phenomenon of a political, not

---

<sup>28</sup> During the 1970’s and 1980’s, historians of early 20<sup>th</sup> century Puerto Rico became interested in the social and economic struggles of the ‘Puerto Ricans without history’ and began writing *nueva historia* (new history). Using methodologies adapted from the social sciences, students of the *nueva historia* searched for materials in long-neglected archival collections or non-traditional sources in an attempt to document the story of laborers, peasants, women or other sectors of the population ignored by the historiography until this time. For a good discussion of the methodology of the *nueva historia* and examples of scholarly works, see James L. Dietz, “Puerto Rico’s New History,” *Latin American Research Review* 19, no. 1 (1984): 210-222; and more recently, Félix V. Matos Rodríguez, “New Currents in Puerto Rican History: Legacy, Continuity and Challenges of the ‘Nueva Historia’,” *Latin American Research Review* 32, no. 3 (1997): 193-208.

<sup>29</sup> Juan Ángel Silén, *We, the Puerto Rican People. A Story of Oppression and Resistance*, trans. Cedric Belfrage (New York, NY: Monthly Review Press, 1971), 45.

psychological nature” that “arose from the class interests linking it with the North American power structure.”<sup>30</sup> Landowners became “reactionary” and intermediate and small-scale farmers lost their lands to sugar corporations, not exactly an original discovery or interpretation.<sup>31</sup>

Sol L. Descartes argued that Puerto Rico had been characterized by the “absence of general economic growth” until 1898, when the American occupation brought the beginnings of commercial agriculture and the establishment of a banking system and transportation infrastructure to the island.<sup>32</sup> Descartes argued that the concentration of agricultural wealth was due to the high cost of machinery and the financial resources of the American investors, which allowed them to purchase contiguous lands and to consolidate them into larger farms. It was the lack of interest from the insular state in protecting agricultural activity, together with the new tax system imposed on small farmers that supposedly forced farmers to sell their land to these capital-rich absentee corporations.<sup>33</sup>

In 1973 Truman Clark published an economic study of the effects of the inclusion of Puerto Rico into the tariff structure of the United States after 1898.<sup>34</sup> He argued that the U.S. replaced Spain and other European countries as providers of many of the

---

<sup>30</sup> Ibid.

<sup>31</sup> Ibid., 22-23.

<sup>32</sup> Descartes, *Trasfondo*, 21.

<sup>33</sup> Ibid., 42. Dale Johnson agreed with Descartes and others that the American occupation resulted in an “extremely rapid process of separation of small producers from productive property.” See Dale Johnson, “Class Formation and Struggle in Latin America,” *Latin American Perspectives* 10, nos. 2 and 3 (Spring-Summer 1983): 3.

<sup>34</sup> Truman Clark, *Puerto Rico and the United States, 1917-1933* (Pittsburgh, PA: University of Pittsburgh Press, 1975).

products used by Puerto Rican in their daily lives.<sup>35</sup> However, the United States did not replace Europe as consumers of Puerto Rican goods, to the detriment of Puerto Rican products that enjoyed popularity in the European markets, such as coffee. Furthermore, because American products could be imported into Puerto Rico free of duty, non-agricultural industries, which could have supplied the insular market, did not flourish. Clark, like Descartes, presented a balanced account of the accomplishments and shortcomings of American intervention in Puerto Rican affairs. Although he praised achievements in public health and education as “little short of revolutionary,” Clark also commented on the “wretchedness” of the lives of agricultural workers throughout the island.<sup>36</sup>

Other scholars were much more direct in their criticism of colonial policies. Ángel Quintero Rivera, for example, described the relationship between the United States and Puerto Rico as one of imperial “convenience,” in which the need for the U.S. to find a market for American products, the strategic location of the island for military purposes, and the ability of American capital to dominate sugar production created a model of “imperialist capitalism.”<sup>37</sup> Under this economic arrangement, Americans were not interested in sustaining a minimum standard of living for the average Puerto Rican. Instead, the “acquisition of agricultural lands by North American corporations, the

---

<sup>35</sup> Ibid., 109. As evidence of the importance of the United States as a provider of goods for the island, Clark cited the high percentage of food (32% to 39% of all imports) that was imported into the island and noted that the majority of those imports (86% to 94%) came from the United States.

<sup>36</sup> Ibid., 17-18. James Dietz also successfully presented a detailed and nuanced economic history of the island. See Dietz, “Political Economy,” and his later work *Economic History of Puerto Rico: Institutional Change and Capitalist Development* (Princeton, NJ: Princeton University Press, 1986).

<sup>37</sup> Ángel G. Quintero Rivera, “Background to the Emergence of Imperialist Capitalism in Puerto Rico,” in López, Adalberto, ed., *The Puerto Ricans: Their History, Culture and Society* (Rochester, VT: Schenkman Books, Inc., 1980), 116. In the same study, see also Morris Morley, “Dependence and Development in Puerto Rico,” 172; and Diana Christophulos, “The Politics of Colonialism: Puerto Rico from 1898-1972,” 135.

process of absorption of industrial establishments and the destruction of the small and incipient Puerto Rican bourgeoisie” were purposefully “meant to displace insular producers.”<sup>38</sup>

James Dietz, like Descartes and Truman Clark, provided a balanced assessment of the island’s economic history under the American flag. His discussion of the agricultural sector was more inclusive than previous scholars and, although he focused on the development of the sugar sector, he broadened his discussion to include a consideration of the tobacco and coffee economies. Like Maldonado-Denis, Dietz incorporated Puerto Rican responses to colonial policies in his discussion, but unlike Maldonado-Denis, he argued that it was due to Puerto Rican activism that changes in the political and economic colonial structure on the island had been made. As an example, Dietz argued that the passage of the Jones Act of 1917 was the result of “demands for greater self-rule and independence for Puerto Rico [that] came from all sectors and classes.”<sup>39</sup> Puerto Ricans became involved in the new colonial structure in a “variety of forces and parties representing specific interests and classes [that] developed to articulate demands for a change in the colonial relationship.”<sup>40</sup> Dietz interpreted the economic situation on the island found in the various periods of the 20<sup>th</sup> century as both the responsibility of federal colonial administrators and insular politicians who did in fact have an impact on U.S.

---

<sup>38</sup> Quintero Rivera, “Imperialist Capitalism,” 120. The theme of the intentional disruption of existing economic, social and political patterns on the island to protect American investments has been repeated by more recent studies, such as Luis Ángel Ferrao, *Pedro Albizu Campos y el nacionalismo puertorriqueño, 1930-1939* (Río Piedras, Editorial Cultural, 1990), 30.

<sup>39</sup> Dietz, “Political Economy,” 4. See also his later work *Economic History*. The Organic Act of 1917, also known as the Jones Act, was an amendment to the Organic Act of 1900, also known as the Foraker Act, which established a civilian government after the American occupation of the island. The Jones Act granted American citizenship to all Puerto Ricans and established a locally elected legislature, among other amendments.

<sup>40</sup> Dietz, “Political Economy,” 5.

policies and decision making. This was a radical, if not greatly acknowledged, departure from prior interpretations of island political life.

There was great anticipation over the publication in 1984 of Raymond Carr's *Puerto Rico: A Colonial Experiment*. Proponents of the island's continued affiliation with the U.S. as well as those who advocated for an end to the colonial relationship between the U.S. and Puerto Rico hoped that Carr, because he was British rather than American, would deliver an objective appraisal of American colonialism. Carr satisfied and angered both groups. He argued that "American capitalism had converted Puerto Rico into a fief of the great absentee American sugar corporations" and that as a result, the island had become "the poorhouse of the Caribbean."<sup>41</sup> Puerto Rico's sad economic situation was, therefore, "the creation of an outside agent, the foreign devil."<sup>42</sup> However, Carr also took pains to delineate achievements in education, health care, and infrastructure that he credited to U.S. involvement in the island. In some ways, Carr accepted earlier critiques of the impact of U.S. involvement on the island, especially his adherence to the absentee sugar corporation paradigm as representing Puerto Rican rural society. In others, he was careful not to launch a wholesale indictment of the 20<sup>th</sup>-century Puerto Rican experience under U.S. rule.

Carr was also interested in Puerto Rican responses to the American administrators and vacillated between accepting the colonial mentality thesis and demonstrating that Puerto Ricans were involved in colonial structures. Carr argued that "the United States was confronted by a self-confident, political elite that had already grasped the local levers

---

<sup>41</sup> Raymond Carr, *Puerto Rico: A Colonial Experiment* (New York, NY: Vintage Books, 1984), 202-203

<sup>42</sup> Ibid.

of power.”<sup>43</sup> The fundamental problem with the colonial relationship between the island and the mainland was that because there existed “a colonial elite convinced of its capacity to rule,” such a relationship became “unsustainable.”<sup>44</sup> Unfortunately, Carr also concluded that Puerto Ricans were “natural authoritarians, satisfied with a government that provides jobs and lulls the population into supine, soulless acquiescence” and that such conformity allowed “their civil rights to be grossly and systematically violated by successive governments.”<sup>45</sup> Carr’s study did not, as many expected, settle once and for all the argument about the social and economic condition of the island vis-à-vis its colonial relationship with the United States. Instead, he agreed that the conditions of the island were the responsibility of both harmful colonial policies and the inability of the Puerto Rican people to decide on any better course of action.

Studies of early 20<sup>th</sup>-century Puerto Rico since the 1990’s have not only remained focused on the dramatic changes on the island due to the American occupation, but have, with a few exceptions, glossed over the intricacies of agricultural development. There are several themes that have continued to resonate through the historiography of the period. First, the development of the sugar industry was the central focus of the American colonial government at the expense of every other economic sector on the island. A related theme is that the insular government acted in effect as the agents of U.S. corporations, promoting policies that protected American economic investments to

---

<sup>43</sup> Ibid., 42. Ronald Fernández later discussed the theme of the ability of Puerto Ricans to participate in the American colonial structure in *The Disenchanted Island: Puerto Rico and the United States in the 20<sup>th</sup> Century*, 2<sup>nd</sup> ed. (Westport, CT: Praeger Publishers, 1996). Fernández agreed with Carr and stated that “for a people with no experience in democratic practices, the Puerto Rican legislators nevertheless manifested an admirable ability to ‘talk turkey’ with the Americans” (see page 11).

<sup>44</sup> Carr, *Colonial Experiment*, 45.

<sup>45</sup> Ibid., 238.

the detriment of the Puerto Rican people. Finally, and perhaps the most pervasive theme of all, is that the Puerto Rican was so damaged by the colonization of their island that they have become psychologically incapable of making economic or political decisions that could ultimately resolve the colonial status of Puerto Rico.

Michael González Cruz argued that “the government promoted sugar cane as a single crop, undermining the coffee and tobacco economies in the mountain areas.”<sup>46</sup> In fact, both the federal and insular administrations were involved in the promotion of tobacco as a commercial crop and actively supported scientific research dedicated to tobacco and the establishment of demonstration farms throughout the tobacco regions. Although González Cruz was correct in stating the obvious fact that sugar was a more important revenue producer for the state than tobacco or coffee, there were credit programs established on the island that particularly addressed the needs of both the tobacco and coffee sectors. The scientific community, mostly funded through public appropriations, was also interested in promoting the use of idle land in coffee and tobacco regions for the production of food crops to reduce the dependence of farmers on purchased foods. González Cruz considered the development of the banking system, but he did not address the lack of institutional agricultural credit for independent farmers or the evident abuses within the non-institutional credit structures. Instead, he argued that the banking system was established in Puerto Rico “not as a basis for independent economic development but as a way of ensuring the survival of the privileged classes.”<sup>47</sup>

---

<sup>46</sup> Michael González Cruz, “The United States’ Invasion of Puerto Rico: Occupation and Resistance to the Colonial State, 1898 to the Present” *Latin American Perspectives* 25, no. 5 (September 1998): 12.

<sup>47</sup> *Ibid.*, 13.

In his dissertation on the effects of the colonial relationship on the island, Martin Joseph Collo argued that “Puerto Rico’s relationship with the United States, particularly the island’s lack of capital autonomy, has had a negative impact on insular agriculture.”<sup>48</sup> He described the period between 1898 and 1945 as one of “dependent agrarian capitalism,” where the United States controlled all major aspects of commercial agriculture.<sup>49</sup> Like González Cruz, he argued against the idea of a benevolent colonial authority: “it is extremely difficult to find any evidence to suggest that, during the first several decades of American rule, there was much concern in Washington for the interests of island residents.”<sup>50</sup> Instead, colonial policy was concerned with establishing the legal and financial infrastructure that would facilitate American investment on the island.<sup>51</sup> On the topic of land expropriation and consolidation into American hands, Collo agreed with many other scholars, and argued that once American capital invaded agriculture, local landowners had no alternative to financial ruin than to sell their land and were thereby “eliminated as an important segment of Puerto Rican society.”<sup>52</sup> There was no discussion of differences among agricultural regions or even if such a statement was correct in the case of the development of the sugar sector.<sup>53</sup>

Some recent studies have been successful in adding complexity to the debate over the effects of American colonialism by placing Puerto Rican economic development

---

<sup>48</sup> Martin Joseph Collo, “Puerto Rico and the United States: The Effect of the Relationship on Puerto Rican Agrarian Development” (Ph.D. diss., University of Pennsylvania, 1986), vi, 12.

<sup>49</sup> *Ibid.*, 13.

<sup>50</sup> *Ibid.*, 21.

<sup>51</sup> *Ibid.*, 61-62.

<sup>52</sup> *Ibid.*, 62-63

<sup>53</sup> For a detailed analysis of the error made by scholars of Puerto Rico regarding the number of landless and land concentration in early 20<sup>th</sup> century Puerto Rico, see Ayala and Bergad, “Rural Puerto Rico,” 65-97.

within the context of globalization and the forces of international markets. They have also stepped away from using 1898 as a demarcation point and have looked several decades back into the 19<sup>th</sup> century and several decades forward in the 20<sup>th</sup> to determine the extent that American colonial policies either accelerated already occurring trends or altered the island into an unrecognizable capitalist territory.

Teresita Martínez-Vergne, for example, studied the demise of the Central San Vicente in the late 19<sup>th</sup> century. She argued that it was precisely the interest in the modernization of the sugar industry by centralizing production into an efficient industrial complex that condemned San Vicente.<sup>54</sup> The idea of centralization was at odds with traditional relations of production, and thus was not successful. Martínez-Vergne's study showed that farmers were interested in modernization during the later part of the 19<sup>th</sup> century and that it was not a 20<sup>th</sup>-century phenomenon, although it was the influx of American capital that later allowed actual centralization to occur.

César Ayala's *American Sugar Kingdom* was a socioeconomic study of the Spanish Caribbean from 1898 to 1934, the period of rapid expansion in the sugar sectors of the islands.<sup>55</sup> Ayala convincingly argued that in Puerto Rico, small sugar-cane growers remained an integral part of the sugar sector as *colonos*, farmers who entered into contracts with large sugar *centrales* for the sale of their raw cane. Because land in Puerto Rico was scarce, but labor was not, the *colonato* was the most economically practical organizational scheme for the production of sugar cane, as it had been in Cuba after the abolition of slavery in 1886.<sup>56</sup> Ayala also discussed changes in land tenure after

---

<sup>54</sup> Martínez-Vergne, *Central San Vicente*, ix, 131.

<sup>55</sup> Ayala, *Sugar Kingdom*.

<sup>56</sup> *Ibid.*, 140.

the American occupation and described simultaneous patterns of fragmentation and concentration, that is, the number of small farms increased while large farms became even larger through the consolidation of medium-sized farms.<sup>57</sup> This was a refreshing departure from the plantation-focused paradigms of prior studies.

The theme of resistance to the colonial apparatus was explored in Rosa Carrasquillo's very recent study about the landless in the town of Caguas, a tobacco-growing municipality in the eastern highlands of Puerto Rico.<sup>58</sup> Carrasquillo argued that it was the Cagüeños' determination to protest the land privatization legislation that they deemed unfair that guaranteed the rural poor of the town a place in the development of local 'civil society.' Landless Cagüeños argued that their use of land as a homestead or for commercial cultivation gave them a rightful civil claim to the parcel and refused to comply with colonial directives in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries that would have forced them to abandon their land.<sup>59</sup>

The supposed 'damage' done by colonial policies on the self-esteem of the Puerto Ricans has continued to be a topic of interest for many scholars. Lillian Guerra, for example, argued that American policies created a socioeconomic crisis, which in turn resulted in "psycho-cultural responses to the imposition of a new colonial system explicitly predicated on the superiority of the colonizer and the inferiority of the colonized."<sup>60</sup> This kind of interpretation dismisses as meaningless, intentionally or not, the activities of every Puerto Rican who joined a worker's union, agricultural

---

<sup>57</sup> Ibid., 144.

<sup>58</sup> Rosa Carrasquillo, *Our Landless Patria: Marginal Citizenship and Race in Caguas, Puerto Rico, 1880-1910* (Lincoln, NE: University of Nebraska Press, 2006).

<sup>59</sup> Ibid., xxi, 5, 118.

<sup>60</sup> Lillian Guerra, *Popular Expression and National Identity in Puerto Rico: The Struggle for Self-Community and Nation* (Gainesville, FL: University Press of Florida, 1998), 23.

organization, or political party. In effect, the “docile Puerto Rican” thesis has negated the life experiences of Puerto Ricans who maneuvered within the colonial system to maintain an active role in the political, economic and social processes that began in 1898.<sup>61</sup>

### **Historiography of Tobacco**

Tobacco has traditionally been seen as the antithesis, in a social and economic sense, to sugar. The earliest and seminal study was written by the well-known Cuban scholar Fernando Ortiz.<sup>62</sup> *Cuban Counterpoint*, first published in Cuba in 1940, contrasted the impact of tobacco and sugar on Cuban society. Ortiz argued that although the same economic factors were present in both sugar and tobacco (land, labor, and capital), the way that these factors of production interacted were diametrically opposed. Where tobacco was a delicate natural plant that provided continuous employment for skilled laborers, sugar required chemical alteration and needed the unskilled attention of seasonal workers. Tobacco was Cuban, dark, and independent; sugar was foreign, white, and dependent. Tobacco was defined in agricultural terms, sugar in terms of mechanization. Ortiz’s portrait of life as a tobacco grower or cigar roller seemed ideal: independence, opportunity for education, and good wages. Although these interpretations

---

<sup>61</sup> Fortunately, other scholars have examined the participation of women, workers and others in contesting the colonial state. For examples of works on women, see Lea E. Osborne, “Bridging the Divide: The Alliances of the Liga Social Sufragista in the Struggle to Enfranchise Puerto Rican Women” (master’s thesis, Sarah Lawrence College, 2004); and Félix V. Matos Rodríguez and Linda C. Delgado, eds., *Puerto Rican Women’s History: New Perspectives* (Armonk, NY: M.E. Sharpe, 1998). For works on workers and unionization, see Ivette M. Rivera-Giusti, “Gender, Labor and Working-Class Activities in the Puerto Rican Tobacco Industry, 1898-1924” (Ph.D. diss., State University of New York at Binghamton, 2004); or Carlos Sanabria, “The Puerto Rican organized workers’ movement and the American Federation of Labor, 1901 to 1934” (Ph.D. diss., City University of New York, 2000).

<sup>62</sup> Fernando Ortiz, *Cuban Counterpoint: Tobacco and Sugar* (New York: Alfred A. Knopf, 1947).

were highly romanticized as well as historically inaccurate, they became a major focal point of Cuban intellectual life.

It was Jean Stubbs who challenged Ortiz's idyllic picture of the tobacco industry in Cuba.<sup>63</sup> Her work, *Tobacco on the Periphery*, was a study of tobacco workers and the effects of United States tobacco companies on the Cuban industry. Stubbs argued that tobacco cultivation during the nineteenth century included slave labor and that large plantations existed in Pinar del Río as late as 1862.<sup>64</sup> Consolidation of tobacco lands by large-scale owners displaced growers and turned them into poor tenants and sharecroppers, a process that began in the late 19<sup>th</sup> century and continued until the 1930s. Stubbs further argued that contrary to the nationalist portrayal of tobacco cultivation, British and American capital were a part of the Cuban tobacco industry as early as 1888.<sup>65</sup> Tobacco was not so different from sugar, after all.

Two recent studies have focused on the Cibao region in the Dominican Republic, which serves as an interesting point of comparison to the Puerto Rican highlands. In his book *Peasants and Tobacco in the Dominican Republic*, Michiel Baud argued that the regional export economy of tobacco in Cibao "depended upon continuing peasant production."<sup>66</sup> The high exigencies of tobacco cultivation combined with local elites and a state that did not have "the means or wish to take charge of agricultural production," made tobacco a viable economic alternative for peasants in the Cibao region of the

---

<sup>63</sup> Jean Stubbs, *Tobacco on the Periphery: A Case Study in Cuban Labor History, 1860-1958* (New York, NY: Cambridge University Press, 1985).

<sup>64</sup> *Ibid.*, p. 53.

<sup>65</sup> *Ibid.*, p. 22.

<sup>66</sup> Michiel Baud, *Peasants and Tobacco in the Dominican Republic, 1870-1930* (Knoxville, TN: University of Tennessee Press, 1995), 5, 42.

Dominican Republic.<sup>67</sup> Baud suggested that the participation in the world tobacco economy did not destroy Dominican peasant production; in fact, it stimulated it and integrated peasants into the social structure of Cibao. Additionally, tobacco cultivation was an example of “capitalist relations of production expanded without undoing small-scale production.”<sup>68</sup> Peasants were not afraid to take advantage of new commercial opportunities and their participation in the tobacco sector was a rational economic choice and not an unavoidable result of capitalist development. Like the farmers of the highlands of Puerto Rico, tobacco cultivation allowed the peasants in Cibao to continue the cultivation of food crops, providing them a degree of autonomy that others such as sugar-cane farmers, did not enjoy.<sup>69</sup> Unlike their Puerto Rican counterparts, “income from tobacco was not essential to the survival of most tobacco-growing families.”<sup>70</sup>

The Cibao region provides an example of commercial cultivation for export using small-scale production similar to the case in Puerto Rico. Tobacco growers in both regions depended on tobacco merchants for curing and fermenting of the tobacco leaf. The Dominican state, like the federal and insular governments in Puerto Rico, became supporters of scientific research to find better cultivation techniques and funded schools, agricultural inspectors, and research institutions. However, the Cibao tobacco growers were able to maintain a higher degree of economic autonomy than their Puerto Rican counterparts due to a dynamic internal market for local tobacco and to the relative

---

<sup>67</sup> Ibid., 6-7.

<sup>68</sup> Ibid., 9, 31.

<sup>69</sup> Ibid., 41-42, 49.

<sup>70</sup> Ibid., 92.

weakness of the state.<sup>71</sup> In Puerto Rico, consumer preferences shifted to the brighter tobacco cultivated in the U.S. instead of island-grown tobacco, and the high level of organization of the federal and insular governments ensured that state involvement in tobacco cultivation was constant and widespread.

Pedro San Miguel wrote the other study of tobacco cultivation in the Cibao region of the Dominican Republic several years after the Baud study was published.<sup>72</sup> San Miguel, like Baud, described the predominance of middle and small-scale farmers that secured agricultural credit from local merchants in exchange for a promise of their tobacco crop.<sup>73</sup> Peasants in Cibao participated at every level in the expansion of the tobacco sector, not only by cultivating the leaf, but also by becoming involved in issues that affected their daily lives. San Miguel argued that peasants in the Cibao were able to maneuver the economic and political structures in place and created “defenses against state policies that have in some way jeopardized their survival and way of life.”<sup>74</sup> Like tobacco growers in Puerto Rico, peasants in the tobacco-growing region of the Dominican Republic maneuvered the colonial apparatus to advance their economic interests.

Such comprehensive studies of tobacco cultivation in Puerto Rico do not exist.

There are, however, several limited studies worthy of mention. An excellent comparison

---

<sup>71</sup> Ibid, 183-184, 195, 203. The same patterns were also evident in the Bahia region of Brazil, where tobacco cultivation was done by small-scale farmers and growers were able to remain relatively independent due to administrative neglect from the Brazilian state. See Michiel Baud and Kees Kooning, “*A lovoura dos pobres: Tobacco Farming and the Development of Commercial Agriculture in Bahia, 1870-1930*,” *Journal of Latin American Studies* 31 (1999): 287-329.

<sup>72</sup> Pedro San Miguel, *Los campesinos del Cibao. Economía del mercado y transformación agraria en la República Dominicana, 1880-1960* (San Juan, P.R.: Editorial de la Universidad de Puerto Rico, 1997).

<sup>73</sup> Ibid., 40-41.

<sup>74</sup> Pedro San Miguel and Phillip Berryman, “Peasant Resistance to State Demands in the Cibao during the U.S. Occupation” *Latin American Perspectives* 22, no. 3 (Summer 1995): 41-42.

of sugar and tobacco cultivation in the highlands of Puerto Rico was written by John P. Augelli in 1953.<sup>75</sup> Tobacco and sugar cultivation had many similarities: there was a surplus of available labor, which helped keep wages down, it was intensively cultivated for export, and there were many small farms involved in the cultivation process for both products.<sup>76</sup> The differences between the two were more marked, and perhaps more important to the wellbeing of agricultural families. First, a sugar-cane farm was a “single-crop production” unit, where all of the available farmland was dedicated to sugar. Tobacco farms, on the other hand, were characterized by “multiple crop production” and the cultivation of food crops for family consumption was as important as the income derived from the sale of the tobacco leaf.<sup>77</sup> Thus, tobacco was well suited for the highland regions of Puerto Rico, where land and capital were limited to small holdings and short-term loans.

Juan José Baldrich’s study, *Sembraron la no siembra*, is perhaps the best-known study of the island’s tobacco economy.<sup>78</sup> Due to the collapse in the price of tobacco after 1929, Puerto Rican growers began a campaign to create a tobacco shortage by not planting during the 1931-1932 growing season. Baldrich argued that, although the strike succeeded in organizing the growers against the merchants who controlled prices at the local level, it failed to have the desired effect on world prices.<sup>79</sup> It was this failure,

---

<sup>75</sup> See John P. Augelli, “Sugar Cane and Tobacco: A Comparison of Agricultural Types in the Highlands of Eastern Puerto Rico,” *Economic Geography* 29, no. 1 (January 1953): 63-73.

<sup>76</sup> *Ibid.*, 64.

<sup>77</sup> *Ibid.*, 63.

<sup>78</sup> Juan José Baldrich, *Sembraron la no siembra. Los cosecheros de tabaco puertorriqueños frente a las corporaciones tabacaleras, 1920-1934* (Río Piedras, P.R.: Ediciones Huracán, 1988).

<sup>79</sup> *Ibid.*, 165.

according to Baldrich, that marked the beginning of the transition for the tobacco grower from landowner to landless agricultural laborer.

There were many agricultural studies conducted regarding the cultivation of tobacco in Puerto Rico written by scientists and economists affiliated with the island's Agricultural Experimental Station. Their findings were routinely published in the *Bulletin of the Agricultural Experimental Station* and the *Revista de agricultura de Puerto Rico*, as well as in individual pamphlets to be distributed among farmers throughout the island. These studies range from the profitability of tobacco farms and discussions of credit and financing options available, to finding disease-resistant breeds, better fertilizers, and effective curing methods.<sup>80</sup>

This dissertation presents an alternative to three main interpretations of Puerto Rican history from the American invasion of 1898 to 1940. First, the agricultural history of Puerto Rico must not be presented as a one-dimensional story of U.S. colonial 'abuse' based on the development of the sugar sector. There were significant variations among the agricultural regions of Puerto Rico in terms of land use, social structure, and income possibilities that add complexity to the debate over the effects of the U.S. occupation on the agricultural sector, and ultimately, on the everyday lives of Puerto Ricans. Second, a study of the efforts of Puerto Rican tobacco farmers to participate in every level of the new colonial structure demonstrates that docility and indifference were not their defining characteristics as has been alleged by many historical interpretations. Instead, tobacco growers chose to participate in an economic sector that provided both monetary rewards

---

<sup>80</sup> For a detailed discussion of agricultural research, see Chapter 5.

and sustenance, and they worked to manipulate colonial political institutions and structures to effect changes that had a significant impact on their daily lives. Third, the extant colonial structures at both the insular and federal levels must not be distilled into a demon/savior dichotomy. Instead, the colonial relationship between the United States and Puerto Rico was nuanced, complicated, and constantly redefined by the actors involved at any point in time.

This dissertation is organized in the following chapters:

Chapter 1, “The Tobacco Industry, 1899-1940,” provides an overview of the commercial cycles of the tobacco leaf market during the period under study. Smoking preferences in the American tobacco market, worldwide events, and natural disasters had immediate and lasting effects on the cultivation of tobacco. Tobacco farmers responded to these changes and adjusted their production, showing great adaptability and an up-to-date knowledge of the latest tobaccos news from around the world.

Chapter 2, “The Tobacco Regions of Puerto Rico,” discusses the eastern and western highland regions of Puerto Rico, where 90% of the tobacco leaf was cultivated. The rapid expansion of the tobacco sector from 1899 to 1940 resulted in changes to the social and economic structure of the regions. Population grew at a phenomenal rate, indicating both natural population growth and migration into tobacco regions in search of economic opportunities. This chapter also compares the tobacco regions to the sugar and coffee regions, demonstrating both similarities and differences in their economic and social structure.

Chapter 3, “Agricultural Credit in Puerto Rico and Tobacco Cultivation,” details the non-institutional and institutional credit structures available to tobacco farmers in

Puerto Rico. The insistence by tobacco farmers and insular government officials to extend federal agricultural laws to the island resulted in the creation of a sophisticated institutional credit structure that provided long, middle, and short-term credit for tobacco cultivation. The non-institutional credit structure, however, with its easy access and wide availability, remained the preferred credit supplier for most tobacco growers.

Chapter 4, “Tobacco Growers and Agricultural Organizations in Puerto Rico, 1917-1937,” argues that tobacco growers were not observers of major economic processes. Instead, they participated at every level in the expansion of the tobacco sector. Tobacco farmers joined local *ligas agrícolas* and the insular *Asociación de Agricultores Puertorriqueños*. They also formed marketing and credit cooperatives to purchase cultivation supplies in bulk, to market their product, and to access federal credit programs extended to Puerto Rico.

Chapter 5, “The Science of Tobacco,” argues that the scientific study of tobacco cultivation provided an opportunity for the federal and insular state to cooperate with tobacco corporations and independent farmers to improve the economic benefit of tobacco cultivation. Rather than an agent of imperial capitalism unfeeling to the needs of the Puerto Rican population, the insular government successfully advocated for the best interests of the island. Indeed, insular officials understood that the power was in Washington, but quickly learned how to maneuver the colonial administration to advance the economic development of the island.

## Chapter 1: Tobacco Cultivation in Puerto Rico

Tobacco leaf cultivation has existed in Puerto Rico since at least the time of the Taínos.<sup>1</sup> Called *cogiba* or *cohiba*, Taínos dried the leaves in the sun, ground them, and smoked the ground leaves in a Y-shaped wood pipe called *tabaco*.<sup>2</sup> Taínos also twisted the dried leaf, wrapped it with a smoother leaf called a *pura*, and smoked it much like cigars are smoked today. When the Spanish settled on the island after 1508, they quickly became users of the aromatic leaf, bringing it to Europe during their travels. A market soon developed for Puerto Rican leaf tobacco, and although the Spanish Crown prohibited legal trading there was an abundance found on the Iberian black markets of the 16<sup>th</sup> century.

By the early 17<sup>th</sup> century the Crown shifted its policies and a *Decreto Real* of 1614 permitted tobacco cultivation for commercial purposes. Theoretically, all exports were destined for Seville, where the *Casa de Contratación*, a Spanish government agency that monopolized the colonial trade, would be responsible for marketing the leaf. By the middle of the 17<sup>th</sup> century, a pound of tobacco leaf was valued at 2 *reales* in the export market, which was estimated to have been about 8,000 *reales* annually.<sup>3</sup> Puerto Rican

---

<sup>1</sup> The Taínos were part of the Arawak people, Amerindians who lived at the time of Spanish contact throughout the lands on the Caribbean Sea. The Taínos were found in the Greater Antilles and were the dominating tribe in Puerto Rico.

<sup>2</sup> María Cadilla de Martínez, “El tabaco,” *Revista de agricultura de Puerto Rico* 29 (July 1937): 110 (hereafter cited as *RAPR*).

<sup>3</sup> Antonio Rojas, Tobacco Institute of Puerto Rico, *Preliminary Plan to Stabilize the Tobacco Industry Submitted to the Planning, Urbanizing and Zoning Board of Puerto Rico* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1944), 3. Also in Cadilla de Martínez, “Tabaco,” 112. Currency equivalencies are difficult to pinpoint exactly. The most used currency in Puerto Rico at this time was the Spanish *peso* and the *real*, available in several denominations. One *peso* was equal to 8 *reales*. Until 1898, one *peso* was equivalent to 1 dollar. The average price per pound in 1636 was therefore, 25 cents.

tobacco production expanded through the 18<sup>th</sup> century, although there was great dissatisfaction with Spanish monopoly policies. In 1784, the Crown opened a *Real Factoría Mercantil* in Puerto Rico charged with the exclusive right to export tobacco leaf and to secure the product from island farmers. This meant the establishment of a buyer's monopoly for tobacco, which controlled the prices paid to agriculturalists for their product.

Island tobacco farmers responded with an increase in illegal commerce with foreign nations, principally the English and French. The Crown finally relented in 1815 and reduced export taxes, not only for tobacco, but for other products making up the export sector such as sugar, ginger, hides, and indigo. By 1828, almost 2.5 million pounds of tobacco were produced on the island and production increased for the remainder of the 19<sup>th</sup> century, peaking in 1880, when it was estimated that Puerto Rico produced over 12 million pounds of leaf.<sup>4</sup>

The American occupation in 1898 and the resulting economic policies accelerated the expansion of the active tobacco sector. The incorporation of Puerto Rico into the tariff structure of the United States opened the American market for Puerto Rican tobacco and allowed the easy flow of American capital into the island for the establishment of tobacco manufacturing plants. In 1899 the Porto Rican American Tobacco Company (PRATC) was incorporated in New Jersey.<sup>5</sup> The PRATC purchased two tobacco manufacturing companies in Ponce and San Juan from Luis Toro, and the firm Rucabado y Portela, thereby formally establishing the presence of American capital in the tobacco

---

<sup>4</sup> Cadilla de Martínez, "Tabaco," 113.

<sup>5</sup> Ibid. The PRATC was a subsidiary of the American Tobacco Company.

sector.<sup>6</sup> Unlike what would occur in the sugar sector, American investment in the tobacco sector remained largely in the manufacturing area, leaving the agricultural process in the hands of the Puerto Rican farmers.

From 1907 through 1917, tobacco was the third most important commercial crop produced on the island after sugar and coffee. In 1918, tobacco surpassed coffee as the second most important commercial crop after sugar. The export value of tobacco on the island peaked in 1920, when tobacco surpassed sugar and represented 38% of the total value of commercial crops (sugar accounted for 25%).<sup>7</sup> From 1921 to 1940, tobacco remained the second most important commercial crop after sugar. Tobacco cultivation was incredibly important to the rural population. In 1910, over 14% of all farms on the island reported the cultivation of tobacco leaf and by 1940, that number had increased to 30%.<sup>8</sup> In addition, the sale of unprocessed tobacco leaf and the manufacturing of tobacco products became essential to the insular government as a revenue provider, providing up to 30% of the insular state's income per year during the 1930s.<sup>9</sup>

Tobacco cultivation experienced dramatic cycles of expansion and contraction from 1910 to 1940, as the sector responded to natural, political, economic and social factors. Until 1917, tobacco cultivation grew steadily and then there was a sharp rise in production from 1918 to 1926. The number of *cuerdas* under cultivation and production

---

<sup>6</sup> José R. Corrales Corrales, "La Cámara de Comercio de Puerto Rico como factor del desarrollo económico nacional, 1913-1933" (Ph.D. diss., University of Puerto Rico, 1997), 171.

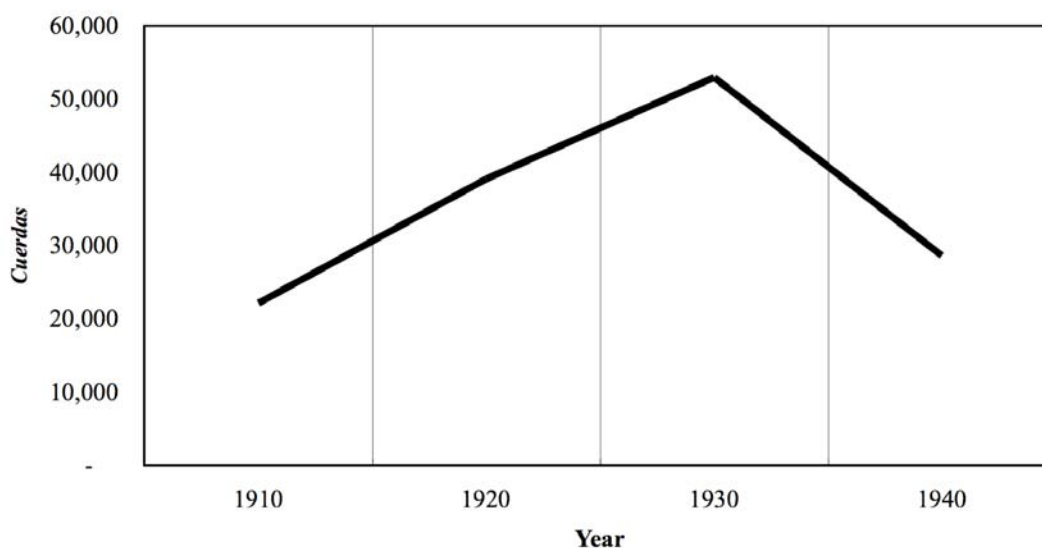
<sup>7</sup> Rafael Menéndez Ramos, Comisionado de Agricultura y Comercio, *Informe anual del Comisionado de Agricultura y Comercio correspondiente al año fiscal 1933-1934* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1934), 210.

<sup>8</sup> Bureau of the Census, *Sixteenth Census of the United States: 1940. Reports for Puerto Rico: Census of Agriculture* (Washington, D.C., 1942), 181.

<sup>9</sup> Carlos Esteva, Jr., *Annual Report of the Tobacco Institute of Puerto Rico. Fiscal years 1939-1940 and 1940-1941* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1942), 7.

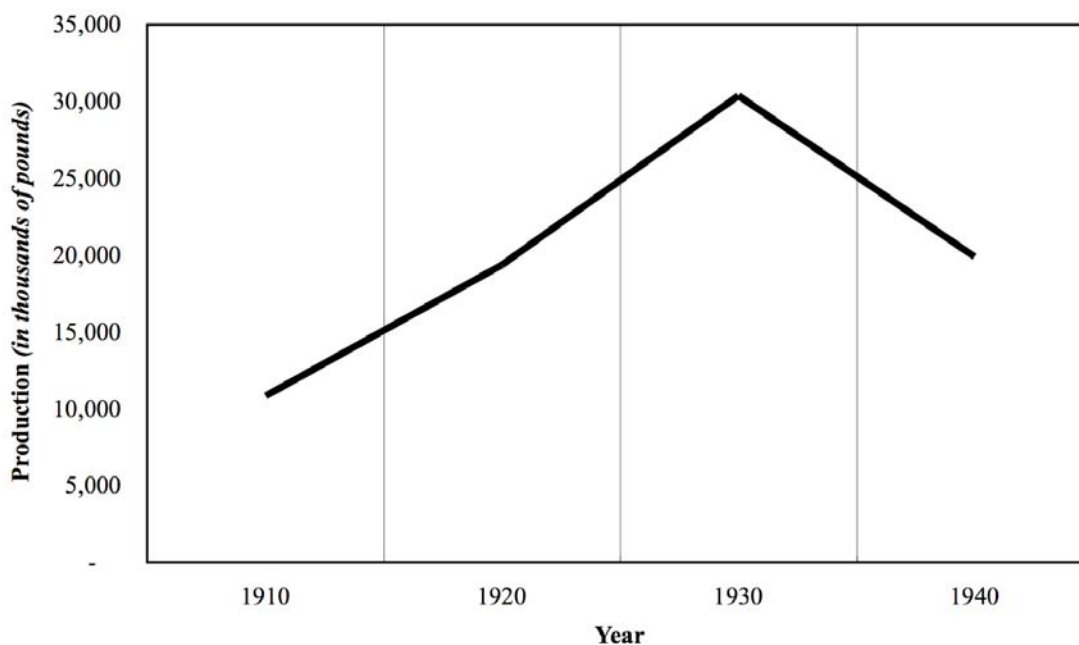
peaked in 1927, followed by a steep decline until 1932. The tobacco sector recovered slightly during the 1930s, achieving another high point in 1938, only to begin its final decline thereafter. Figures 1.1 and 1.2 illustrate the cycles of expansion and contraction by decade in the tobacco sector from 1910 to 1940, both in *cuerdas* under cultivation and in total production in pounds.

**Figure 1.1**  
**Tobacco Cultivation in *Cuerdas* by Decade in Puerto Rico, 1910-1940**



Source: Data for 1910 from Bureau of the Census, *Thirteenth Census of the United States Taken in the Year 1910. Statistics for Porto Rico, Agriculture* (Washington, D.C., 1913), 72-77 (hereafter cited as *Agriculture Census 1910*). Data for 1920 from Bureau of the Census, *Fourteenth Census of the United States Taken in the Year 1920. Volume VI, Part 3. Agriculture* (Washington, D.C., 1922), 408-415 (hereafter cited as *Agriculture Census 1920*). Data for 1930 from Bureau of the Census, *Fifteenth Census of the United States: 1930. Outlying Territories and Possessions* (Washington, D.C., 1932), 232-237. Data for 1940 from Bureau of the Census, *Sixteenth Census of the United States: 1940. Reports for Puerto Rico: Census of Agriculture*, (Washington, D.C., 1942), 60 (hereafter cited as *Agriculture Census 1940*).

**Figure 1.2**  
**Tobacco Production in Pounds by Decade in Puerto Rico, 1910-1940**



Source: Same as Figure 1.1

For the purposes of this study two general tobacco regions will be examined: the eastern highlands and the western highlands. The municipalities included in each are detailed in Table 1.1 and Map 1.1 below.<sup>10</sup>

---

<sup>10</sup> The municipalities were chosen according to census data from 1910 to 1940. These municipalities had the most *cuerdas* under cultivation and were the largest producers in pounds of tobacco. All of the maps used in this chapter only depict those municipalities on the main island; they do not depict Vieques and Culebra or the other minor isles that surround the main island.

**Table 1.1**  
**Tobacco Growing Regions in Puerto Rico, 1899-1940**

Eastern Highlands	Western Highlands
Aguas Buenas	Arecibo
Aibonito	Barceloneta
Barranquitas	Camuy
Bayamón (1)	Ciales
Caguas	Hatillo
Cayey	Isabela
Cidra	Manatí
Comerio	Morovis
Corozal	Orocovis (3)
Gurabo	Quebradillas
Humacao (2)	Utua (4)
Juncos	
Naranjito	
San Lorenzo	
Toa Alta	
Yabucoa	

*Source:* Data for 1910 from *Agriculture Census 1910*, 72-77. Data for 1920 from *Agriculture Census 1920*, 408-415. Data for 1930 from *Census 1930*, 232-237. Data for 1940 from *Agriculture Census 1940*, 60.

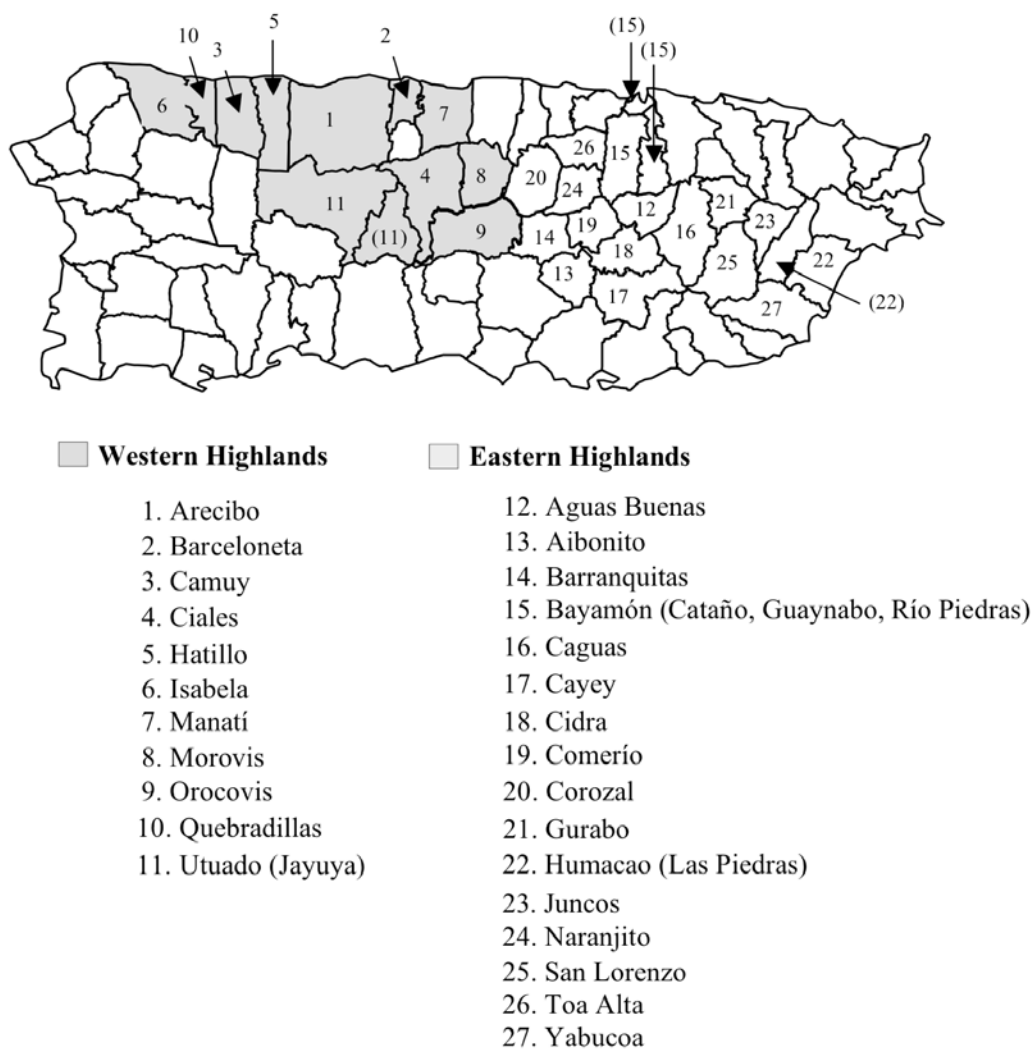
(1) Part of Bayamón was taken to form part of Guaynabo between 1910 and 1920. Part of Río Piedras was also taken to form part of Guaynabo between 1910 and 1920. Part of Bayamón was taken to form Cataño after 1920. All figures for Bayamón cited in this study will include those for Río Piedras for 1910 and those for Cataño, Guaynabo and Río Piedras from 1920-1940.

(2) Part of Humacao was taken to form Las Piedras between 1910 and 1920. All figures for Humacao cited in this study will include those of Las Piedras from 1920-1940.

(3) Orocovis was called Barros in the 1899 and 1910 census.

(4) Part of Utua was taken to form Jayuya between 1910 and 1920. All figures for Utua cited in this study will include those for Jayuya from 1920-1940.

**Map 1.1**  
**Tobacco Growing Regions in Puerto Rico, 1910-1940**



### Characteristics of Puerto Rican Tobacco

There were three types of tobacco grown in Puerto Rico, classified according to their geographic characteristics: interior, coastal, and semi-coastal.<sup>11</sup> Filler tobacco was

<sup>11</sup> Charles E. Gage, *The Tobacco Industry in Puerto Rico, United States Department of Agriculture, Circular no. 519* (Washington, D.C.: Government Printing Office, March 1939), 16. Also in Jorge Serrallés, Jr. and Martín Vélez, Jr., "Precio del tabaco en rama al agricultor en Puerto Rico del 1907-1940," *Boletín de la Estación Experimental Insular* 60, (June 1941): 2.

cultivated in the interior highlands of the island. Filler tobacco, which accounted for 95% of the total island tobacco crop, was of the Virginia No. 9 and Utuado X varieties of tobacco classified as Type 46. The characteristics of Puerto Rican tobacco made it appropriate for blending with other types of filler tobacco from the U.S. for the manufacturing of cheaper cigars. Because of the smoothness, aroma, and distinctive taste of Puerto Rican tobacco, American manufacturers compared it to Cuban tobacco. For the manufacture of higher priced cigars, Puerto Rican tobacco would be used alone or blended with Cuban filler tobacco.<sup>12</sup> Unlike Cuban tobacco, however, Puerto Rican tobacco was not subjected to a tariff when it was imported into the U.S., thereby making Puerto Rican tobacco economically advantageous to the manufacturing sector without any sacrifice in quality.

Coastal tobacco was grown on the northwestern and southeastern littorals of the island. It was not as carefully cultivated as interior tobacco, and was not considered to be of high quality. The leaf was short and heavy in taste and coastal tobacco was mostly used to produce chewing blends, since the salt from the sea made its taste unpleasant for smokers but mellow for chewers. Coastal tobacco was also used as scrap for very cheap cigars and cigarettes.<sup>13</sup>

Semi-coastal tobacco fit somewhere between interior and coastal tobacco in quality. Because it was cultivated in the island's lower altitude valleys as the terrain

---

<sup>12</sup> Ramón Colón Torres, "Financing Low Income Farmers in Puerto Rico," *Journal of Farm Economics* 34, no. 5 (December 1952): 2. Also in Gage, *Tobacco Industry*, 16.

<sup>13</sup> Gage, *Tobacco Industry*, 17.

changed from coastal plain to mountain moving inland it benefited from slightly higher elevations but was still affected by the saline coastal air.<sup>14</sup>

Shade-grown wrapper tobacco, the most exquisite and valued of the island's tobacco leaf, was produced on the island between 1902 and 1927 on lands owned by a subsidiary of the Porto Rican-American Tobacco Company in the La Plata Valley in Aibonito, Cayey and Comerío and in the lowlands around Caguas, Gurabo, and Juncos.<sup>15</sup> Wrapper tobacco was used as the outer leaf for high priced cigars. Because it was the first leaf a smoker would taste, great care was taken in its cultivation. However, the shift in consumer taste to cheaper cigars and cigarettes during the 1920s, along with the labor-intensive nature of its cultivation, eventually made production of shade-grown wrapper tobacco unprofitable for the PRATC. In 1927, its production was ended and the land on which it was grown was sold to the insular government as well as to individual farmers.

### **The Cultivation of the Tobacco Plant**

Tobacco cultivation can be separated into different and specific stages: planting and cultivation, harvesting, curing, and fermenting. The tobacco season usually began in June or July with a careful plowing of the fields. During these months tobacco farmers who tended their own seedbeds would begin the cultivation process. By early August, the land was plowed and cleaned of all weeds, rocks or other debris, and farmers would use oxen to dig ditches about 10 inches deep and 3 feet apart.<sup>16</sup> Farmers would then scatter tobacco seed by hand into the ditches and water them twice per day. Farmers who

---

<sup>14</sup> Ibid., 18.

<sup>15</sup> Ibid.

<sup>16</sup> F.H. Bunker, "El tabaco: semilleros, preparación del terreno, abonos y cultivos," *RAPR* 1, (1918): 33.

had more abundant financial resources would use cheesecloth to cover the seedbeds from pests and the weather for the first two weeks after the planting. The seeds would germinate and grow into seedlings in 35 to 40 days, but were not considered ready to transplant until after 60 to 65 days. Seedlings were then planted 32 to 48 inches apart in rows that were set 14 to 18 inches apart.<sup>17</sup> The transplanting would begin as early as the final weeks in September, although most farmers preferred to wait until the middle of October and early November, when the hurricane season was over. Once in the growing fields the tobacco plants had to be fertilized regularly, sprayed for insects, and inspected for disease, which meant the constant attention of the tobacco farmer. It would take 45 days from the transplant date for the tobacco plants to be ready for picking, a painstaking process that would occur in stages beginning with the leaves closest to the ground. The harvest would continue for another 30 days, until the plant was bare of all leaves. Usually, the harvest began anytime between December and March, depending on weather conditions and the initial planting date.<sup>18</sup> From the soil preparation for the seedbeds to the final harvest, the tobacco cultivation cycle would last from six to seven months. Farmers who planted early in the growing season often had time to plant a second crop with purchased seedlings that were ready to transplant, but because the soil was depleted of minerals after the first planting, the quality of the second crop was not as high.

After the harvest the curing of the tobacco leaf would begin. Green tobacco is between 80 and 90 percent water and the leaf must be carefully dried to bring out the correct color and flavor. The curing process, if accomplished properly, would “facilitate

---

<sup>17</sup> Gage, *Tobacco Industry*, 18-19. Tobacco farmers could also buy the young plants ready to transplant.

<sup>18</sup> *Ibid.*, 22.

those chemical changes which will produce leaf of the desired character.”<sup>19</sup> Improper curing could ruin a good leaf; therefore, curing is one of the most important post-harvest operations in the productive process. Tobacco was cured in three distinct ways: flue-cured, fire-cured, and air-cured. In the flue-curing process green tobacco was hung over metal flues or ducts and cured by heating up to 180° F. Fire-cured tobacco was hung to dry over a smoldering fire. Air-cured tobacco was cured in tobacco barns that had controlled ventilation, where the natural evaporation process cured the tobacco.

Secondary heat usually played no role, although it may have been used to control humidity on occasion.<sup>20</sup> In Puerto Rico, most of the tobacco was air-cured, since this required the least amount of capital investment. Some farmers were financially able to cure their own tobacco, but most took their leaf to curing barns owned by local merchants, tobacco corporations, or cooperative associations. Curing barns were usually constructed of a simple wooden frame with walls made of palm thatch or cane leaves and a zinc roof, and were up to 40 feet long.<sup>21</sup> The curing process took from 33 to 40 days and was highly sensitive to weather changes, ventilation problems, and the overcrowding of leaf. If there was too much rain the leaf would not dry properly; too little and it would dry too quickly. If there was too much air circulation the complexities of the flavor would not fully develop; too little and the leaf could become moldy. Too much tobacco hanging from the curing barn would result in overcrowding and ventilation became harder to control, which could lead to moldy leaf.

---

<sup>19</sup> John Fraser Hart and Eugene Cotton Mather, “The Character of Tobacco Barns and Their Role in the Tobacco Economy of the United States,” *Annals of the Association of American Geographers* 51, no.3 (September 1961): 275.

<sup>20</sup> *Ibid.*, 276-277.

<sup>21</sup> Gage, *Tobacco Industry*, 23.

The high risk of damaging good tobacco leaf was a constant concern for tobacco farmers. Accordingly, the Agricultural Experimental Station in Caguas, an insular agricultural scientific institution affiliated with the University of Puerto Rico and which had a tobacco specialist on staff, developed several flue-curing projects as alternatives to air-curing during the 1920s. Although experiments were successful, they required a larger capital investment that most tobacco farmers could not afford and therefore took over a decade to implement. Flue-curing became more important in the decade of the 1930s when consumer preference shifted to cigarettes because half of the tobacco used in cigarettes was of the flue-cured variety.<sup>22</sup> Many tobacco farmers in Caguas, Cayey, Aibonito and Comerío had adopted flue-curing and were able to meet the demand for this type of tobacco.<sup>23</sup>

Most Puerto Rican tobacco farmers did not have the financial means to build curing barns. On average, one barn was needed for every 3 acres of tobacco grown. As a result, farmers depended on arrangements with other farmers or with *refaccionistas*, tobacco corporations, or cooperative associations who owned curing ranches, to prepare their crop for sale.<sup>24</sup> One of the common problems Puerto Rican tobacco farmers faced was that there were not enough curing ranches to accommodate all of the tobacco grown on the island in any given year. This meant that many planters were forced to let the harvested leaf lie in the field until a particular ranch had room for their crop. Delaying the curing and leaving the tobacco in the field where it was susceptible to weather

---

<sup>22</sup> Hart and Mather, "Tobacco Barns," 290.

<sup>23</sup> Gage, *Tobacco Industry*, 22.

<sup>24</sup> Carlos Chardón, Commissioner of Agriculture and Labor, *Annual Report of the Commissioner of Agriculture and Labor Submitted to the Governor of Porto Rico, 1924-25* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1926), 21.

conditions and insects could negatively impact the final quality of the leaf.<sup>25</sup> A related problem was overcrowding once the tobacco was hung for curing, which could result in damp and moldy tobacco. Both of these situations affected the price a farmer received for his product.

Once farmers finished the curing process, they would deliver the tobacco to a warehouse designated by a lender, or to a leaf dealer or a tobacco corporation, where the tobacco leaf would be fermented. It was then classified into grades, fermented, and once again graded and classified. Although there was no standard system for Puerto Rican tobacco, it was generally classified as detailed in Table 1.2 below.

**Table 1.2**  
**Classification System for Puerto Rican Tobacco**

Type of Tobacco Leaf	Characteristics
<b>Stalk-cut Tobacco</b>	
Manojo 1 and 2	Heavy leaf; either first or second quality; 50% of tobacco plant.
Tripas	Thin leaf; short inferior leaves that can be stripped; sometimes called Manojo 3; 30% of tobacco plant.
Boliches	Low-grade leaf; lugs and all second cuttings; leaves that cannot be stripped; 20% of tobacco plant.
<b>Primed Tobacco</b>	
Medios	Middles; could be further classified as Superior or Finos Inferiores.
Coronas	Tops; could be further classified as Superiores or Inferiores.
Pie	Foot; could be further classified as Superiores, Inferiores or Boliches.
<b>Rezagos</b>	Throw-outs from different grades.
<b>Sentidos</b>	Leaves that have been injured in the harvesting or processing.
<b>Picadura</b>	Scraps.

*Source: Gage, Tobacco Industry, 23-24.*

<sup>25</sup> R.T. Cotton, "Report on Tobacco and Vegetable Insects," in Board of Commissioners of Agriculture, *Fifth Report of the Board of Commissioners of Agriculture for the period from July 1, 1915 to July 1, 1916* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1917), 86.

Fermentation was the process whereby the temperature of the tobacco leaves would be manipulated to eliminate their natural greenish tint and to produce leaf with a uniformly brown color. To do this, tobacco leaves were packed into *estibas* (bundles) of 50 to 60 *quintales*. A small card, much like an index card today, was attached to each *estiba* to record the daily temperature inside the bundle. The core temperature of a newly formed *estiba* of tobacco would rise to 126 degrees Fahrenheit in a period of four to five days. When that occurred the *estiba* would be untied, torn down, and remade with the previous inside tobacco placed on the outside, and the top and bottom layers placed in the center. The *estiba* would be heated, unpacked and repacked another four or five times until the core temperature became stable between 118 to 122 degrees Fahrenheit.<sup>26</sup> After the tobacco leaf was fermented, it was again classified into grades using the same accepted standards as detailed in Table 1.2. Then it was sold to local, U.S.-based, or international buyers.

### **Tobacco Cultivation in Puerto Rico, 1910-1940**

Tobacco cultivation in Puerto Rico experienced dramatic cycles of expansion and contraction from 1910 to 1940. The number of total *cuerdas* under cultivation and the total production of tobacco leaf in pounds increased overall from 1910 until 1927, with yearly fluctuations. After 1927, both began a series of highs and lows characterized by an overall downward trend until 1940.<sup>27</sup> Land under tobacco cultivation increased from

---

<sup>26</sup> Ibid., 26.

<sup>27</sup> Rojas, *Plan to Stabilize Tobacco*, 4. The political, economic and natural forces that affected the cultivation cycles of growth and contraction will be discussed throughout this chapter.

over 22,000 *cuerdas* in 1910 to over 34,000 in 1917. A year later, an astounding 51,000 *cuerdas* were planted in tobacco throughout the island, an overall increase from 1910 of 132%. The largest number of *cuerdas* ever prepared for a growing season was 81,900 *cuerdas* planted in 1927, and the lowest number was in 1932, when only a little over 10,000 *cuerdas* were planted. After the peak of 1927, the number of *cuerdas* under cultivation fluctuated yearly until 1940 with an overall downward trend. The details of tobacco cultivation in *cuerdas* planted are indicated in Table 1.3 and Figure 1.3.

Production of tobacco leaf in pounds followed a similar pattern. Production increased 35% from 1910 to 1917 with slight yearly fluctuations. The number of pounds produced from a harvest peaked in 1927 at 50 million pounds, with the second most productive year occurring in 1938 when the island tobacco harvest was slightly over 44 million pounds. The least productive year was 1932 with 6 million pounds of tobacco produced on the island. After the peak of 1938, tobacco production rapidly declined until 1940 to levels below those prevalent in 1917, and it never recuperated thereafter. The details of tobacco production are indicated in Table 1.3 and Figure 1.4.

**Table 1.3**  
**Tobacco Cultivation in *Cuerdas* and Production**  
**in Pounds in Puerto Rico, 1910-1940**

Year	<i>Cuerdas</i>	Production
1910	22,143	10,828,000
1912	18,000	12,800,000
1913	23,000	15,000,000
1914	18,000	13,000,000
1915	17,000	12,000,000
1917	34,540	25,410,000
1918	51,444	25,772,000
1919	39,067	19,363,000
1920	42,232	25,339,000
1921	40,000	25,000,000
1922	35,000	22,500,000
1923	41,500	26,000,000
1924	40,000	25,000,000
1925	34,023	23,000,000
1926	58,000	36,000,000
1927	81,900	50,000,000
1928	40,345	27,000,000
1929	39,075	28,000,000
1930	43,312	32,500,000
1931	50,000	37,300,000
1932	10,079	6,000,000
1933	25,300	16,783,000
1934	45,500	25,000,000
1935	38,000	22,500,000
1936	43,809	26,000,000
1937	50,000	34,983,000
1938	63,000	44,069,000
1939	18,688	13,825,000
1940	33,265	21,713,000

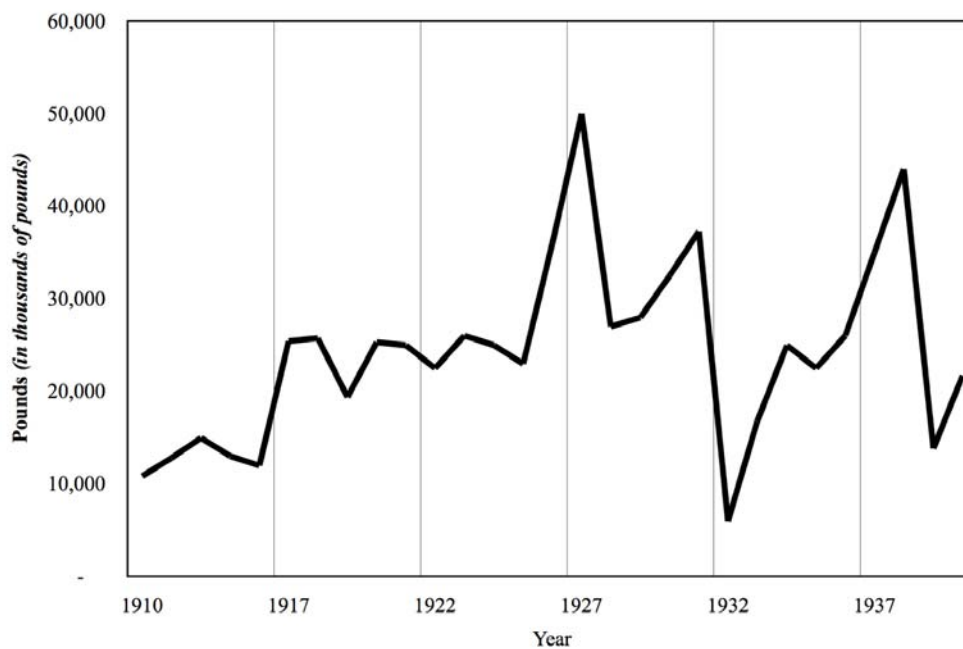
*Source:* Serrallés and Vélez, "Precio," 7.

**Figure 1.3**  
**Tobacco Cultivation in Puerto Rico, 1910-1940**



Source: Same as Table 1.3.

**Figure 1.4**  
**Tobacco Production in Puerto Rico, 1910-1940**



Source: Same as Table 1.3.

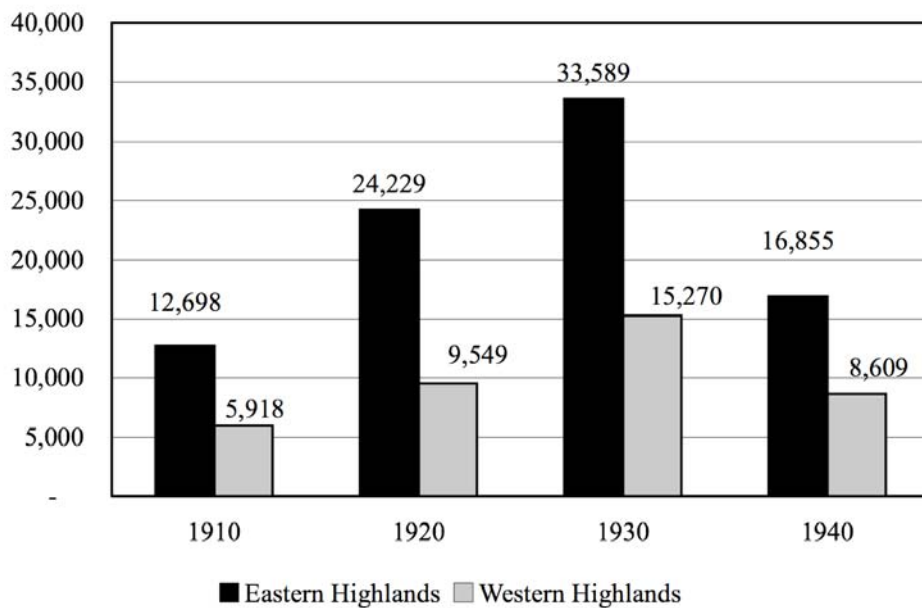
Although tobacco was cultivated in almost every municipality in Puerto Rico, the tobacco regions defined previously were responsible for the greatest portion of cultivation and production. From 1910 to 1940, over 61% of land planted in tobacco and 65% of the total production of the island was found in the eastern highland region. The western highland region accounted for 28% of tobacco *cuerdas* on the island and 26% of tobacco leaf. In total, the tobacco regions in the eastern and western highlands of the island cultivated 89% of all tobacco *cuerdas* and produced 91% of all tobacco leaf in Puerto Rico from 1910 to 1940. Table 1.4 and Figures 1.5 and 1.6 below detail the number of *cuerdas* planted in tobacco and production in the tobacco regions. Table 1.5 indicates the percentage of tobacco cultivation and production in the eastern and western highlands.

**Table 1.4**  
**Tobacco Cultivation by Region, 1910-1940**

Year	Eastern Highlands		Western Highlands	
	<i>Cuerdas</i>	Production (in pounds)	<i>Cuerdas</i>	Production (in pounds)
<b>1910</b>	12,698	6,124,120	5,918	3,247,150
<b>1920</b>	24,229	13,612,444	9,549	3,586,263
<b>1930</b>	33,589	19,787,707	15,270	8,707,356
<b>1940</b>	16,855	12,598,524	8,609	5,581,590
<b>Total</b>	87,371	52,122,795	39,346	21,122,359

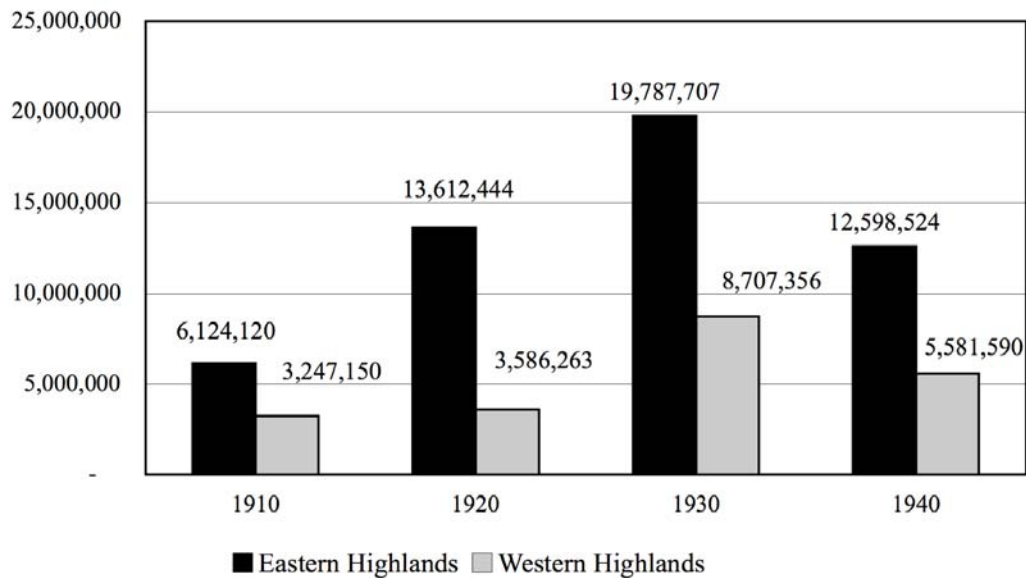
*Source:* Data for 1910 from *Agriculture Census 1910*, 72-77; for 1920 from *Agriculture Census 1920*, 408-415; for 1930 from *Census 1930*, 232-237; for 1940 from *Agriculture Census 1940*, 60.

**Figure 1.5**  
**Tobacco Cultivation in Cuerdas in Tobacco Regions, 1910-1940**



Source: Same as Table 1.4.

**Figure 1.6**  
**Tobacco Production in Pounds in Tobacco Regions, 1910-1940**



Source: Same as Table 1.4.

**Table 1.5**  
**Percentage of Tobacco Cultivation by Region, 1910-1940**

Year	<i>Cuerdas</i>			Production		
	Eastern Highlands	Western Highlands	Total	Eastern Highlands	Western Highlands	Total
1910	57.4%	26.7%	84.1%	56.6%	30.0%	86.6%
1920	62.0%	24.4%	86.5%	70.3%	18.5%	88.8%
1930	63.4%	28.8%	92.3%	65.2%	28.7%	93.9%
1940	58.9%	30.1%	89.1%	63.4%	28.1%	91.4%

*Source:* Same as Table 1.4.

Most of the leaf tobacco produced on the island was exported to the United States for manufacturing into cigars and cigarettes in American factories. The finished product would then be re-exported around the world. Export figures from 1900 through 1902 indicate that tobacco leaf exports from Puerto Rico to the United States averaged 664,000 pounds. In 1903 exports increased by more than 300% to reach almost 2.4 million pounds. From that year until 1917, there was a slow and steady increase in the volume of leaf exported to the United States. It was the opening of markets in Europe after the end of World War I that resulted in a sharp rise in demand for tobacco from the Americas. From 1917 to 1918, tobacco exports from Puerto Rico to the U.S. increased by 85% in volume and by 134% in value. (See Table 1.6 and Figure 1.7.)

Rising demand resulted in increased prices, which fueled tobacco market expansion after the First World War. From an average price of 31 cents per pound from 1900 to 1917, prices paid for Puerto Rican tobacco increased to 52 cents per pound in

1918 and 1919 and to 65 cents per pound in 1920.<sup>28</sup> A year later, in 1921, because of a reduced crop, tobacco sold for an average of 93 cents per pound, the highest export price ever paid for Puerto Rican tobacco. (See Table 1.6 and Figure 1.7.) Tobacco cultivation expanded to such a great extent by the early 1920s that 20% of the total Puerto Rican work force was involved in its cultivation.<sup>29</sup>

---

<sup>28</sup> Manuel Camuñas, Commissioner of Agriculture and Labor, *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1921. From the Report of the Governor of Porto Rico, 1921, pages 448-503 inclusive* (Washington, D.C.: Government Printing Office, 1921), 448. Also in Serrallés and Vélez, “Precio,” 37.

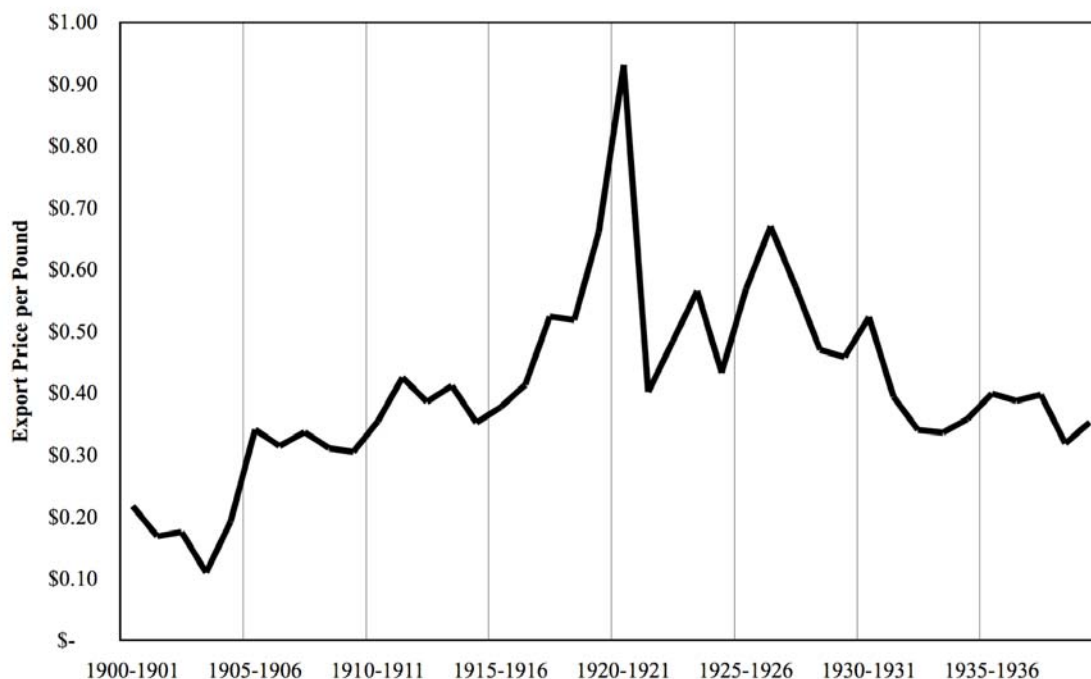
<sup>29</sup> Corrales Corrales, “Cámara,” 173.

**Table 1.6**  
**Exports of Leaf Tobacco from Puerto Rico to the United States, 1900-1940**

Year	Quantity ( <i>in pounds</i> )	Value	Price per Pound
1900-1901	557,000	\$121,000	\$0.22
1901-1902	666,000	\$112,000	\$0.17
1902-1903	770,000	\$135,000	\$0.18
1903-1904	2,386,000	\$261,000	\$0.11
1904-1905	2,196,000	\$422,000	\$0.19
1905-1906	1,397,000	\$477,000	\$0.34
1906-1907	3,681,000	\$1,157,000	\$0.31
1907-1908	4,979,000	\$1,678,000	\$0.34
1908-1909	3,868,000	\$1,202,000	\$0.31
1909-1910	4,120,000	\$1,255,000	\$0.30
1910-1911	4,362,000	\$1,547,000	\$0.35
1911-1912	5,457,000	\$2,320,000	\$0.43
1912-1913	8,150,000	\$3,148,000	\$0.39
1913-1914	7,534,000	\$3,104,000	\$0.41
1914-1915	9,052,000	\$3,187,000	\$0.35
1915-1916	8,021,000	\$3,026,000	\$0.38
1916-1917	9,256,000	\$3,829,000	\$0.41
1917-1918	17,114,000	\$8,968,000	\$0.52
1918-1919	15,664,000	\$8,111,000	\$0.52
1919-1920	20,173,000	\$13,318,000	\$0.66
1920-1921	14,564,000	\$13,552,000	\$0.93
1921-1922	22,370,000	\$8,994,000	\$0.40
1922-1923	19,574,000	\$9,459,000	\$0.48
1923-1924	23,298,000	\$13,170,000	\$0.57
1924-1925	22,721,000	\$9,838,000	\$0.43
1925-1926	24,521,000	\$13,945,000	\$0.57
1926-1927	30,730,000	\$20,580,000	\$0.67
1927-1928	29,807,000	\$17,062,000	\$0.57
1928-1929	27,410,000	\$12,881,000	\$0.47
1929-1930	26,014,000	\$11,914,000	\$0.46
1930-1931	25,180,000	\$13,165,000	\$0.52
1931-1932	17,035,000	\$6,714,000	\$0.39
1932-1933	12,928,000	\$4,403,000	\$0.34
1933-1934	18,846,000	\$6,329,000	\$0.34
1934-1935	19,974,000	\$7,146,000	\$0.36
1935-1936	23,157,000	\$9,254,000	\$0.40
1936-1937	23,581,000	\$9,135,000	\$0.39
1937-1938	20,699,000	\$8,239,000	\$0.40
1938-1939	23,208,000	\$7,398,000	\$0.32
1939-1940	17,087,000	\$6,029,000	\$0.35

*Source:* United States Department of Labor, Age and Hour Division, Research and Statistics Branch, *Puerto Rico: The Leaf Tobacco Industry* (Washington, D.C.: Government Printing Office, 1941), 4.

Figure 1.7  
Export Price Per Pound of Tobacco Leaf, 1900-1940

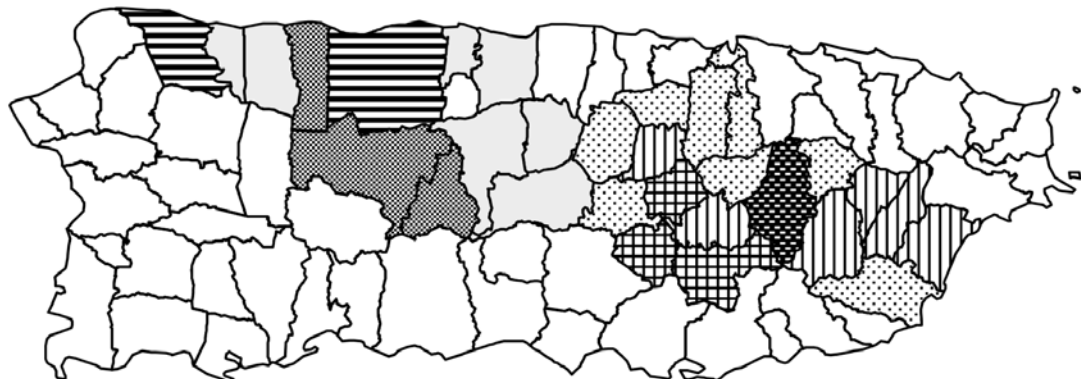


Source: Same as Table 1.6.

A closer look at the rate of growth in the tobacco regions illustrates the rapid expansion of the tobacco sector from 1910-1920. Between 1910 and 1920, the number of *cuerdas* under tobacco cultivation increased by 90% in the eastern highlands, a yearly rate of increase of 6.7%. In the western highlands, *cuerdas* under cultivation increased 5% per year for a 61% percent increase over the decade. Total production also increased dramatically in the eastern highlands by 122%, a rate of 6% per year between 1910 and 1920. The western highlands reported an increase of only 10% in total production and the yearly rate of growth for the region was almost 1%.<sup>30</sup> (See Maps 1.2 through 1.5.)

<sup>30</sup> Data for 1910 from *Agriculture Census 1910*, 72-77; for 1920 from *Agriculture Census 1920*, 408-415; for 1930 from *Census 1930*, 232-237; for 1940 from *Agriculture Census 1940*, 60.

**Map 1.2**  
**Tobacco Cultivation in Puerto Rico in 1910**  
*in cuerdas*



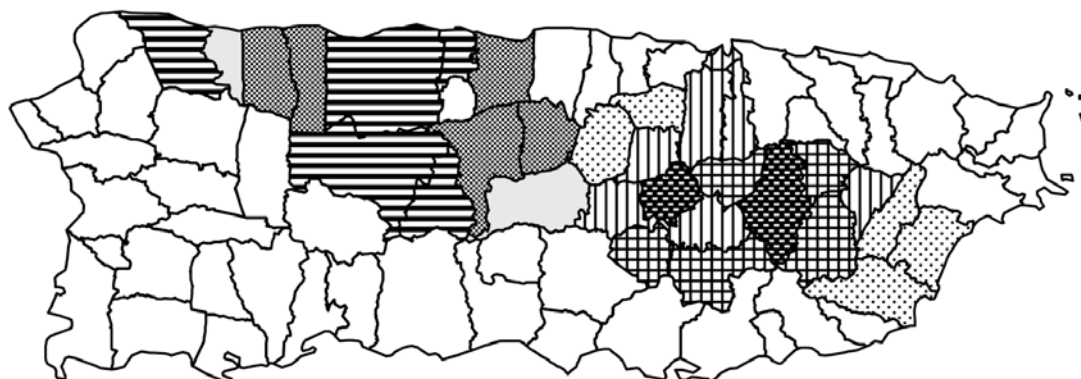
**Western Highlands**

- 0-500 cuerdas
- ▨ 501-1,000 cuerdas
- ▧ 1,001-3,000 cuerdas
- Over 3,001 cuerdas

**Eastern Highlands**

- ▩ 0-500 cuerdas
- ▨ 501-1,000 cuerdas
- ▧ 1,001-3,000 cuerdas
- Over 3,001 cuerdas

**Map 1.3**  
**Tobacco Cultivation in Puerto Rico in 1920**  
*in cuerdas*



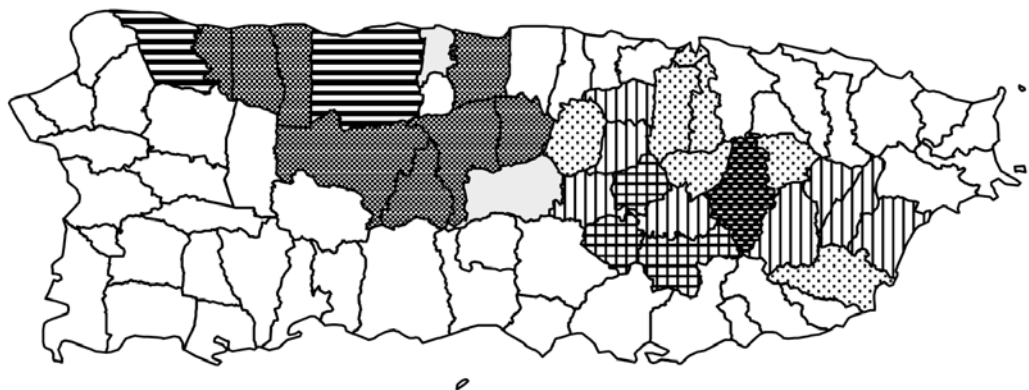
**Western Highlands**

- 0-500 cuerdas
- ▨ 501-1,000 cuerdas
- ▧ 1,001-3,000 cuerdas
- Over 3,001 cuerdas

**Eastern Highlands**

- ▤ 0-500 cuerdas
- ▨ 501-1,000 cuerdas
- ▧ 1,001-3,000 cuerdas
- Over 3,001 cuerdas

**Map 1.4**  
**Tobacco Production in Puerto Rico in 1910**  
*(in pounds)*



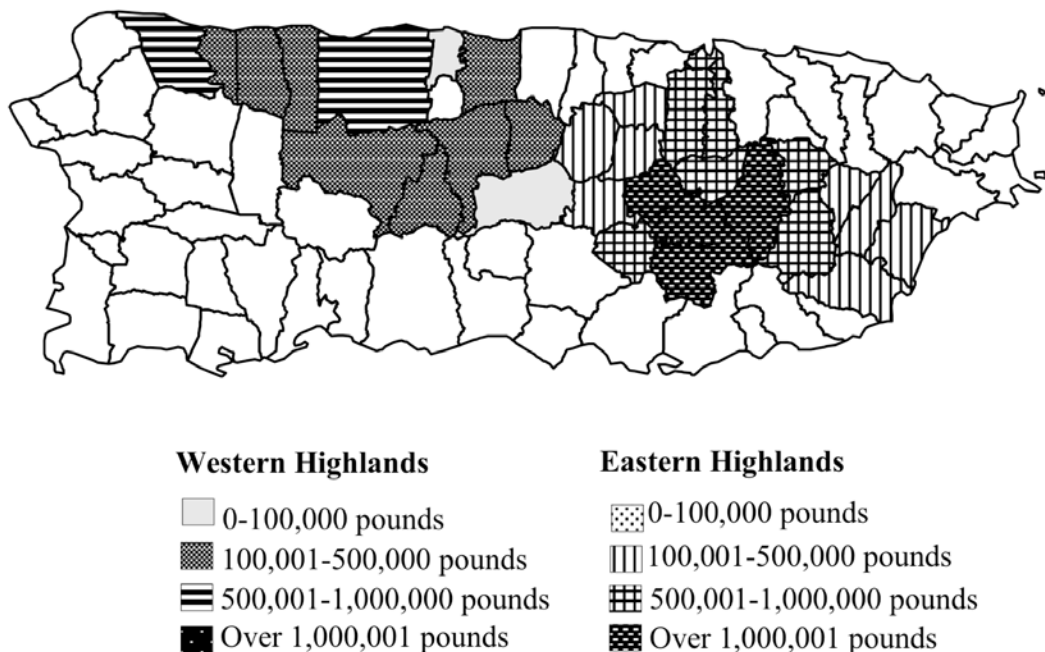
**Western Highlands**

- 0-100,000 pounds
- ▨ 100,001-500,000 pounds
- ▧ 500,001-1,000,000 pounds
- Over 1,000,000 pounds

**Eastern Highlands**

- ▩ 0-100,000 pounds
- ▧ 100,001-500,000 pounds
- ▨ 500,001-1,000,000 pounds
- Over 1,000,000 pounds

**Map 1.5**  
**Tobacco Production in Puerto Rico in 1920**  
*(in pounds)*



Tobacco cultivation in the eastern highlands expanded at a higher rate than in the western highlands from 1910-1920 for several reasons. First, the eastern highlands became the center of the island's tobacco cultivation because of favorable soil and climatic conditions. Additionally, the municipalities in the region benefited from better institutional and non-institutional credit structures, as well as extensive involvement of agricultural scientists testing the latest technologies in tobacco cultivation.<sup>31</sup> Second, the eastern highlands cultivated the tobacco that was most in demand, Type 46, used alone or blended for cigar filler.

<sup>31</sup> Scientific research was being conducted by the Agricultural Experiment Station out of the experimental farm in the eastern highland municipality of Caguas. Details about the science of tobacco are in Chapter 5. For a detailed discussion of the credit structure, see Chapter 3.

The tobacco market in Puerto Rico responded to economic, political and natural forces that affected the number of *cuerdas* under cultivation, total production, and the prices paid for tobacco leaf. From 1920 to 1935, the tobacco market in Puerto Rico had to contend with major hurricanes that caused devastation in tobacco plantations, shifting consumer preferences, and a worldwide economic depression after 1929.

In July 1926, the western-central portion of Puerto Rico was devastated by hurricane San Liborio. Damages were calculated at over two million dollars and the greatest losses were reported among coffee and tobacco plantations. Many tobacco ranches, used for the drying and curing of tobacco leaf, were destroyed: 300 in Aibonito, half of all ranches in Orocovis, all ranches in Guayama, 50 in Jayuya, and 34 in Caguas.<sup>32</sup> Because the hurricane occurred in July, when the crop had been harvested and was in the barns for curing, farmers suffered terrible losses. Throughout the tobacco regions, 65% of all tobacco curing barns were destroyed by San Liborio.<sup>33</sup> It was estimated that the tobacco crop for 1926 would be 30% lower than the previous year. Reports made by tobacco farmers across the region are evidence of the severity of the situation. Feliz Jiménez, a tobacco grower from Aibonito, lost 7 ranches and calculated that his available crop would be reduced by 40%. Nicolas Ortiz Lebrón expected a reduction in his crop of 35% and Anastasio Noriega expected 50% less tobacco from his farm, although they both planned to rebuild some of their lost ranches immediately.<sup>34</sup>

---

<sup>32</sup> “300 ranchos de tabaco destruidos,” *El agricultor puertorriqueño* 2, no. 4 (July 31, 1926): 5 (hereafter cited as *EAP*). Also in “Pérdidas,” *EAP* 2, no. 5 (August 7, 1926): 3, 7, 17.

<sup>33</sup> “La cosecha de tabaco será grandemente reducida. La caída de los ranchos,” *EAP* 2, no. 7 (August 21, 1926): 6. Farmers in Comerío, for example, reported up to \$60,000 in losses and those in Barranquitas, \$26,000. See “Pérdidas,” 7.

<sup>34</sup> “Cosecha de tabaco,” 6.

In preparation for the 1926 harvest, farmers had increased the number of *cuerdas* they planted in tobacco, partly due to reports that tobacco supplies from other parts of the world would be limited and of inferior quality.<sup>35</sup> Because acreage had been expanded to 58,000 *cuerdas* for 1926 (from 34,023 for the 1925 crop year), the total crop, even after San Liborio, still amounted to over 36 million pounds. The ability of Puerto Rican tobacco farmers to adjust cultivation to forecasted market conditions is remarkable and suggests constant access to information regarding the worldwide tobacco market. A reduction in available tobacco on the island after the hurricane, together with correct predictions of a reduction in tobacco stock from around the world, resulted in a 34% increase in prices paid to farmers (38.17 cents per pound) over the previous year. For the 1927 crop year, therefore, farmers once again increased the acreage planted to further take advantage of the strong demand for Puerto Rican tobacco.

There were reports that the tobacco harvest in Santo Domingo would be “considerably reduced,” from 50 million pounds in 1926 to an expected 15 to 20 million pounds in 1927, due to heavy rains followed by an extended drought.<sup>36</sup> Low prices and low demand were also projected for tobacco from the Philippines. Plantings in the United States were reportedly 4% lower than the previous year, and the Cuban harvest suffered from both the fury of a tropical storm and a drought.<sup>37</sup> Farmers in Puerto Rico, therefore, increased their plantings with the assumption that they were fulfilling a need that other countries would not be able to meet. In fact, the tobacco sector was so

---

<sup>35</sup> “Tabaco,” *EAP* 1, no. 7 (January 23, 1926): 16.

<sup>36</sup> “El tabaco en Santo Domingo,” *EAP* 2, no. 12 (September 25, 1926): 16.

<sup>37</sup> “Perspectiva del mercado tabacalero,” *EAP* 3, no. 3 (February 15, 1927): 1.

optimistic in their outlook for the 1927 market, that *refaccionistas* (local financiers) willingly increased the amount of money available for production credit.<sup>38</sup>

Tobacco farmers increased the total acreage under cultivation in 1927 to 81,900 cuerdas, a rise of 41% from the previous year. Production totaled in excess of 50 million pounds, an increase of 39% over 1926.<sup>39</sup> Tobacco reductions in other countries were not as low as had been expected and the market could not absorb such an enormous increase in supply from Puerto Rico. Prices paid to tobacco farmers dropped dramatically to 19.84 cents per pound, a decrease of 48%, making the 1927 crop a disastrous one for tobacco farmers across the island.<sup>40</sup> As noted in a government report, tobacco farmers “have not recuperated from the recent disaster of 50 million pounds.”<sup>41</sup>

The difficulties of 1927 were aggravated by hurricane San Felipe II, which swept through the island on September of 1928 resulting in financial losses calculated at one hundred million dollars.<sup>42</sup> In the tobacco regions, newly planted seedbeds and curing ranches were destroyed and manufacturing factories were damaged as a result of the storm. Table 1.7 below indicates data from damage reports submitted by some

---

<sup>38</sup> “Tabaco,” *EAP* 2, no. 22 (December 11, 1926): 13. For a detailed discussion of production credit for tobacco cultivation, see Chapter 3.

<sup>39</sup> Serrallés and Vélez, “Precio,” 7.

<sup>40</sup> Ibid. Carlos Chardón also commented on the “fever” that had gripped tobacco farmers in 1927 and the resulting saturation of the tobacco market in Comisionado de Agricultura y Trabajo, *Informe del Comisionado de Agricultura y Trabajo al Honorable Gobernador de Puerto Rico, 1927* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1928), 58.

<sup>41</sup> Carlos Chardón, Comisionado de Agricultura y Trabajo, *Informe del Comisionado de Agricultura y Trabajo al Honorable Gobernador de Puerto Rico, 1928* (San Juan: Negociado de Materiales, Imprenta y Transporte, 1929), 5. Also in “La producción agrícola de la Isla en el año fiscal último,” *EAP* 7, no. 9 (May 15, 1929): 28.

<sup>42</sup> “Los primeros cálculos de las pérdidas,” *EAP* 6, no. 5 (September 15, 1928): 4, 19.

municipalities. In total, 6,316 tobacco ranches were destroyed at a loss of over 1.4 million dollars, and 25% of seedbeds throughout the island were completely lost.<sup>43</sup>

**Table 1.7**  
**Sample Reports of Losses from Tobacco Farmers after Hurricane San Felipe II in 1928.**

Municipality	Percentage of Seedbeds Destroyed	Percentage of Ranches Destroyed
Barranquitas	50%	100%
Cabo Rojo	75%	
Coamo	75%	95%
Dorado	100%	100%
Manatí		50%
Moca		50%
Naguabo	100%	100%
Villalba	100%	60%

*Source:* “Estimados preliminares de las pérdidas sufridas por motivo del temporal,” *EAP* 6, no. 6 (September 30, 1928): 13-15.

Damages to the tobacco crop due to San Felipe II resulted in an increase of 20% in the price paid to farmers for the 1928 harvest. This slight recovery was quickly annulled by the stock market crash in the United States in October of 1929 that once again reduced the farm price of tobacco to 19.18 cents per pound. In September 1932, Puerto Rico would be hit by the most devastating hurricane of the century, San Ciprián. Over 3,000 people were injured by the storm across the island and more than 400,000 lost their homes. Property damages alone were calculated at over 40 million dollars.<sup>44</sup> The tobacco sector was once again devastated. A government worker in Caguas sent to survey the damage done by San Ciprián, commented: “All of the tobacco ranches that

<sup>43</sup> “Se solicita ayuda para los Tabacaleros,” *EAP* 7, no. 2 (January 31, 1929): 6. Also in Carlos Chardón, Commissioner of Agriculture and Labor, *Annual Report of the Commissioner of Agriculture and Labor Submitted to the Governor of Porto Rico, 1928-29* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1930), 632.

<sup>44</sup> “Ante el desastre,” *EAP* 12, no. 18 (October 15, 1932): cover page.

this agent has seen, and all others that he has received information about, have been completely destroyed... This agent knows of 3 tobacco seedbeds that were completely destroyed. He has been informed that in another two *barrios*, all seedbeds were also destroyed.”<sup>45</sup> The effects of the storm were acknowledged by Rafael Menéndez Ramos, the Commissioner of Agriculture and Commerce at the time: “Farmers are mentally depressed because of the losses... Tobacco farmers lost one million dollars in ranches and equipment during the hurricane.”<sup>46</sup>

Puerto Rican tobacco was affected by an enormous crop that caused a glut of product on the market, three catastrophic hurricanes in 6 years, and a worldwide economic depression. At the same time smoking preferences had shifted considerably and permanently beginning in the 1920s from heavy, large, and expensive cigars to lighter, smaller, and cheaper cigars and cigarettes. Consumption of more expensive cigars in the United States fell from 80 per person in 1920 to 42 per person in 1939, a decline of 48%. Demand for cigars priced over 5 cents, which accounted for 62% of the total of manufactured cigars in Puerto Rico between 1920 and 1925, fell to 11% of the total between 1935 and 1939.<sup>47</sup> Conversely, the sales of cheap cigars (5 cents or less) accounted for less than 25% of all sales from 1920-1925, but increased to more than 80%

---

<sup>45</sup> “Informe preliminar del ciclón de 27 de septiembre de 1932 San Ciprián;” Sección: Secretaría, Subsección: Beneficiencia; Serie: Expedientes y Documentos, Subserie: Huracanes; Años: 1819-1932; Caja #13, Sobre: 1932 B; Archivo Histórico Municipal de Caguas.

<sup>46</sup> Rafael Menéndez Ramos, Comisionado de Agricultura y Comercio, *Informe Anual del Comisionado de Agricultura y Comercio correspondiente al año fiscal 1932-1933* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1933): 16.

<sup>47</sup> Serrallés and Vélez, “Precio,” 32-33.

of all cigar sales by 1940.<sup>48</sup> The result was that the same well-regarded Puerto Rican tobacco that had been used for cigars priced between 8 and 15 cents each, began to be used in cheaper cigars priced at 5 cents or less.<sup>49</sup> (See Tables 1.8 and 1.9 and Figure 1.8.) The decline in sales of more expensive cigars is also reflected in the reduction of cigars exported to the United States from Puerto Rico, a 64% decrease from 1929 to 1935. For tobacco farmers, these changes resulted in a significant drop in the price received for their product. Farmers were paid an average of 27 cents per pound for their tobacco from 1920 to 1929 and only an average of 15 cents per pound from 1930 to 1939, a decrease of 43%.<sup>50</sup>

---

<sup>48</sup> Esteva, *Tobacco Institute, 1939-40 and 1940-41*, 5. Also in E.B. Hill and Sol L. Descartes, "An Economic Background for Agricultural Research in Puerto Rico," *Bulletin of the Agricultural Experiment Station* 51 (December 1939): 31.

<sup>49</sup> Gobierno de Puerto Rico, Junta de Salario Mínimo, División de Investigaciones y Estadísticas, *La industria del tabaco en rama* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1942), 48.

<sup>50</sup> Serrallés and Vélez, "Precio," 5.

**Table 1.8**  
**Number of Puerto Rican Cigars According to Class for the U.S., 1920-1935**

<b>Year</b>	<b>Class A</b>	<b>Class B</b>	<b>Classes C, D, and E</b>	<b>Total</b>
	<i>no more than 5 cents each</i>	<i>5 to 8 cents each</i>	<i>more than 8 cents each</i>	
1920	58,134,000	7,410,000	81,243,000	146,787,000
1921	51,533,000	7,583,000	65,406,000	124,522,000
1922	100,904,000	15,020,000	52,655,000	168,579,000
1923	91,411,000	13,176,000	35,550,000	140,137,000
1924	122,560,000	15,681,000	48,310,000	186,551,000
1925	141,810,000	11,483,000	50,459,000	203,752,000
1926	109,508,000	8,826,000	30,136,000	148,470,000
1927	116,209,000	4,033,000	20,405,000	140,647,000
1928	119,967,000	7,020,000	20,267,000	147,254,000
1929	122,503,000	3,876,000	14,305,000	140,684,000
1930	148,243,000	3,022,000	8,985,000	160,250,000
1931	92,467,000	828,000	4,612,000	97,907,000
1932	58,709,000	1,046,000	1,036,000	60,791,000
1933	57,565,000	2,781,000	958,000	61,304,000
1934	56,504,000	2,006,000	665,000	59,175,000
1935	49,343,000	1,369,000	599,000	51,311,000

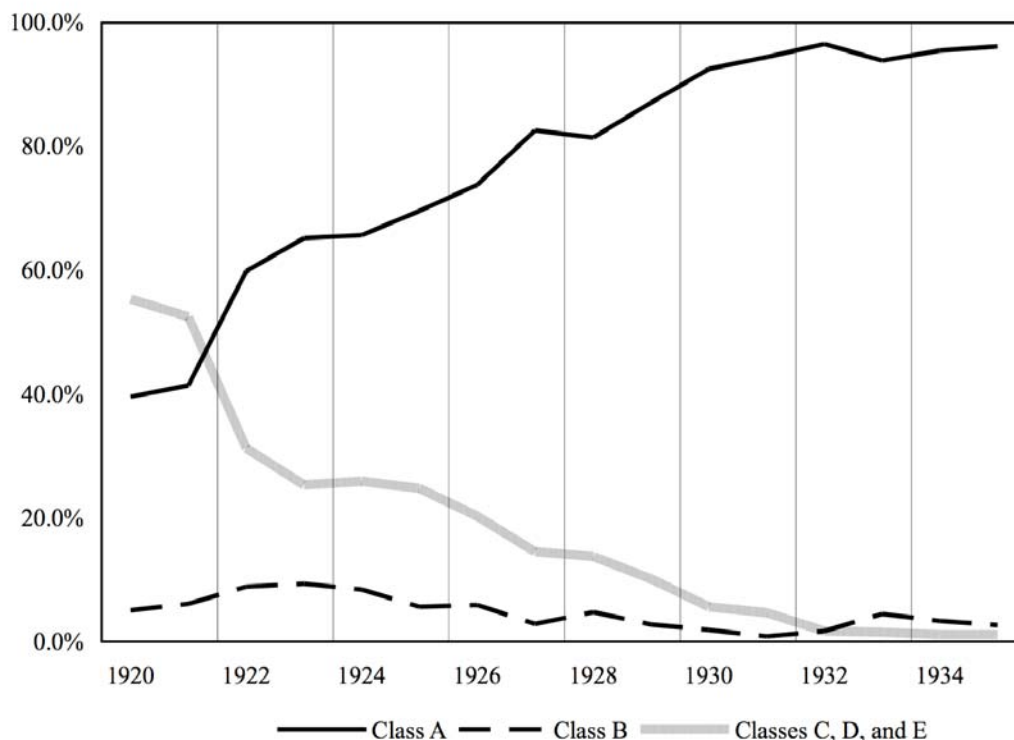
Source: Gage, *Tobacco Industry*, 46.

**Table 1.9**  
**Percentage of Puerto Rican Cigars According to Class for the United States, 1920-1935**

<b>Year</b>	<b>Class A</b>	<b>Class B</b>	<b>Classes C, D, E</b>	<b>Total</b>
	<i>no more than 5 cents each</i>	<i>5 to 8 cents each</i>	<i>more than 8 cents each</i>	
1920	39.6%	5.0%	55.3%	100.0%
1921	41.4%	6.1%	52.5%	100.0%
1922	59.9%	8.9%	31.2%	100.0%
1923	65.2%	9.4%	25.4%	100.0%
1924	65.7%	8.4%	25.9%	100.0%
1925	69.6%	5.6%	24.8%	100.0%
1926	73.8%	5.9%	20.3%	100.0%
1927	82.6%	2.9%	14.5%	100.0%
1928	81.5%	4.8%	13.8%	100.0%
1929	87.1%	2.8%	10.2%	100.0%
1930	92.5%	1.9%	5.6%	100.0%
1931	94.4%	0.8%	4.7%	100.0%
1932	96.6%	1.7%	1.7%	100.0%
1933	93.9%	4.5%	1.6%	100.0%
1934	95.5%	3.4%	1.1%	100.0%
1935	96.2%	2.7%	1.2%	100.0%

Source: Gage, *Tobacco Industry*, 46.

**Figure 1.8**  
**Percentage of Cigars According to Class, 1920-1935**



Source: Same as Table 1.9.

The shift in preference to cheaper cigars coincided with an overall shift in consumption from cigars to cigarettes.<sup>51</sup> Cigar consumption in Puerto Rico fell continuously after 1929, and by 1935 annual consumption had decreased 48% from 1929 levels. (See Table 1.10.) Cigar imports from the United States to the island were minimal during this time, never reaching even 1% of cigar consumption on the island (see Table 1.11.) However, it must be noted that because cigar consumption had decreased and

<sup>51</sup> The agricultural press was well aware that the change from cigars to cigarettes was occurring. *El agricultor puertorriqueño* often published tobacco reports from around the world, noting shifts in consumer preferences and opinions about Puerto Rican tobacco around the world. Examples of the discussion regarding the increase of cigarette consumption can be found in “La Perspectiva tabacalera,” *EAP* 7, no. 4 (February 28, 1929): 8. See also “Notas tabacaleras,” *EAP* 7, no. 7 (April 15, 1929): 7. An example of an update on the decline of cigar manufacturing on the island can be found in “Perspectiva agrícola para el 1931,” *EAP* 11, no. 6 (March 31, 1931): 23.

cigarette consumption increased, and since Puerto Rican cigarettes were being replaced by American cigarettes “the implication is clear that Puerto Rican tobacco... lost a large part of its domestic market.”<sup>52</sup> (See Table 1.12.) Writing about the state of the tobacco industry in 1941, Jorge J. Serrallés and Martín Vélez of the Agriculural Experiment Station in Río Piedras stated: “It can very well be said that... the most important factor [affecting the situation in the tobacco sector] has been the enormous increase in the consumption of cigarettes, with the consequent decrease in that of cigars.”<sup>53</sup>

**Table 1.10**  
**Cigars Manufactured in Puerto Rico for Consumption on the Island and for Export, 1929-1935**

<b>Year</b>	<b>Consumption</b>	<b>Export</b>	<b>Total</b>
<b>1929</b>	55,453,000	145,798,000	201,251,000
<b>1930</b>	48,494,000	171,458,000	219,952,000
<b>1931</b>	43,524,000	122,455,000	165,979,000
<b>1932</b>	36,547,000	63,039,000	99,586,000
<b>1933</b>	32,003,000	65,278,000	97,281,000
<b>1934</b>	28,530,000	63,193,000	91,723,000
<b>1935</b>	28,881,000	52,368,000	81,249,000

*Source:* Gage, *Tobacco Industry*, 44.

---

<sup>52</sup> Gage, *Tobacco Industry*, 45.

<sup>53</sup> “La Administración de Créditos Agrícolas y el establecimiento de sus agencias en Puerto Rico,” in Menéndez Ramos, *Agricultura 1933-34*, 164.

**Table 1.11**  
**Cigar Imports into Puerto Rico from**  
**the United States, 1925-1935**

<b>Year</b>	<b>Quantity</b>
1929	133,000
1930	58,000
1931	33,000
1932	185,000
1933	88,000
1934	167,000
1935	150,000

*Source: Gage, Tobacco Industry, 45.*

**Table 1.12**  
**Consumption of Domestic Cigars versus American**  
**Cigarettes in Puerto Rico, 1929-1935**

<b>Year</b>	<b>Consumption of Domestic Cigars</b>	<b>Consumption of American Cigarettes</b>
<b>1929</b>	55,453,000	421,353,000
<b>1930</b>	48,494,000	468,234,000
<b>1931</b>	43,524,000	445,600,000
<b>1932</b>	36,547,000	448,982,000
<b>1933</b>	32,003,000	549,113,000
<b>1934</b>	28,530,000	599,083,000
<b>1935</b>	28,881,000	666,818,000

*Source: Gage, Tobacco Industry, 44-45.*

The total number of cigarettes manufactured on the island also declined. Table 1.13 details the total number of cigarettes manufactured in Puerto Rico from 1920-1935, and specifies how many cigarettes remained on the island for consumption and how many were exported. As the number of Puerto Rican-made cigarettes for consumption on the island increased, the number exported decreased. This is combined with a decrease of 82% in the total number of cigarettes manufactured from 1920 to 1935. At the same time, the consumption of Puerto Rican-made cigarettes on the island declined and the

imports of American-manufactured cigarettes increased. (See Figure 1.9.) Table 1.14 below details the steady increase in the number of American cigarettes imported into Puerto Rico from 1922-1935. In those thirteen years, there was an increase in cigarette imports of 336%.<sup>54</sup>

**Table 1.13**  
**Cigarettes Manufactured in Puerto Rico for Consumption on the Island and Export, 1920-1935**

Year	Consumption	Export	Total
1920	411,717,000	5,738,000	417,455,000
1921	434,653,000	2,056,000	436,709,000
1922	417,307,000	2,996,000	420,303,000
1923	401,134,000	7,734,000	408,868,000
1924	410,102,000	14,006,000	424,108,000
1925	365,260,000	10,262,000	375,522,000
1926	341,857,000	12,597,000	354,454,000
1927	373,458,000	16,786,000	390,244,000
1928	286,632,000	17,750,000	304,382,000
1929	239,324,000	21,072,000	260,396,000
1930	211,686,000	20,015,000	231,701,000
1931	166,510,000	9,402,000	175,912,000
1932	122,248,000	4,978,000	127,226,000
1933	91,339,000	6,788,000	98,127,000
1934	70,638,000	6,366,000	77,004,000
1935	69,526,000	4,784,000	74,310,000

*Source: Gage, Tobacco Industry, 48.*

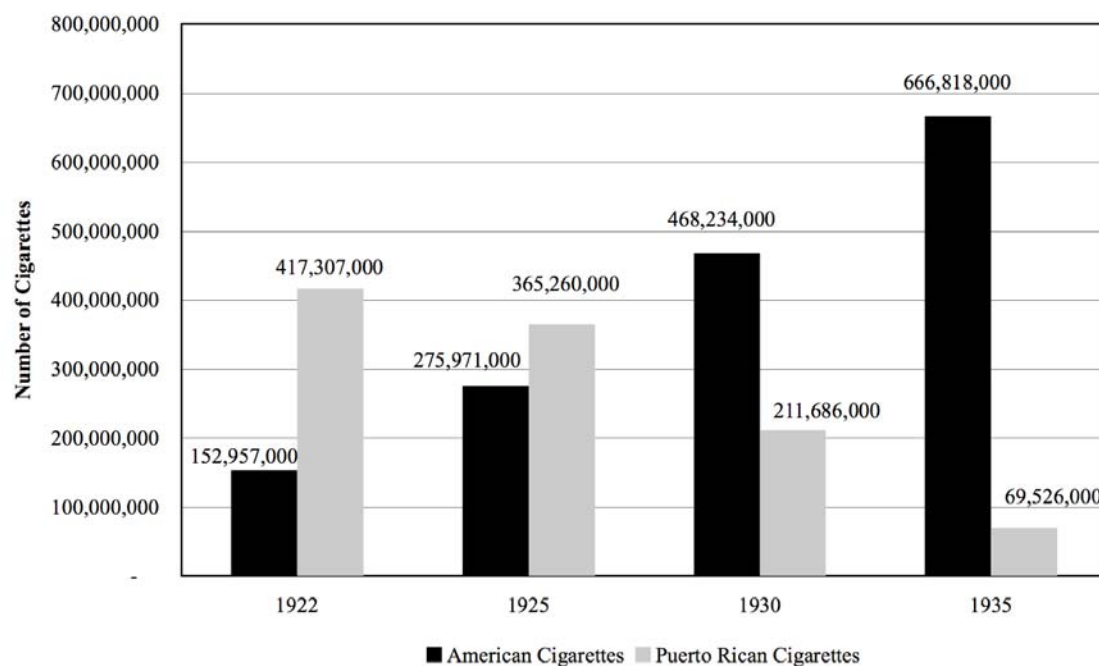
<sup>54</sup> The worldwide increase in the consumption of American cigarettes was noted in “Aumenta el consumo mundial de cigarrillos americanos,” *EAP* 2, no. 11 (September 18, 1926): 16.

**Table 1.14**  
**Cigarette Imports into Puerto Rico**  
**from the United States, 1922-1935**

<b>Year</b>	<b>Quantity</b>
1922	152,957,000
1923	249,201,000
1924	257,230,000
1925	275,971,000
1926	311,249,000
1927	332,496,000
1928	398,789,000
1929	421,353,000
1930	468,234,000
1931	445,600,000
1932	448,982,000
1933	549,113,000
1934	599,083,000
1935	666,818,000

*Source: Gage, Tobacco Industry, 49.*

**Figure 1.9**  
**Cigarette Consumption in Puerto Rico, 1922-1935**



*Source: Same as Tables 1.13 and 1.14.*

A brief review of the statistical data for the tobacco regions illustrates the changes in the tobacco market between 1920 and 1930. For the decade as a whole, both regions experienced growth, but to a lesser extent than from 1910-1920. The number of *cuerdas* under cultivation increased in the eastern highland region by 38.6% and in the western highland regions by almost 60%. The yearly rate of growth was 3.3% for the eastern highlands and 4.5% for the western highlands. Production also increased by 45% in the eastern highlands, at a yearly rate of growth of 3.8%. The most significant expansion occurred in the production levels of the western highland tobacco districts, which increased 142% from 1920 to 1930, at a 9.3% yearly rate of growth. (See Maps 1.6 and 1.7.) For the years between 1920 and 1930, the western highlands experienced phenomenal rates of growth when compared to the eastern highlands, although the eastern highlands were still planting more *cuerdas* and producing more tobacco than the western highlands. The difference in rates of growth in the two tobacco regions can be attributed to the shift in consumer preferences described above. The increase in consumption of cheaper cigars meant that tobacco leaf did not need to be as fine as for more expensive cigars. The same is true for cigarettes. The tobacco growers in the western highlands, although their land was less suited for high quality tobacco cultivation, took advantage of these market opportunities for reduced quality leaf since their product was adequate for the type of manufacturing occurring on the island.

**Map 1.6**  
**Tobacco Cultivation in Puerto Rico in 1930**  
*in cuerdas*



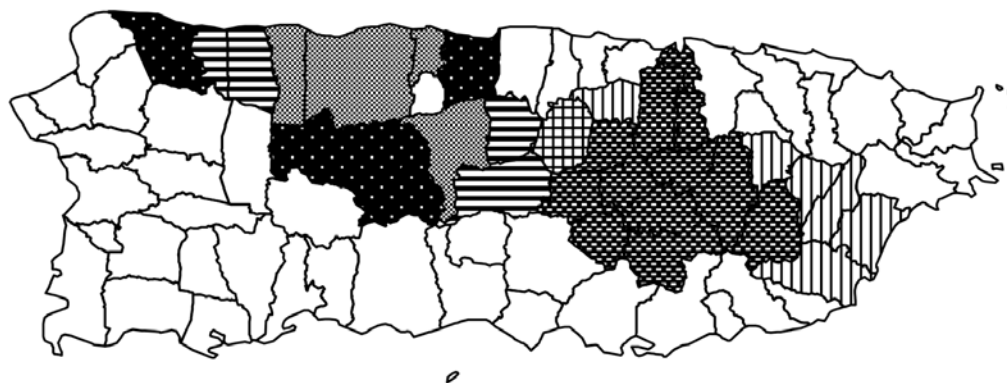
**Western Highlands**

- 0-500 cuerdas
- ▨ 501-1,000 cuerdas
- ▧ 1,001-3,000 cuerdas
- Over 3,001 cuerdas

**Eastern Highlands**

- ▤ 0-500 cuerdas
- ▥ 501-1,000 cuerdas
- ▦ 1,001-3,000 cuerdas
- ▧ 1,001-3,000 cuerdas
- ▨ Over 3,001 cuerdas

**Map 1.7**  
**Tobacco Production in Puerto Rico in 1930**  
*in pounds*



**Western Highlands**

- 0-100,000 pounds
- ▨ 100,001-500,000 pounds
- ▧ 500,001-1,000,000 pounds
- Over 1,000,000 pounds

**Eastern Highlands**

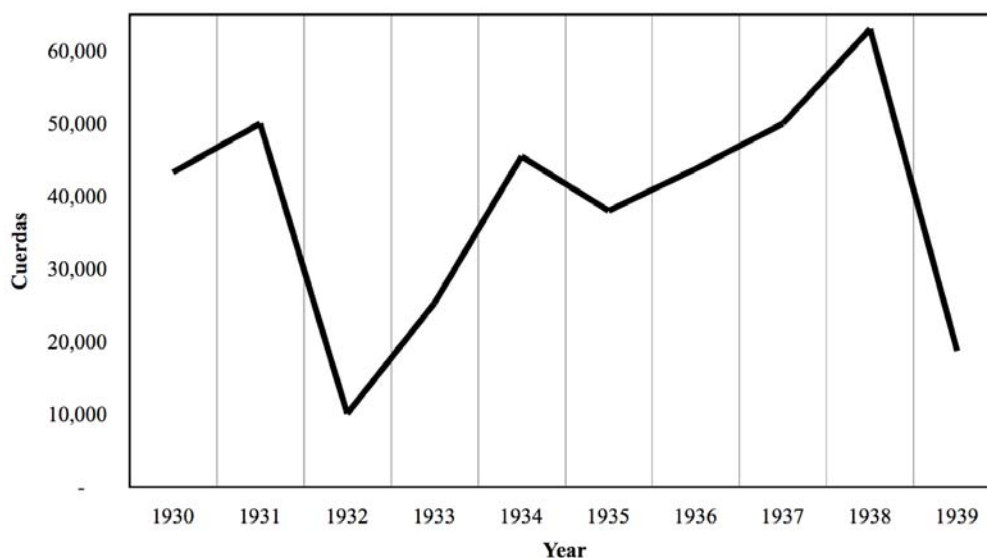
- ▩ 0-100,000 pounds
- 100,001-500,000 pounds
- ▤ 500,001-1,000,000 pounds
- ▥ Over 1,000,000 pounds

The decade of the 1930s was characterized by great changes, both positive and negative, in the number of *cuerdas* under cultivation and the total production of tobacco. (See Figures 1.10 and 1.11). The least productive year, measured in either total *cuerdas* under cultivation or quantity produced was 1932 when a little over 10,000 *cuerdas* produced 6 million pounds a decrease of approximately 80% in both from 1931. In 1932 tobacco farmers attempted to limit the acreage under cultivation in order to recuperate from the 50 million pound crop of 1927 and reduce the stock of leaf on the market.<sup>55</sup> However, there was an expansion in yearly production and *cuerdas* under cultivation

<sup>55</sup> For details on the 1932 reduction, see Chapter 4.

from 1933 to 1937 largely because of Agricultural Adjustment Administration programs to aid farmers and improved credit facilities.<sup>56</sup> The most productive year of the decade was 1938, when 63,000 *cuerdas* were planted that produced over 44 million pounds. From then on, tobacco cultivation in Puerto Rico plummeted and would never recuperate.

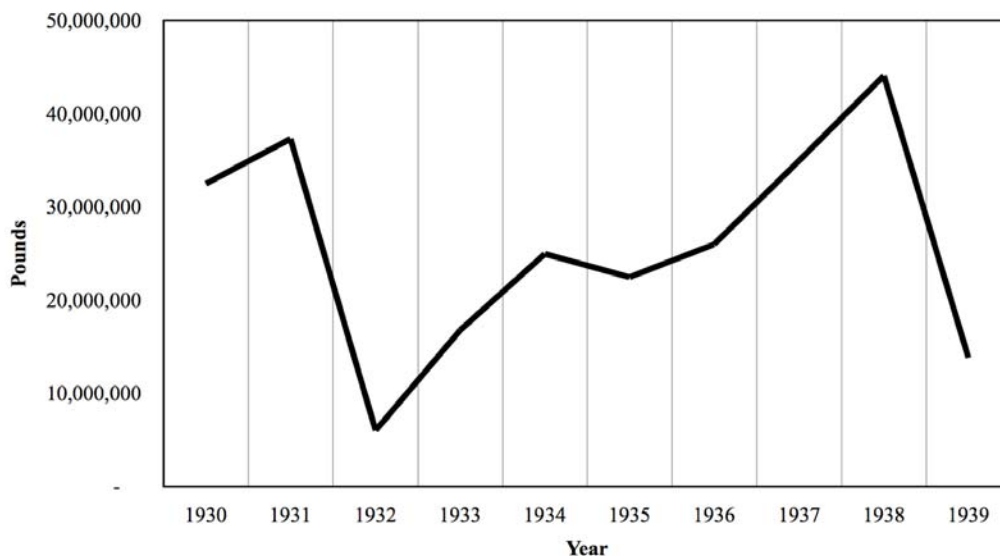
Figure 1.10  
Tobacco Cultivation in *Cuerdas* in Puerto Rico, 1930-



Source: Same as Table 1.3.

<sup>56</sup> The Agricultural Adjustment Administration (AAA) was the federal agency responsible for the enforcement of the Agricultural Adjustment Act of May 12, 1933, a New Deal program extended to Puerto Rico that would pay farmers to reduce the size of their crop area and leave fields unplanted. For a detailed discussion of the AAA and the establishment of institutional credit on the island, see Chapter 3.

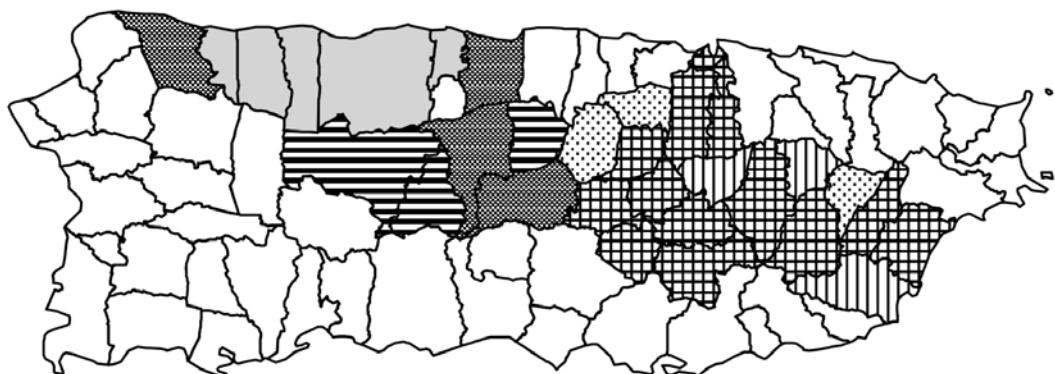
**Figure 1.11**  
**Tobacco Production in Pounds in Puerto Rico, 1930-1939**



Source: Same as Table 1.3.

The tobacco regions experienced high contraction rates from 1930 to 1940 in both the number of *cuerdas* under cultivation and in production levels. (See Maps 1.8 and 1.9.) In the eastern highland regions, there was a decrease of almost 50% in the number of *cuerdas* planted, a reduction of 6.7% yearly. The western highland regions did not fare much better, with a reduction in the number of *cuerdas* planted in tobacco of 44%, a yearly rate of decrease of 5.6%. The reduction in the production was less severe due to increases in yields per *cuerva*. (See Table 1.15.) The yearly rate of contraction in the eastern highlands region was 4.4% for a total reduction in production of 36%, the same percentages found in the western highlands. This suggests that new cultivation techniques designed to increase the average yield per acre had spread through the island and become standard practice in both regions.

**Map 1.8**  
**Tobacco Cultivation in Puerto Rico in 1940**  
*in cuerdas*



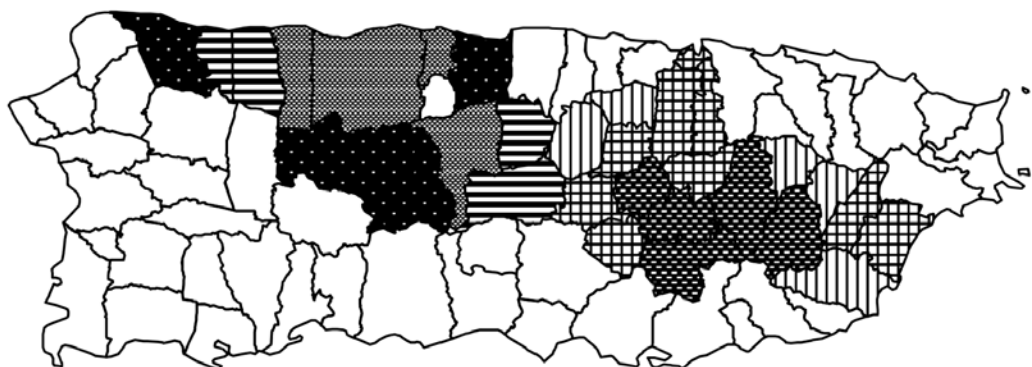
**Western Highlands**

- 0-500 cuerdas
- 501-1,000 cuerdas
- ▨ 1,001-3,000 cuerdas
- Over 3,001 cuerdas

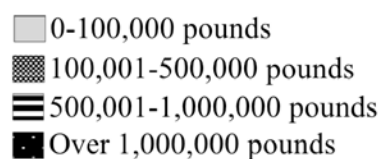
**Eastern Highlands**

- ▨ 0-500 cuerdas
- ▨ 501-1,000 cuerdas
- ▨ 1,001-3,000 cuerdas
- ▨ Over 3,001 cuerdas

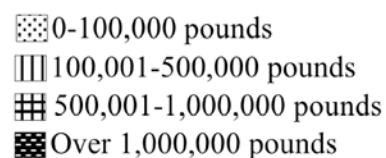
**Map 1.9**  
**Tobacco Production in Puerto Rico in 1940**  
*in pounds*



**Western Highlands**



**Eastern Highlands**



**Table 1.15**  
**Average Yield per Cuerda in Tobacco Regions, 1910-1940**

Year	Eastern Highlands	Western Highlands
1910-1920	562	376
1920-1930	589	570
1930-1940	747	648

*Source:* Data for 1910 from *Agriculture Census 1910*, 72-77. Data for 1920 from *Agriculture Census 1920*, 408-415. Data for 1930 from *Census 1930*, 232-237. Data for 1940 from *Agriculture Census 1940*, 60.

## Conclusion

Tobacco cultivation in Puerto Rico from 1899 to 1940 experienced periods of expansion and contraction for various reasons. On the eve of the American occupation of the island Puerto Rico's tobacco sector was well established and had been operational for centuries. The inclusion of Puerto Rico in the tariff structure of the United States opened the American market to the island's tobacco. The interest in the island's tobacco because of its particular characteristics and general quality, combined with the absence of an import tariff to the U.S. and the influx of American capital into the industrial phase of the tobacco industry, dramatically accelerated the expansion of tobacco cultivation after 1898.

By 1910, tobacco had become the second most important commercial crop for export, employing thousands of agricultural laborers throughout the island, and because of insular taxation policies tobacco had become a major revenue producer for the island's government. Until 1917, the cultivation of tobacco, both in terms of *cuerdas* planted and in terms of production grew slowly and steadily. The end of the First World War opened markets around the world for American tobacco and Puerto Rican tobacco growers rapidly increased plantings to meet demand. Tobacco cultivation grew significantly after 1917 and peaked in 1927 with a crop of over 50 million pounds. The economic consequences of this bumper crop would be aggravated by the economic depression that began in 1929. Because most of the tobacco leaf produced on the island was exported to the United States, the Puerto Rican tobacco economy was intimately linked to economic and cultural changes in mainland markets. Accordingly, the stock market crash of 1929 greatly affected the island's tobacco sector because of a decline in demand. At the same

time, smokers' tastes had shifted from larger, heavier cigars, to smaller lighter cigars and cigarettes, a preference that continued as economic hardship made the purchase of more expensive cigars more difficult.

By the 1930s, Puerto Rican tobacco had faced a major economic depression, the shifting of consumer preferences, and three major hurricanes that caused great devastation to the tobacco crop. Although there was some recovery of the tobacco sector from 1933 to 1938 due to federal aid programs and wider credit availability, its value fell to levels of the early 20<sup>th</sup> century and the tobacco economy would never again recover to the levels of production or importance in the local economy achieved during the 1920s.

## **Chapter 2: The Tobacco Regions of Puerto Rico**

Tobacco cultivation in early 20<sup>th</sup>-century Puerto Rico was heavily concentrated in the eastern and western highland regions of the island where small-scale farmers predominated. Known as the “poor man’s crop,” tobacco could be cultivated on very small tracts of land, required no major capital investments in machinery, and farmers did not have to wait more than a season to produce a crop for the market which could generate income. For the highlands of Puerto Rico in the first decades of the century “tobacco is the keystone upon which hinges the entire agricultural structure.”<sup>1</sup> Farmers in the highlands generated cash income from the sale of tobacco leaf, which provided the greatest share of their income. Additionally, because tobacco could be cultivated efficiently on small parcels of land, a significant percentage of the available farmland could be dedicated to food crops that could be sold at the local markets. More important for the wellbeing of a tobacco-farming family, tobacco occupied the land for only several months out of the year, which meant that tobacco fields could be planted with subsistence crops after the tobacco harvest was completed.<sup>2</sup> Thus, farmers in the tobacco regions relied on tobacco for cash income and were also able to produce food crops for family sustenance or for sale in local markets.

The expansion of tobacco as an export crop after 1898 resulted in changes in the social and economic structures of the eastern and western highland regions of the island.

---

<sup>1</sup> John P. Augelli, “Sugar Cane and Tobacco: A Comparison of Agricultural Types in the Highlands of Eastern Puerto Rico,” *Economic Geography* 29, no. 1 (January 1953): 70-71.

<sup>2</sup> Tobacco drained nutrients from the soil and thus had to be fertilized constantly throughout its growing cycle. However, when the tobacco was harvested, the plant scraps and roots would get tilled back into the soil and act as a natural fertilizer for crops such as corn, rice and green beans.

Population increased in the tobacco regions at rates that were greater than in other areas of the island, especially during the apex of tobacco cultivation during the 1920s. Some scholars have argued that the Puerto Rican family was seriously threatened in the rural areas due to displacements caused by expanding agricultural production in the early 20<sup>th</sup> century, and that this was related to the supposed out-migration of males from highland communities who sought employment in coastal sugar-producing enclaves.

Empirical evidence suggests that this was not the case and that population movement between regions was predominantly a family phenomenon not only in tobacco regions, but in sugar and coffee zones as well.<sup>3</sup> This is underlined by the fact that a relative parity was maintained between adult male and female populations in each region during the early 20<sup>th</sup> century, although the tobacco regions maintained the most balanced sex ratio among adults of the three main agricultural regions.<sup>4</sup> Another indicator of the predominance of families in all the agricultural regions was the maintenance of a relatively large number of children (under 10 years of age) in relation to adult women of child-bearing age (15 – 44 years of age). These child/women ratios were highest in the tobacco regions compared with sugar and coffee-producing areas.<sup>5</sup>

A major issue in the historiography of early 20<sup>th</sup>-century Puerto Rican rural history has revolved around the social and economic impact of investment patterns by

---

<sup>3</sup> The municipalities chosen for the sugar and coffee regions had the highest number of *cuerdas* under cultivation and were the largest producers in pounds of sugar-cane and coffee. Calculations as to *cuerdas* and pounds were made using census data from 1910 to 1940.

<sup>4</sup> The sex ratio is the number of males for every 100 females. A sex ratio of 84, for example, means that there are 84 men per 100 women. The closer the sex ratio is to 100, the more balanced the population in terms of sex.

<sup>5</sup> There was certainly some level of out-migration of working males, but the continued parity in the sex ratio of the adult population aged 20 and over suggests that families were the major component of inter-regional migration.

American absentee individuals and corporations.<sup>6</sup> There are several interrelated themes that have been explored in this regard. The first is with respect to the changing level of owner-operated farms as opposed to farms run by managers or those that were leased to tenants. Scholars have accepted the sugar-focused interpretation of the impact of American capital on land ownership patterns and have projected it to all agricultural regions, decrying the supposed transformation of the Puerto Rican landowner into a wage earner or a renter. Empirical evidence indicates, however, that the number of owner-operated farms increased in the tobacco regions from 1910 to 1940 and that there were a larger number of owner-operated farms in the tobacco regions than in the sugar or coffee regions.

A second related issue revolves around the supposed loss of land by Puerto Rican farmers in the aftermath of the 1898 seizure of Puerto Rico by the United States. The prevailing historiography has emphasized the dramatic loss of land by Puerto Rican farmers who supposedly were displaced by absentee corporations, although this paradigm has not been tested empirically in most studies that have asserted this.<sup>7</sup> One way of testing this is to measure the number and relative percentage of Puerto Rican rural families who owned no land of their own during the early 20<sup>th</sup> century, and how this changed from decade to decade. It is evident that the percentage of landless families

---

<sup>6</sup> For a detailed discussion of the historiography of Puerto Rico, see the Introduction. For the 1947 study *The People of Puerto Rico*, the research team compiled substantial quantitative and qualitative data in a tobacco-growing municipality they called "Tabara." The data indicated that during the 20<sup>th</sup> century, there was an increase in the number of small farms and a decrease in the number of large farms in Tabara, a clear indicator that land concentration was not occurring. See Julian H. Steward, Robert A. Manners, Eric R. Wolf, Elena Padilla Seda, Sidney W. Mintz, and Raymond L. Scheele, *The People of Puerto Rico: A Study in Social Anthropology* (Urbana, IL: University of Illinois Press, 1956), 116, 162, 467.

<sup>7</sup> A study that systematically analyzed land distribution patterns for the early twentieth century is César J. Ayala and Laird W. Bergad, "Rural Puerto Rico in the Early Twentieth Century Reconsidered: Land and Society, 1899-1915," *Latin American Research Review* 37, no. 2 (2002): 65-97.

increased in all of the agricultural regions from 1910 to 1940, although it increased by a smaller margin in the tobacco regions than in the sugar or coffee zones.

The following discussion of the social and economic transformations that occurred in the tobacco regions of Puerto Rico will add complexity to the accepted narrative of the effects of American investment in commercial agriculture on the island after 1898.

### Population Changes

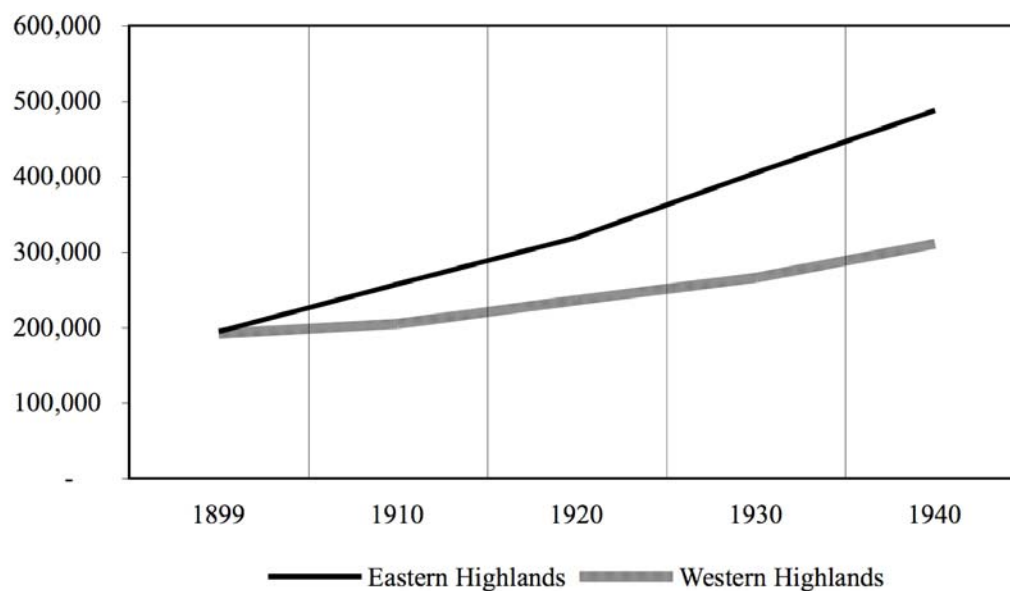
Population in the western and eastern highland tobacco regions experienced high rates of growth between 1899 and 1940. In 1899 the population in the municipal districts comprising these regions was 386,814. By 1940, it had more than doubled to 798,832. Eastern highland districts experienced more dramatic changes than the western highland tobacco municipalities. (See Tables 2.1, 2.2 and 2.3, and Figure 2.1.) This was largely due to the fact that tobacco cultivation expanded at a much more rapid pace in the eastern highlands than in the western highlands and drew more internal migrants to the region.

**Table 2.1**  
**Population in the Tobacco Regions, 1899-1940**

	<b>1899</b>	<b>1910</b>	<b>1920</b>	<b>1930</b>	<b>1940</b>
<b>Tobacco Regions</b>	386,814	462,433	555,518	671,842	798,832
<b>Eastern Highlands</b>	194,773	257,218	319,232	405,557	488,186
<b>Western Highlands</b>	192,041	205,215	236,286	266,285	310,646

*Source:* Data for 1899 from War Department, *Report on the Census of Porto Rico, 1899* (Washington, D.C., 1900), 164-169. Data for 1910 from Bureau of the Census, *Thirteenth Census of the United States Taken in the Year 1910. Statistics for Porto Rico* (Washington, D.C., 1913), 1208-1224. Data for 1920 from Bureau of the Census, *Fourteenth Census of the United States Taken in the Year 1920. Volume III, Population* (Washington, D.C., 1922), 1208-1214. Data for 1930 from Bureau of the Census, *Fifteenth Census of the United States: 1930. Outlying Territories and Possessions* (Washington, D.C., 1932), 147-154. Data for 1940 from Bureau of the Census, *Sixteenth Census of the United States: 1940. Reports for Puerto Rico, Bulletin No. 2: Characteristics of the Population* (Washington, D.C., 1942), 31-40.

**Figure 2.1**  
**Population Growth in the Tobacco Regions, 1899-1940**



Source: Same as Table 2.1.

**Table 2.2**  
**Percentage Change in Population Growth in Tobacco Regions, 1899-1940**

	Eastern Highlands	Western Highlands
<b>1899-1910</b>	32.1%	6.9%
<b>1910-1920</b>	24.1%	15.1%
<b>1920-1930</b>	27.0%	12.7%
<b>1930-1940</b>	20.4%	16.7%

Source: Same as Table 2.1.

**Table 2.3**  
**Yearly Rate of Population Growth in Tobacco Regions, 1899-1940**

	Eastern Highlands	Western Highlands
<b>1899-1910</b>	2.8%	0.7%
<b>1910-1920</b>	2.2%	1.4%
<b>1920-1930</b>	2.4%	1.2%
<b>1930-1940</b>	1.9%	1.6%

Source: Same as Table 2.1.

It is useful to compare demographic changes in the tobacco regions with those occurring in the other two major agricultural regions on the island, the sugar and coffee zones. In 1899 a significant number of the island's coffee farms were destroyed by hurricane San Ciriaco. In the aftermath of the destructive storm and the U.S. occupation of 1898 there was a surge of capital investment in the sugar and tobacco sectors, both having been of secondary importance to the island's economy prior to the U.S. invasion of 1898. Accordingly, in the first decade of the 20<sup>th</sup> century population in the coffee regions declined slightly, while population in the tobacco and sugar regions increased significantly. (See Tables 2.4 and 2.5.) Between 1910 and 1920 the overall percentage population increases in all three regions were similar. However, from 1920 to 1930, when the tobacco sector peaked in importance, both in terms of value and productive output, the population in the tobacco regions grew almost 21%, while the population in the sugar regions grew approximately 17%. In the coffee zones population increased by 11%. In the eastern highlands, the most important tobacco zone of the two, the population grew by 27% during the 1920s. It is clear that people moved to the regions in eastern highland municipalities to take advantage of opportunities presented by expanded markets for tobacco leaf and they did so at a greater rate than to other areas of the island. Even during the 1930s, when the tobacco sector contracted due to the impact of the Great Depression and a consumer shift from cigars to cigarettes, the population in the tobacco regions continued to increase, but at a slower rate than in the sugar cane-growing municipalities. (See Tables 2.5 and 2.6.)

**Table 2.4**  
**Population by Region, 1899-1940**

	<b>Tobacco Region</b>	<b>Sugar Region</b>	<b>Coffee Region</b>
<b>1899</b>	386,814	346,310	322,732
<b>1910</b>	462,433	424,890	319,301
<b>1920</b>	555,518	510,913	377,091
<b>1930</b>	671,842	599,535	417,419
<b>1940</b>	798,832	738,904	493,365

*Source:* Same as Table 2.1.

**Table 2.5**  
**Percentage Change in Population by Region, 1899-1940**

	<b>Tobacco Region</b>	<b>Sugar Region</b>	<b>Coffee Region</b>
<b>1899-1910</b>	19.5%	22.7%	-1.1%
<b>1910-1920</b>	20.1%	20.2%	18.1%
<b>1920-1930</b>	20.9%	17.3%	10.7%
<b>1930-1940</b>	18.9%	23.2%	18.2%

*Source:* Same as Table 2.1.

**Table 2.6**  
**Yearly Rate of Change in Population by Region, 1899-1940**

	<b>Tobacco Region</b>	<b>Sugar Region</b>	<b>Coffee Region</b>
<b>1899-1910</b>	1.8%	2.1%	-0.1%
<b>1910-1920</b>	1.9%	1.9%	1.7%
<b>1920-1930</b>	1.9%	1.6%	1.0%
<b>1930-1940</b>	1.8%	2.1%	1.7%

*Source:* Same as Table 2.1.

Changes in the working population, defined as adults 20 years of age and older, also reflected the economic cycles in the agricultural sectors of the island.<sup>8</sup> (See Tables 2.7 and 2.8.) In the tobacco regions, there was an increase of 34.9% in the working

<sup>8</sup> Ideally, the working population should include those between the ages of 15 and 44. However, age categories in published census reports from 1899-1940 prevent such a comparison. For this study, the working population is defined as adults who are ages 20 and older. Because the age categories in published census data from 1899 to 1940 are not exact, the working population figures for 1899 and 1920 include those who are ages 21 and older, and ages 20 and older for 1930 and 1940. Data for 1910 are not available in a comparable age category, so the figures for 1910 have been omitted for tables detailing the working population.

population between 1899 and 1920, while the working-age population in the sugar regions increased 48.7% and 24.3% in the coffee districts. This working-age population increased slightly more in the tobacco regions than in the sugar and coffee zones during the height of tobacco production from 1920 to 1930. (See Table 2.8.) The tobacco sector experienced radical fluctuations during the 1930s with an overall decline in production, and paralleling this economic instability, growth of the working population in the sugar regions was greater than in tobacco municipalities. Expansion or contraction in the working populations as a response to demand for labor in agricultural regions in different time periods suggests the facility of labor mobility among regions, as well as knowledge among farmers and agricultural workers of economic conditions throughout the island.

**Table 2.7**  
**Working Population by Region by Sex, 1899-1940**

	Tobacco Regions		Sugar Regions		Coffee Regions	
	Male	Female	Male	Female	Male	Female
<b>1899</b>	86,136	90,449	76,582	81,584	68,305	69,210
<b>1920</b>	120,113	118,160	116,583	118,580	83,894	87,048
<b>1930</b>	149,838	145,415	142,432	142,168	95,552	99,250
<b>1940</b>	189,970	182,765	184,716	183,366	119,899	122,185

*Source:* Data for 1899 from *Census 1899*, 164-169, 172-173, 243-245. Data for 1910 from *Census 1910*, 1208-1224. Data for 1920 from *Census 1920*, 1208-1214. Data for 1930 from *Census 1930*, 147-154. Data for 1940 from *Census 1940, Bulletin No. 2*, 31-40.

**Table 2.8**  
**Percentage Change in Working Population, 1899-1940**

	Tobacco Region	Sugar Region	Coffee Region
<b>1899-1920</b>	34.9%	48.7%	24.3%
<b>1920-1930</b>	23.9%	21.0%	14.0%
<b>1930-1940</b>	26.2%	29.3%	24.3%

*Source:* Same as Table 2.7.

The conclusion that inter-regional migration was a family phenomenon in the agricultural regions of the island, regardless of crop, is supported by an analysis of the changes in the working population by sex and in the sex ratio, or the number of men per 100 women. In the tobacco regions from 1899 to 1920, the male working population grew 39.4% while the female working population grew 30.6% a slight differentiation over the 21-year period. (See Table 2.9.) This suggests that during the initial expansion of tobacco as a commercial crop, slightly more men moved to the regions to explore economic opportunities. By way of comparison over the same time period, in the sugar regions, the male working population increased 52.2% and the female working population increased 45.3%. It was only in the coffee region that the female working population increased at a greater rate but this was only marginal and reflected a slightly higher rate of out-migration of men from the depressed coffee districts.

Between 1920 and 1940, growth of male working populations was slightly higher in relation to females in the tobacco and sugar regions. In the coffee zones the working population grew evenly among the sexes from 1920 to 1930, although from 1930 to 1940 males increased at a slightly higher overall percentage (25.5%) than females of working age (23.1%).

**Table 2.9**  
**Percentage Change in Male and Female Working Population, 1899-1940**

	<b>Tobacco Region</b>		<b>Sugar Region</b>		<b>Coffee Region</b>	
	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
<b>1899-1920</b>	39.4%	30.6%	52.2%	45.3%	22.8%	25.8%
<b>1920-1930</b>	24.7%	23.1%	22.2%	19.9%	13.9%	14.0%
<b>1930-1940</b>	26.8%	25.7%	29.7%	29.0%	25.5%	23.1%

*Source:* Same as Table 2.7.

The sex ratio for the tobacco regions in 1899 was 96 (96 males for every 100 females), compared to 95 for the sugar region and 99 in the coffee region. (See Table 2.10.) By 1920, there were 102 men per 100 women in the tobacco regions and the sex ratio was 98 in the sugar-producing municipalities. In the coffee zones the corresponding figure was 96. These sex ratios suggest that slightly more men than women moved out of the coffee region into tobacco and sugar municipalities where employment opportunities were more prevalent because of economic expansion. The increase in the number of men per women continued until 1940 for all three regions. By 1930, there were 103 men per 100 women in tobacco regions; 100 in the sugar region and there was no change in the coffee region. By 1940, the number of men per 100 women was 104 (tobacco), 101 (sugar), and 98 (coffee).

**Table 2.10**  
**Sex Ratio (Male to Female) of Working Population, 1899-1940**

	<b>Tobacco Region</b>	<b>Sugar Region</b>	<b>Coffee Region</b>
<b>1899</b>	96	95	99
<b>1920</b>	102	98	96
<b>1930</b>	103	100	96
<b>1940</b>	104	101	98

*Source:* Same as Table 2.7.

Although the differences are slight, these data are important because of the insights they provide into the demographic history of Puerto Rico in the early 20<sup>th</sup> century, especially with respect to the internal migration of people to and from different economic sub-regions of the island. According to the extant historiography of Puerto Rico and the sugar narrative paradigm indicated earlier in this study, the influx of American capital into the sugar sector supposedly resulted in the migration of large

numbers of men from depressed mountain regions to the sugar zones in search of employment opportunities in the expanding economy. Yet, an examination of the data indicate that the sex ratio in the sugar region was slightly lower than in the tobacco regions and slightly higher than in the coffee regions between 1920 and 1940. If prior interpretations asserting that males left the municipalities of the *cordillera central* were accurate, a distorted sex ratio in favor of working-age males should have been found in the sugar zones of the island. In fact, this was not the case. In 1920 the sex ratio favoring males was highest in the tobacco regions, not in the sugar-producing zones.

Fairly similar sex ratios were found in the major agricultural regions of the island in the first four decades of the 20<sup>th</sup> century. The largest differentiation was found in 1930 between tobacco (103) and coffee regions (96). There were also comparable yearly rates of increase in the working population of both sexes, and although there were differences among regions and between decades, the working population of both sexes grew at similar rates between 1899 and 1940. (See Table 2.11.) These data do not imply that men did not migrate from one zone to another in search of employment. Instead, they suggest that families migrated from one region to another more often than men alone.

**Table 2.11**  
**Yearly Rate of Change in Working Population, 1899-1940**

	Tobacco Region		Sugar Region		Coffee Region	
	Male	Female	Male	Female	Male	Female
<b>1899-1920</b>	1.6%	1.3%	2.0%	1.8%	1.0%	1.1%
<b>1920-1930</b>	2.2%	2.1%	2.0%	1.8%	1.3%	1.3%
<b>1930-1940</b>	2.4%	2.3%	2.6%	2.6%	2.3%	2.1%

*Source:* Same as Table 2.7.

An examination of the child-to-woman ratio, the number of children (under 10 years of age) per 1,000 women (between the ages of 15 to 44) provides further evidence of the predominance of families in all of the agricultural regions. Table 2.12 below details the child/woman ratios for the tobacco, sugar, and coffee regions from 1899 to 1910. The tobacco regions had the highest number of children in relation to women of child-bearing age from 1899 to 1940, which suggests that more families migrated to tobacco regions than to sugar and coffee regions. The lower child/woman ratio in the sugar region, together with the higher rates of growth among the male working population, suggests that indeed, there were men who were moving alone in search of work. However, the differences between the sugar and coffee regions are not very dramatic in the context of the sugar society that has been described in the prevailing literature.

**Table 2.12**  
**Child to Woman Ratio per Region, 1899-1940**

	<b>Tobacco Region</b>	<b>Sugar Region</b>	<b>Coffee Region</b>
<b>1899</b>	1,650	1,424	1,456
<b>1920</b>	1,700	1,454	1,503
<b>1930</b>	1,402	1,177	1,171
<b>1940</b>	1,324	1,169	1,237

*Source:* Data for 1899 from *Census 1899*, 164-169, 172-173, 243-245. Data for 1910 from *Census 1910*, 1208-1224. Data for 1920 from *Census 1920*, 1208-1214. Data for 1930 from *Census 1930*, 147-154. Data for 1940 from *Census 1940, Bulletin No. 2*, 31-40. For 1899 and 1920, the ages for women are 18 to 44. For 1930 and 1940, the ages for women are 15 to 44. Children are those under 10 for all years.

Population changes in the tobacco region from 1899 to 1940 reflected the economic processes occurring in the tobacco sector of Puerto Rico. As the tobacco sector expanded and increased in importance as a commercial crop for export, the population

grew as well. When the tobacco sector contracted due to market pressures both on the island and in the United States, population growth slowed.

### **Income and Expenses on Tobacco Farms**

Tobacco cultivation remained a viable economic endeavor from 1910 until 1940 for farmers with plots of all sizes, even with the overall decline in the tobacco sector experienced from 1930 to 1940. Tobacco farmers earned most of their cash income from the sale of tobacco although they cultivated food crops as well. Since land was only dedicated to tobacco for part of the year, the tobacco crop was usually followed by the planting of corn, green beans, rice, and sweet potatoes.<sup>9</sup> Some of these crops were sold on local markets, but most were used for family consumption. An examination of the income and expenses of the average tobacco farm between 1936 and 1938 illustrates how, by combining cash earnings from tobacco sales and the sale or consumption of food crops, families in the tobacco regions lived better than their counterparts in the sugar and coffee regions, even though families in the tobacco regions often earned less cash income than families in the other economic zones.<sup>10</sup>

The average weekly income for families living in the tobacco regions for 1936 was \$8.60, lower than the \$10.07 for families in coffee regions, and much lower than the weekly income of \$16.20 for families in sugar regions. (See Table 2.13.) The average

---

<sup>9</sup> Ramón Colón Torres, "Estudio económico de 270 fincas de tabaco en Puerto Rico, 1936-37," *Boletín de la Estación Experimental Agrícola* 50 (1939): 12 (hereafter cited as *BEEA*).

<sup>10</sup> The figures used for this discussion are from Manuel A. Pérez, *Living Conditions among Small Farmers in Puerto Rico, Research Bulletin on Agriculture and Livestock, Bulletin No. 2* (San Juan, PR: Bureau of Supplies, Printing and Transportation, 1942); and from Roberto Huyke and Ramón Colón Torres, "Costo de producción de tabaco en Puerto Rico, 1937-38," *BEEA* 56 (1940): 3-28. There are no previous studies that offer comparable data so it is impossible to make comparisons between these data collected from 1936 to 1938 and data from the 1920s when tobacco prices were highest.

annual income in 1936 for tobacco farms was \$421.59, slightly lower than the annual income in coffee farms of \$426.92 but significantly lower than the income of sugar farms at \$804.94 for the year. (See Table 2.14.)

**Table 2.13**  
**Weekly Income of Small Farmers by Region, 1936**

	Weekly Income
<b>Tobacco Regions</b>	\$8.60
<b>Sugar Region</b>	\$16.20
<b>Coffee Region</b>	\$10.07

*Source: Pérez, Living Conditions, 50.*

**Table 2.14**  
**Average Annual Income of Families by Source and by Type of Farm, 1936**

Type of Farm	Annual Income per Family	Source of Income			
		Wages	Products Consumed	Products Sold	Other Income
<b>Tobacco</b>	\$421.59	\$51.86	\$100.76	\$222.96	\$46.01
<b>Sugar</b>	\$804.94	\$112.00	\$105.70	\$491.99	\$95.25
<b>Coffee</b>	\$426.92	\$32.41	\$73.84	\$198.05	\$122.62

*Source: Pérez, Living Conditions, 13, 52.*

To make ends meet, families in all agricultural regions earned income from many sources, as evident in Table 2.14 and Figure 2.2. Because there were job opportunities as day laborers in all regions, many family members, including women and children, would work off of the farms that were their principal residences during their particular slow seasons. Wages as a source of family income were most important in the sugar regions where pay rates were generally higher than in tobacco and coffee zones. However, it is clear that wages were not an important source of income for farm owners in any of the

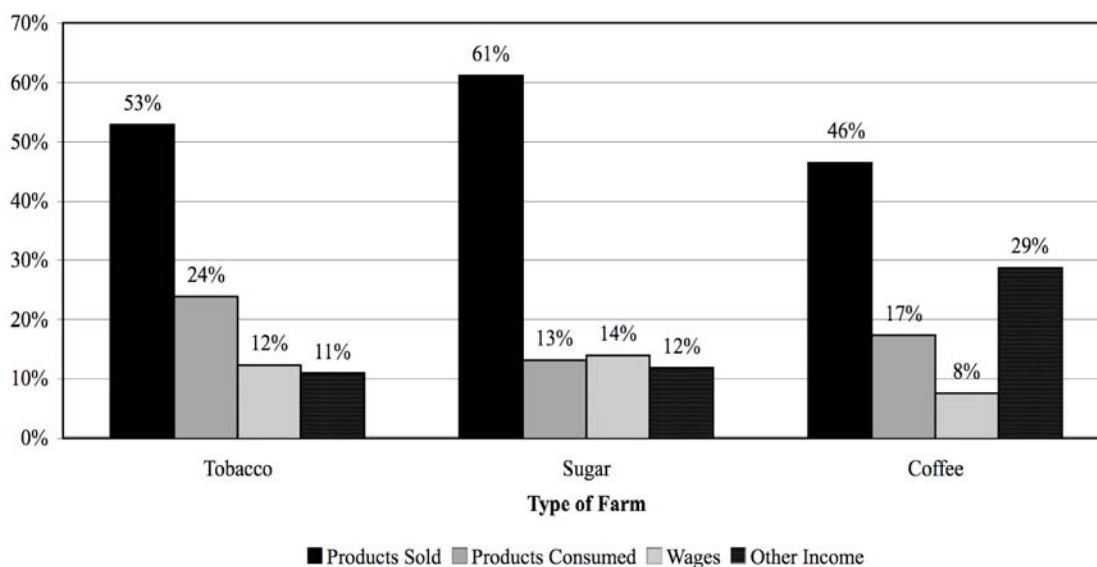
agricultural regions since they derived the greatest benefits from land cultivation and sale of their products.

Families also earned income from other sources, such as land or animal rentals and these were most important in the coffee regions. Sugar farms made more cash income from the sale of agricultural products (which included sugar, secondary crops, wood and coal, and animal products) than tobacco and coffee farms.<sup>11</sup> However, to determine the actual benefit of agricultural products to a particular farm or sector, the income from the cash sales must be added to the income derived from the consumption of home-grown products. A slightly higher percentage (77%) of the annual income earned by families on tobacco farms was derived from agricultural products, both sold and consumed, compared to sugar farms (74%) although this was significantly greater than the 64% found on coffee farms.

---

<sup>11</sup> The farms classified as sugar farms for the Pérez study cited here were independent farms that cultivated and sold sugar cane. It does not appear from the description of the farms presented by Pérez that any of them dealt in the sale of refined sugar. Instead, these farms were part of the *colonato* that developed as a result of the expansion of the sugar sector during the first decades of the 20<sup>th</sup> century. *Colonos* were independent farmers that contracted the sale of their sugar cane to a sugar refinery for a pre-determined price. The sugar companies would often provide cultivation credit. For more details on the development of the *colonato* in the Spanish Caribbean, see César J. Ayala, *American Sugar Kingdom: The Plantation Economy of the Spanish Caribbean, 1898-1934* (Chapel Hill: University of North Carolina Press, 1999).

Figure 2.2  
Percentage of Average Annual Income of Families by Source and by Type of Farm, 1936



Source: Same as Table 2.14.

Cultivation expenses determined net profits or losses for small farms in each of the agricultural regions of the island. Roberto Huyke and Ramón Colón Torres, officials of Puerto Rico's Agricultural Experimental Station, conducted the first detailed study of the cost of tobacco cultivation during the 1937-1938 crop year.<sup>12</sup> For this study, accounting books were distributed among farmers in the tobacco growing municipalities of Caguas, San Lorenzo, Aguas Buenas, Cidra, Cayey, Comerío, Aibonito, and Barranquitas in the eastern highlands, and Orocovis in the western highlands.<sup>13</sup> The greatest expense for tobacco farms was labor, especially for the owners of larger farms that could not meet their labor needs with family or extended family members. (See

<sup>12</sup> Huyke and Colón Torres, "Costo de producción," 3. For details on the establishment and operation of the Agricultural Experiment Station, see Chapter 5.

<sup>13</sup> *Ibid.*, 4.

Table 2.15.) Fertilizer expenses were significant, as tobacco needed constant fertilizing throughout the cultivation season to ensure that the leaf would be of good quality. Once all of the expenses were added and deducted from the total income of the farm, these tobacco growers reported a net loss of \$22 per  *cuerda* of tobacco. However, the average value of the farm products consumed by the tobacco farmer and his family for that same year was \$315. (See Table 2.16.) To determine the total benefit reaped by tobacco farmers from their land the value of the farm products consumed by the family must be added to the total cash income from the sale of produce, in which case the tobacco farmer generated a yearly net income of \$292.96 according to these data.

**Table 2.15**  
**Average Cultivation Income and Expenses in Tobacco Farms,**  
**1937-1938**

<b>Description</b>	<b>Cost per <i>Cuerda</i></b>	<b>Cost per <i>Quintal</i></b>
<b>Expenses</b>	\$116.05	\$12.95
Labor	\$64.44	\$7.19
Fertilizer	\$15.58	\$1.74
Rent of Curing Ranch	\$9.76	\$1.09
Purchase of Seedlings	\$7.04	
Insecticides	\$3.69	
Animal Rental	\$6.74	\$0.75
Rent of Farm	\$3.30	
String for Curing	\$4.75	\$0.19
Other	\$3.79	\$0.42
<b>Income</b>	\$94.01	\$10.49
<b>Net Loss</b>	\$(22.04)	\$(2.46)

*Source:* Huyke and Colón Torres, "Costo de producción," 10-11.

**Table 2.16**  
**Value of Farm Products Used by the Tobacco Farmers' Family, 1937-1938**

Product	Average Quantity per Farm	Average Value per Farm
Milk	119 Quarts	\$91.00
Eggs	86 Dozen	\$16.00
Animal Products		\$19.00
Minor Crops		\$122.00
Rent for Home		\$51.00
Coal		\$3.00
Wood		\$12.00
Other		\$1.00
<b>Total</b>		<b>\$315.00</b>

*Source:* Colón Torres, "270 fincas," 24.

The distribution of expenses on farms was similar in all of the agricultural regions in Puerto Rico. Food was the largest expense for all families, even with the benefits derived from subsistence crops. (See Table 2.17.) Families in tobacco regions had the highest food expenses of all agricultural regions and families in sugar regions had the lowest. This was due, in part, to higher transportation costs incurred by food distributors in the mountainous regions where tobacco was cultivated. Infrastructural development was much more advanced in the sugar zones since the level of sucrose of recently cut sugar cane dropped in proportion to the length of time it took to press the cane from the time it was cut. Therefore, well-constructed roads were of extraordinary importance in the sugar regions to ensure the maximum yield of refined sugar from the sugar cane.<sup>14</sup> Additionally, sugar producers needed well built all-weather roads to move bulky sugar from mills to ports. Tobacco leaf did not need to be quickly transported to cigar factories, since the quality of the leaf would not be affected by delays in transportation. Thus, because of higher internal transportation costs, food prices in the tobacco regions were

<sup>14</sup> John Lounsbury, "Farmsteads in Puerto Rico and Their Interpretative Value," *Geographical Review* 45, no. 3 (July 1955): 352.

higher than in the sugar regions making the dollar benefit of food grown for subsistence on tobacco farms greater than on sugar farms.

**Table 2.17**  
**Distribution of Expenses by Type of Farm, 1937**

<b>Expense</b>	<b>Tobacco</b>	<b>Sugar</b>	<b>Coffee</b>
Food	55.3%	42.1%	50.0%
Farm Operation Expenses	10.4%	14.0%	13.4%
Clothes	9.9%	7.7%	8.7%
Health	7.1%	5.9%	5.5%
Recreation and Transportation	7.0%	6.7%	7.5%
Payment of Debts	4.3%	10.2%	6.0%
Miscellaneous	3.1%	4.3%	4.7%
Purchase of Property	1.6%	5.5%	1.6%
Taxes	0.8%	1.4%	1.3%
Help to Relatives	0.5%	2.2%	1.3%
Total Expenses	100%	100%	100%

*Source: Pérez, Living Conditions, 57.*

The income and expenses of farmers who cultivated tobacco, compared to those in sugar and coffee farms, demonstrate that although overall earnings from the sale of tobacco leaf were lower than from the sale of sugar or coffee, tobacco farmers derived other benefits from their farms, such as secondary agricultural products to sell and food for family consumption noted previously. Cultivation expenses were lowest in the tobacco sector accounting for 10% of the total expenses, compared to 14% for sugar farms and 13.4% for coffee farms. Lower cultivation expenses combined with greater overall farm benefits, allowed tobacco cultivation to remain economically viable between 1910 and 1940 despite the decline of the tobacco sector after 1930.

## Number of Farms and Land Use

From 1910 to 1940, the tobacco regions had the greatest number of farms of the three main agricultural zones.<sup>15</sup> (See Table 2.18 and Figure 2.3.) The number of farms in the tobacco regions increased from 26,736 in 1910 to 27,242 in 1930 and then to 30,104 in 1940. (See Tables 2.18 and 2.19.) In comparison, the number of farms in the sugar region decreased between 1910 and 1930 from 19,656 to 14,447, a decrease of 26.3%, and decreased yet again to 13,650 in 1940, a fall of 5.7%. The number of farms in the coffee regions decreased from 15,039 in 1910 to 14,611 in 1930, (a 2.8% decline), but increased by 8% to 15,820 in 1940. From 1910 to 1940, the number of tobacco farms increased by 12.6%, while the number of sugar farms decreased 30.6%. There was a slight increase of 5.2% in the number of farms in the coffee region over the same period.

---

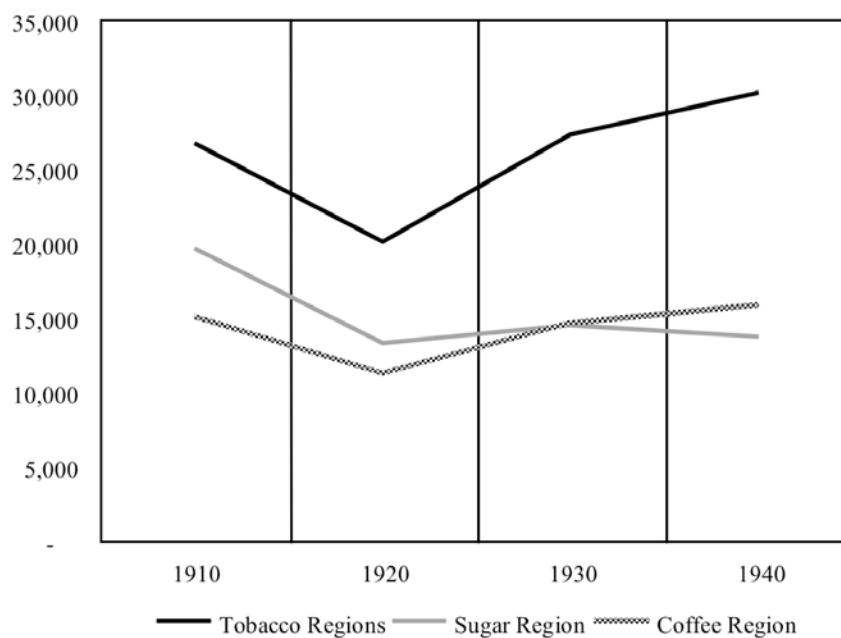
<sup>15</sup> The number of farms in the 1920 census is dramatically lower in all agricultural regions compared to the 1910 figures. The 1930 figures are dramatically higher than the 1920 figures. These radical fluctuations between census years suggest that there may be methodological inconsistencies in the enumerators' instructions on how to count farms. These inconsistencies compromise the validity of the number of farms counted in the 1920 census and therefore, any comparison between 1920 and either 1910 or 1930 would be suspect. There are other indicators that the number of farms may have been undercounted in 1920. First, a calculation of the yearly rate of growth in the number of farms per region shows the same dramatic fluctuations. From 1899 to 1910, the yearly rate of growth in the number of farms for tobacco regions is 4.3%. From 1910 to 1920, there is a yearly rate of decrease of 2.8%, which then increases from 1920 to 1930 to 3.1% annually. If the figures for 1920 are eliminated and the yearly rate of growth is calculated between 1899 and 1930, it is a reasonable (but still significant) 1.6% per year. Second, unexplainable and dramatic fluctuations are found in the percentage change in the number of farms per size. In the tobacco regions, for example, there was a decrease in the number of farms under 10 cuerdas of 44% from 1910 to 1920, followed by an increase of 83% from 1920 to 1930 in census data. A comparison between 1910 and 1930 demonstrates an increase of 2.8% in the number of farms in the tobacco regions under 10 cuerdas. Although the figures for 1920 appear to be unreliable, they will be included on the data tables for comparison purposes among regions in that year. The changes between 1910 and 1920 will not be discussed. Instead, 1910 and 1930 will be used as comparative years.

**Table 2.18**  
**Number of Farms by Region, 1910-1940**

	<b>Tobacco Regions</b>	<b>Sugar Region</b>	<b>Coffee Region</b>
<b>1910</b>	26,736	19,656	15,039
<b>1920</b>	20,101	13,238	11,243
<b>1930</b>	27,242	14,477	14,611
<b>1940</b>	30,104	13,650	15,820

*Source:* Data for 1910 from Bureau of the Census, *Thirteenth Census of the United States Taken in the Year 1910. Statistics for Porto Rico, Agriculture* (Washington, D.C., 1913), 66-71 (hereafter cited as *Agriculture Census 1910*). Data for 1920 from Bureau of the Census, *Fourteenth Census of the United States Taken in the Year 1920. Volume VI, Part 3. Agriculture* (Washington, D.C., 1922), 392-399 (hereafter cited as *Agriculture Census 1920*). Data for 1930 from *Census 1930*, 212-215. Data for 1940 from Bureau of the Census, *Sixteenth Census of the United States: 1940. Reports for Puerto Rico: Census of Agriculture* (Washington, D.C., 1942), 36-37 (hereafter cited as *Agriculture Census 1940*).

**Figure 2.3 Number of Farms by Region, 1910-1940**



*Source:* Same as Table 2.18.

**Table 2.19**  
**Percentage Change in Number of Farms by Region, 1910-1940**

	<b>Tobacco Regions</b>	<b>Sugar Region</b>	<b>Coffee Region</b>
<b>1910-1930</b>	1.9%	-26.3%	-2.8%
<b>1930-1940</b>	12.6%	-30.6%	5.2%

*Source:* Same as Table 2.18.

The increase in the number of farms in the tobacco regions between 1920 and 1930 occurred because of the overall expansion of tobacco production during the 1920s. Additionally, the number of tobacco farms continued to increase from 1930 to 1940, even as the tobacco sector contracted. One explanation for this increase may be that farmers took advantage of U.S. government-sponsored programs developed under the Agricultural Adjustment Administration that provided benefit payments for tobacco growers, thereby guaranteeing a minimum income regardless of market conditions.<sup>16</sup>

Another factor that may be used to explain the increase in the number of tobacco farms during the 1930s was the expanded credit availability provided for the cultivation of tobacco, together with the organization of agricultural cooperative associations in the tobacco regions.<sup>17</sup> Finally, the nature of tobacco cultivation, with its low land requirements and need for little capital investment, made tobacco farming more economically viable than the production of sugar cane which required much more land to turn a profit, or a newly established coffee farm which had a 5-year minimum initial gestation period until seedlings would mature and become significant producing coffee bushes.

<sup>16</sup> For a detailed discussion of the Agricultural Adjustment Administration and the other federal programs, see Chapter 3.

<sup>17</sup> For a detailed discussion of institutional and non-institutional credit structures, see Chapter 3. For a detailed discussion of cooperative organizations, see Chapter 4.

Land use in tobacco farms was more diversified than on sugar and coffee farms. (See Table 2.20.) After a decade of rapid expansion in the tobacco sector during the 1920s, the census figures for 1930 indicate that less than 10% of all improved farmland in the tobacco regions was planted in tobacco, although there were significant differences between municipalities. For example, farmers in Aibonito, a municipality in the eastern highlands, dedicated over 30% of their land to tobacco while those in Orocovis, a nearby municipality in the western highlands, only dedicated 7.7% of their land to tobacco. These differences may have been related to the extent of arable land found on each district's farms. In the sugar and coffee regions, the percentage of land dedicated to each main cash crop was much higher in comparative perspective for 1930. Almost 38% of all improved land was dedicated to the planting of coffee in the coffee regions and 28.4% to sugar in the sugar regions.

**Table 2.20**  
**Percent of Improved Farm Land Dedicated to Main Crops by Region, 1910-1940**

<b>Tobacco Regions</b>	<b>Improved Land in Farms (in <i>cuerdas</i>)</b>	<b><i>Cuerdas</i> Planted in Tobacco</b>	<b>Percentage of Improved Land Dedicated to Tobacco</b>
<b>1910</b>	688,955	18,616	2.7%
<b>1920</b>	558,113	33,778	6.1%
<b>1930</b>	505,067	48,859	9.7%
<b>1940</b>	466,834	25,464	5.5%

<b>Sugar Regions</b>	<b>Improved Land in <i>Cuerdas</i></b>	<b><i>Cuerdas</i> Planted in Sugar</b>	<b>Percentage of Improved Land Dedicated to Sugar</b>
<b>1910</b>	573,430	83,931	14.6%
<b>1920</b>	535,231	149,257	27.9%
<b>1930</b>	474,491	134,608	28.4%
<b>1940</b>	353,770	113,229	32.0%

<b>Coffee Regions</b>	<b>Improved Land in <i>Cuerdas</i></b>	<b><i>Cuerdas</i> Planted in Coffee</b>	<b>Percentage of Improved Land Dedicated to Coffee</b>
<b>1910</b>	430,029	123,010	28.6%
<b>1920</b>	360,439	127,619	35.4%
<b>1930</b>	374,413	140,799	37.6%
<b>1940</b>	327,559	131,407	40.1%

*Source:* Data for 1910 from *Agriculture Census 1910*, 72-77. Data for 1920 from *Agriculture Census 1920*, 392-399. Data for 1930 from *Census 1930*, 212-215, 232-237. Data for 1940 from *Agriculture Census 1940*, 36-37.

There are several important conclusions that may be drawn from the above data. First, tobacco provided cash income from smaller parcels of land than was the case on sugar or coffee farms, an obvious benefit for farmers with small parcels of land or for those with limited resources. Second, because small extensions of land were planted in tobacco, more land could be dedicated to secondary crops, such as plantains, which could be consumed by the family or sold on local markets. Finally, greater land availability on tobacco farms permitted the raising of cattle, pigs, goats, or chickens, which provided eggs, dairy products, and meat for family consumption.

## Land Tenure

Writing on the particular characteristics of tobacco farms across the highland regions and the projected future of the tobacco sector after 1940, one observer noted that “the geographical location [of tobacco farms], together with the prevalence of many small farms, make the consolidation into large estates difficult, if not impossible.” He also wrote that there was “practically no absentee ownership in the agricultural phase of the tobacco industry.”<sup>18</sup> This meant that, unlike in the dominant sugar sector, the cultivation of tobacco remained almost entirely in Puerto Rican hands during the early 20<sup>th</sup> century.

The tobacco regions had the greatest number of farms operated by owners of all three major agricultural regions for 1910 and 1930. In 1910, there were 20,906 farms operated by owners in the tobacco regions and 21,968 in 1930, an increase of 5.1%. The number of owner-operated farms decreased in the sugar region from 16,137 in 1910 to 11,893 in 1930, a decrease of 26.3%. In the coffee regions the number of farms fell by 5.5% from 12,472 in 1910 to 11,782 in 1930. (See Table 2.21.) Additionally, a higher percentage of the total land in farms was owner-operated in the tobacco regions than in the sugar or coffee regions from 1910 to 1930, although all three regions experienced a decrease from 1910 to 1930. In 1910, 72.8% of the total land in farms was operated by owners in the tobacco regions although the comparable figure decreased to 68.9% in 1930. In the sugar regions, the percentage of the land in farms that was owner-operated decreased from 65.6% in 1910 to 44.1% in 1930, and in the coffee regions from 70.4% in 1910 to 56.6% in 1930.

---

<sup>18</sup> Rafael Picó, “Land Tenure in the Leading Types of Farming of Puerto Rico,” *Economic Geography* 15, no. 2 (April 1939): 143.

**Table 2.21**  
**Number and Percentage of Farms, and Percentage of Land Operated by Owners and Managers**  
**by Region, 1910-1940**

Tobacco Regions	Number and Percentage of Farms				Percentage of Land	
	Owners		Managers		Owners	Managers
	Number	Percentage	Number	Percentage		
<b>1910</b>	20,906	78.2%	522	2.0%	72.8%	13.2%
<b>1920</b>	17,716	88.1%	580	2.9%	79.3%	10.1%
<b>1930</b>	21,968	80.6%	1,222	4.5%	68.9%	22.3%
<b>1940</b>	22,474	74.7%	432	1.4%	64.9%	19.3%

Sugar Region	Number	Percentage	Number	Percentage	Owners	Managers
<b>1910</b>	16,137	82.1%	554	2.8%	65.6%	25.2%
<b>1920</b>	11,606	87.7%	496	3.7%	69.7%	19.8%
<b>1930</b>	11,893	82.2%	1,350	9.3%	44.1%	48.5%
<b>1940</b>	10,916	80.0%	441	3.2%	46.5%	42.9%

Coffee Region	Number	Percentage	Number	Percentage	Owners	Managers
<b>1910</b>	12,472	82.9%	312	2.1%	70.4%	20.8%
<b>1920</b>	9,844	87.6%	418	3.7%	79.1%	15.6%
<b>1930</b>	11,782	80.6%	1,470	10.1%	56.6%	37.8%
<b>1940</b>	13,030	82.4%	562	3.6%	59.9%	30.8%

*Source:* Data for 1910 from *Agriculture Census 1910*, 66-71. Data for 1920 from *Agriculture Census 1920*, 392-399. Data for 1930 from *Census 1930*, 210-213. Data for 1940 from *Agriculture Census 1940*, 36-37.

The increase in the number of farms operated by owners in the tobacco regions suggests that there was a pattern of land fragmentation occurring between 1910 and 1930, the period when the tobacco sector was rapidly expanding. This conclusion is supported by the data presented in Table 2.22 below. Between 1910 and 1930, the number of farms under 9 *cuerdas* in the tobacco regions increased from 12,979 in 1910 to 13,337, a modest overall rise of 2.8%. This is striking, however, when compared to the decreases in farms under 9 *cuerdas* in the sugar region (39%) and a decline of 12.7% in the coffee region. It is clear that in the tobacco regions there were greater relative opportunities for participation in the sector as independent producers than in sugar or coffee regions, despite the proliferation of the *colonato* in the sugar-producing zones of the island.

**Table 2.22**  
**Number of Farms by Size (in *cuerdas*) and Percentage Change in Regions,**  
**1910-1930**

<b>Tobacco Regions</b>	<b>Number of Farms, 1910</b>	<b>Number of Farms, 1930</b>	<b>Percentage Change, 1910-1930</b>
9 and under	12,979	13,337	2.8%
10 to 19	4,793	5,954	24.2%
20 to 49	4,609	4,791	3.9%
50 to 99	1,969	1,760	-10.6%
100 to 174	878	770	-12.3%
175 to 499	683	502	-26.5%
500 and over	195	128	-34.4%

<b>Sugar Region</b>	<b>Number of Farms, 1910</b>	<b>Number of Farms, 1930</b>	<b>Percentage Change, 1910-1930</b>
9 and under	11,754	7,167	-39.0%
10 to 19	3,023	3,000	-0.8%
20 to 49	2,508	2,313	-7.8%
50 to 99	1,100	977	-11.2%
100 to 174	508	434	-14.6%
175 to 499	519	417	-19.7%
500 and over	244	169	-30.7%

<b>Coffee Region</b>	<b>Number of Farms, 1910</b>	<b>Number of Farms, 1930</b>	<b>Percentage Change, 1910-1930</b>
9 and under	8,045	7,020	-12.7%
10 to 19	2,520	2,941	16.7%
20 to 49	2,276	2,417	6.2%
50 to 99	1,015	1,016	0.1%
100 to 174	510	563	10.4%
175 to 499	518	542	4.6%
500 and over	155	112	-27.7%

*Source:* Same as Table 2.21.

There were a small number of manager-operated farms in all agricultural districts, although there were significant differences in the percentage of land in farms that they operated in each region. The percentage of land in farms that was manager-operated in 1910 in the tobacco regions was 13.2%, compared to 25.2% in the sugar region and 20.8% in the coffee regions. By 1930, the percentage of land in farms operated by

managers had increased to 22.3% in the tobacco regions, to 48.5% in the sugar region and to 37.8% in the coffee region. (See Table 2.21.) Farms that were operated by managers in the tobacco regions were owned either by established, prosperous landowners (U.S. residents and citizens, or Puerto Ricans) or to a lesser extent, by tobacco manufacturing corporations. The lower percentages of land in farms that were manager-operated between 1910 and 1930 in the tobacco regions, suggest that larger farms were not as prevalent in the overall land tenure structure of the region as they were in the sugar or coffee regions.

There were two types of tenants in the tobacco economy. Most tenants were usually farmers who were hired by owners of larger farms to cultivate part of the land they owned in sharecropping arrangements. Under these agreements the owner contributed seed, animals, and curing barns (if there was one on the property), and one-half of the expenses for fertilizers, insecticides, bundling cord, and any other materials. The tenant contributed all of the labor and the remaining half of production expenses. In return, the tenant received one-half of the crop.<sup>19</sup>

A smaller number of “tenants” were those farmers who had entered into a *venta con compacto de retroventa* (a theoretical sale with right to buy back the land), also called *hipoteca, refacción, y arrendamiento* (mortgage, cultivation loan and lease) in legal documents. This was not really a land sale but a credit arrangement whereby a farmer transferred the title of land as a guarantee in return for seasonal operating capital. When the farmer paid back the loan, the title was transferred back to him. These ‘tenants’ were usually responsible for the entire cost of cultivation, but the entire crop

---

<sup>19</sup> Colón Torres, “270 Fincas,” 3, 10.

after harvest was theirs to sell. Thus, although they theoretically were tenants cultivating land owned by someone else, in reality they were farming land which they considered to be their own. This credit system was the continuation of an institution for securing and guaranteeing loans which was widespread during the 19<sup>th</sup> century.<sup>20</sup>

The percentage of tenant-operated farms was higher in the tobacco regions than in the sugar or coffee regions in both 1910 and 1930. (See Table 2.23.) In 1910, 19.9% of all farms in the tobacco regions were tenant-operated, compared to 15% in both the sugar and coffee regions. By 1930, the percentage of farms that were tenant-operated had decreased to 14.9% in tobacco regions, 8.5% in sugar regions and 9.3% in the coffee region. The percentage of the land in farms operated by tenants was also higher in tobacco regions than in sugar and coffee regions from 1910 to 1930. In tobacco regions, 14% of the land in farms was operated by tenants, compared to 9.2% in sugar regions and 8.8% in coffee regions. By 1930, the percentage of tenant-operated land in farms had decreased to 8.8% in tobacco regions, 7.3% in the sugar region and 5.5% in the coffee region. The larger percentage of tenant-operated farms in the tobacco regions indicates that as the tobacco sector expanded from 1910 to 1930, the relative opportunities for participation in the sector for farmers who were unable to purchase land remained more open than in sugar and coffee regions.

---

<sup>20</sup> For a detailed explanation of credit arrangements, see Chapter 3.

**Table 2.23**  
**Farms Operated by Tenants by Region, 1910-1940**

<b>Tobacco Regions</b>	<b>Number of Farms</b>	<b>Percentage of Farms</b>	<b>Percentage of Land</b>
<b>1910</b>	5,308	19.9%	14.0%
<b>1920</b>	1,805	9.0%	10.6%
<b>1930</b>	4,052	14.9%	8.8%
<b>1940</b>	7,198	23.9%	15.9%

<b>Sugar Region</b>	<b>Number of Farms</b>	<b>Percentage of Farms</b>	<b>Percentage of Land</b>
<b>1910</b>	2,965	15.1%	9.2%
<b>1920</b>	1,136	8.6%	10.5%
<b>1930</b>	1,234	8.5%	7.3%
<b>1940</b>	2,293	16.8%	10.6%

<b>Coffee Region</b>	<b>Number of Farms</b>	<b>Percentage of Farms</b>	<b>Percentage of Land</b>
<b>1910</b>	2,255	15.0%	8.8%
<b>1920</b>	981	8.7%	5.4%
<b>1930</b>	1,359	9.3%	5.5%
<b>1940</b>	2,228	14.1%	9.3%

*Source:* Data for 1910 from *Agriculture Census 1910*, 66-71. Data for 1920 from *Agriculture Census 1920*, 392-399. Data for 1930 from *Census 1930*, 210-213. Data for 1940 from *Agriculture Census 1940*, 36-37.

A discussion of land use and ownership must include a consideration of the role of those agricultural laborers who owned no land of their own. Agricultural laborers were different from tenants because tenants usually had contracts stipulating the use of a parcel of land. Although tenants were landless in that they did not own the land that was farmed, they had the right of commercial cultivation. Yet, agricultural laborers were sometimes permitted to “plant a small area in food crops for home use” by their employers, thus reaping non-wage benefits for their labor.<sup>21</sup> Tenants were also responsible for some type of payment for usufruct rights over land, either in cash or kind

<sup>21</sup> Sol L. Descartes, “Land Reform in Puerto Rico,” *The Journal of Land and Public Utilities* 19, no. 4 (November 1943): 405.

rent, or by providing a portion of expenses for cultivation. Agricultural laborers, in most cases, “do not pay rent since they usually live [as squatters] in houses built by themselves on somebody else’s land, or in houses provided free by the landowners [who hired them].”<sup>22</sup> These men, women and sometimes children who were hired seasonally were paid daily wages. A study conducted by the Department of Labor in 1936 noted “the busy season of the tobacco and cane plantations lasts for about six months, and that of the coffee farms for about three months. Coffee workers go to the sugar and tobacco regions and tobacco workers go to the cane regions after the busy season in their own district is over. Tobacco and cane laborers also go to the coffee regions to work during the picking season.”<sup>23</sup>

Table 2.24 below details the number of agricultural laborers found working in each of the major agricultural sectors. For the cultivation of tobacco and coffee, there was a constant increase in the number of workers employed between 1910 and 1930, then a sharp drop from 1930 to 1940. Tobacco and coffee both declined in importance throughout the 1930s and accordingly the loss of employment for agricultural workers in the cultivation of these crops is not surprising. Sugar remained an employment alternative for wage laborers, and some tobacco and coffee workers surely migrated to sugar areas in search of employment. The number of sugar laborers increased continuously from 1910 until 1940, even during the crisis years of the Great Depression.<sup>24</sup>

---

<sup>22</sup> Ibid., 405.

<sup>23</sup> Pérez, *Living Conditions*, 11.

<sup>24</sup> For details on the expansion of the sugar market, see Ayala, *Sugar Kingdom*.

**Table 2.24**  
**Number of Agricultural Laborers per Crop, 1910-1940**

	Tobacco	Sugar	Coffee
<b>1910</b>	6,188	76,601	29,720
<b>1920</b>	28,118	79,261	37,776
<b>1930</b>	29,839	84,112	40,088
<b>1940</b>	10,010	111,835	15,334

*Source:* Data for 1910 from Bureau of the Census, *Thirteenth Census of the United States Taken in the Year 1910. Volume IV Population 1910, Occupation Statistics* (Washington, D.C.: Government Printing Office, 1914), 295-300. Data for 1920 from *Fourteenth Census of the United States Taken in the Year 1920. Volume IV Population 1920, Occupations* (Washington, D.C.: Government Printing Office, 1923), 1288. Data for 1940 from Bureau of the Census, *Sixteenth Census of the United States: 1940. Reports for Puerto Rico: Bulletin No. 3: Occupations and Other Characteristics by Age* (Washington, D.C., 1943), 54-59. For 1930, there are no data dividing agricultural workers by crop. There is a category of "Agricultural Laborer," which also existed for 1910, 1920 and 1940. To calculate the number of agricultural laborers per crop for 1930, the percentage of laborers employed in each crop for 1920 was calculated. That percentage was then used to calculate the agricultural laborers per crop from the total number of agricultural laborers. Data on agricultural laborers for 1930 from *Census 1930*, 186-189.

Tobacco regions had the lowest number of agricultural laborers, as well as the lowest percentage of families that owned no land of the three major agricultural regions between 1910 and 1940. (See Table 2.25.)<sup>25</sup> The sugar region, in contrast, had the most laborers and the highest percentage of landless families. The percentage of landless families in the tobacco regions increased from 61.5% in 1910 to 73.5% in 1940, compared with 68.4% in 1910 and 85.3% in 1940 in the sugar regions. There are two possible factors that may have impacted land ownership. First, the data for the tobacco regions suggest that the possibility of becoming a landowner was greater in the highlands than in the sugar regions. Second, the comparatively larger increase in landless families

<sup>25</sup> The percentage of landless families from 1910 to 1930 was calculated using the number of rural inhabitants and the number of rural families. For the 1940 Census, there was no "Number of Families" category. Instead, there was a "Number of Heads of Private Households" category. As described in the introduction to the section, "the number of heads of private households is the same as the number of private households. This number is roughly comparable with the number of families shown in the census reports of 1935, 1930, and 1920" (see p. 3). In addition, the 1940 figures were not published by municipality, but by region. The average number of families was also omitted. The average number of family members per region was calculated by dividing the total population by the number of heads of private households. Then the average number of family members per region was assigned to each municipality in that region. The number of rural families in each municipality was calculated by dividing the total rural population by the average number of family members. The number of landless families was then calculated by subtracting the number of rural families from the number of farms.

in the sugar regions from 1910 and 1940 may have been the result of families moving from tobacco regions to sugar zones in search of work. In all likelihood both factors were important. The same phenomenon may be observed when comparing the sugar region to the coffee region, where the percentage of landless families increased from 67.5% in 1910 to 74.8% in 1940. Although the percentage of landless families in the sugar regions was comparatively greater than that found in either the tobacco and coffee regions, it is important to note that all three regions had more landless families in 1940 than they did in 1910.

**Table 2.25**  
**Percentage of Landless Families by Crop, 1910-1940**

	<b>Tobacco Regions</b>	<b>Sugar Region</b>	<b>Coffee Region</b>
<b>1910</b>	61.5%	68.4%	67.5%
<b>1920</b>	75.5%	81.0%	78.3%
<b>1930</b>	70.9%	80.7%	71.8%
<b>1940</b>	73.5%	85.3%	74.8%

*Source:* Data for 1910, 1920 and 1930 from *Census 1930*, 124, 132. Data for 1940 from *Census 1940, Bulletin No. 3*, 9, 21-22.

## **Conclusion**

The rural areas of Puerto Rico during the early 20<sup>th</sup> century have been discussed by most of the extant historiography as if they were one homogenous unit. The arguments made in relation to the development of the sugar sector, such as absentee ownership, displacement of families, and high rates of male migration have been applied to other agricultural sectors without systematic study of each region. In the tobacco sector the paradigms used to describe the sugar sector were not evident and can not be applied analytically.

There were similarities, of course, between the tobacco, sugar and coffee regions, such as rapid population growth, the continued importance of the family unit, the increase in the number of landless families, and the high percentage of family income spent on food products. But there were also marked differences in social and economic patterns among the three. First, the overall cash earnings of tobacco farmers were much lower than the earnings of sugar and coffee farmers. This limited the cash wealth that tobacco farmers could potentially accumulate from their activities in comparison with sugar or coffee farmers. Second, cultivation expenses were the lowest in tobacco regions. Thus, farmers in the tobacco regions of Puerto Rico had greater opportunities to participate in a booming agricultural market as independent producers than their counterparts in the sugar and coffee regions because of lower start-up costs. Third, landowners (as opposed to managers or tenants) cultivated the greatest share of the tobacco crop and were responsible for the largest number of *cuerdas* under cultivation than in the other agricultural sectors. There were more farmers who owned land in tobacco regions in 1940 than in 1910, even after a decade of diminishing returns from tobacco earnings after 1930. All of this suggests that farmers in tobacco regions had greater relative opportunities to eventually own their own land than farmers in sugar or coffee regions.

A crucial factor that must be taken into account when calculating the economic benefits derived by farmers was the amount of food that a family could produce on their farms. Food items were the largest expense for any rural family, especially for families in tobacco regions due to the high costs of transporting food from other regions of the island. The more food a family could produce on their farms lessened the amount of cash that would have to be spent on the purchase of food items. For farmers in tobacco

regions, who had the lowest cash earnings of any of the agricultural regions, the availability of land to cultivate subsistence crops was a guarantee that at least a minimum standard of living would be maintained throughout the year.

Because of the nature of tobacco cultivation, with its limited land requirements and lower expenses, farmers and their families were able to live off of their land even when the tobacco crop did not turn a profit. It was the importance of the secondary agricultural items produced both for the local market and for family consumption in addition to the cash-earning potential of tobacco that made tobacco farming such an attractive economic alternative for the thousands of farmers in the eastern and western highland regions of Puerto Rico.

### Chapter 3: Agricultural Credit in Puerto Rico and Tobacco Cultivation

From 1910 through 1940, small farmers planting less than 10 *cuerdas* of land cultivated the greatest share of the Puerto Rican tobacco crop. Although tobacco cultivation did not require the large capital investments needed for sugar cultivation, small tobacco farmers depended on agricultural credit to finance cultivation and cover their living expenses until their crops could be marketed after the harvest. Agricultural credit for tobacco cultivation came from a variety of sources, both institutional, such as banks or cooperative organizations, and non-institutional, such as *refaccionistas* (loosely translated as “financiers”), local leaf traders or, to a lesser extent, corporations that manufactured cigars or cigarettes.<sup>1</sup>

American and Puerto Rican agricultural administrators and government officials, as well as representatives of the agricultural sector, constantly decried the “lack of adequate credit facilities” and often called their poor development “one of the main problems of Puerto Rican agriculture.”<sup>2</sup> The principal problem was that farmers throughout the island depended on credit offered by local merchants, sugar mills, or manufacturing corporations often at interest rates as high as 30%. The end result of this was that small farmers with limited capital resources found themselves, more often than not, in perpetual debt. To address this problem the insular and federal governments, with

---

<sup>1</sup> Joseph S. Tulchin classifies agricultural credit systems as formal or institutional and informal or non-institutional in his article “El crédito agrario en Argentina, 1910-1926,” *Desarrollo Económico* 18, no. 71 (October 1978): 381-408. The formal/informal dichotomy presented by Tulchin has been left out of this study, since all credit arrangements are formal in some way or another. Regardless of whether the lender is an individual, a corporation, or a bank, credit agreements are highly sophisticated and involve detailed contracts, as will be evident in this chapter.

<sup>2</sup> Ramón Colón Torres, “Financing Low Income Farmers in Puerto Rico,” *Journal of Farm Economics* 34, no. 5 (December 1952): 944.

the support of agricultural organizations and farmers throughout the island, worked to establish credit systems that would be beneficial to Puerto Rican farmers.<sup>3</sup>

It ought to be noted that the early part of the 20<sup>th</sup> century was a time of dramatic changes in the agricultural economy of the United States and there were great changes in agricultural legislation designed to protect the living standard of American farmers. Puerto Rican farmers, after much lobbying in San Juan and Washington, benefited from such legislation and took advantage of federal credit programs made available on the island.

One of the aspects of U.S. government programs and legislation was the creation of a credit infrastructure that offered long-term loans and short-term production credit at lower interest rates than non-institutional or private lenders such as merchants or corporations, and these were extended to Puerto Rican farmers. Tobacco planters in the early 20<sup>th</sup> century quickly took advantage of these opportunities and they not only requested credit in greater numbers than all other types of farmers on the island, but they also received the largest share of available institutional production credit. By 1936, tobacco farmers utilized about 46% of the institutional credit on the island and in comparison, sugar farmers used 41.6%.<sup>4</sup>

---

<sup>3</sup> For a detailed discussion of the establishment and mission of the *Asociación de Agricultores Puertorriqueños*, see Chapter 4.

<sup>4</sup> Manuel A. Pérez, *Living Conditions Among Small Farmers in Puerto Rico, Research Bulletin on Agriculture and Livestock, Bulletin No. 2* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1942), 43. According to statistical data contained in this report, tobacco farms used 16.8% of available credit. However, the report also mentions farms that produce tobacco in combination with another minor crop. Those “tobacco-minor” farms used 28.9% of credit. To arrive at the 45.7% figure, the percentage of available credit used by the tobacco farms and the tobacco-minor farms were added. The percentage of credit in sugar cane farms was also calculated by adding the credit used by sugar farms (38.6%) and “sugar-minor” farms (3%). These figures refer to production credit, and not to mortgage loans.

Although federal programs were a welcome addition to the overall rural credit structure in Puerto Rico, a careful review of the credit mechanisms in the tobacco sector suggests that either the programs were too restrictive or that Puerto Rican tobacco farmers continued to rely on the non-institutional credit system that had been extant prior to 1898 and that remained after the U.S. occupation. Puerto Rican non-institutional credit structures were so well established, and perhaps so effective at meeting production credit needs, that only a fraction of farmers found it necessary, or were able, to utilize the new institutional credit facilities. By 1936, after two decades of constant consumer education regarding banking structures, only 4% of tobacco farmers (1% of all small-scale farmers) reported using commercial banking for their credit needs and approximately 60% of tobacco farmers continued to use *refaccionistas* as their principal sources of credit during the late 1930s.<sup>5</sup>

### **Non-Institutional Credit**

The greatest share of small-scale tobacco farmers obtained credit from *refaccionistas*, who were often well-established tobacco growers, owners of large farms, or local merchants that traded in agricultural products such as fertilizer, animal feed, and equipment.<sup>6</sup> A *refaccionista* would provide currency, fertilizer, or other materials in exchange for a promise of the farmer's tobacco crop. This agreement between the

---

<sup>5</sup> Ramón Colón Torres, "Estudio económico de 270 fincas de tabaco en Puerto Rico, 1936-1937," *Boletín de la Estación Experimental Agrícola* 50 (June 1939): 41 (hereafter cited as *BEEA*). Also in Pérez, *Living Conditions*, 12, 44.

<sup>6</sup> Charles E. Gage, *The Tobacco Industry in Puerto Rico*, United States Department of Agriculture, Circular no. 519 (Washington, D.C., March 1939), 28.

grower and the financier was very formal and included a detailed contract called the *contrato de refacción*.<sup>7</sup>

In a *contrato de refacción*, the financier and the farmer would agree upon a specific amount of money to cultivate a defined number of *cuerdas* in tobacco. The funds would be disbursed either on a regular basis, i.e. weekly, bimonthly, in specified installments, or “as needed.” The *refaccionista*, as the supplier of the production credit, would be involved in the actual cultivation process: he was allowed, under contractual agreement, to make unannounced visits to the tobacco fields he was financing and could “recommend” ways to spend the capital he loaned.<sup>8</sup> In exchange for this credit the farmer would deliver the tobacco to the *refaccionista* after the harvest. At this point, the financier would classify it into grades and give the grower a receipt that would reflect “a deduction... made from delivery weights for anticipated losses in drying and fermenting of 10-12%.”<sup>9</sup> The *refaccionista*, according to insular law, would have a lien on the crop until he determined that all contractual stipulations had been met. The financier then cured and fermented the tobacco leaf and arranged for its sale. Only after the sale was arranged would the farmer be cleared of his loan obligations.

In addition to local landowners or merchants, local tobacco leaf dealers, corporate leaf buyers, and tobacco manufacturing corporations could also act as *refaccionistas*. Local leaf dealers were usually located close to the tobacco farms and acted as “commissioned intermediaries between [American and international] leaf dealers

---

<sup>7</sup> Because an individual is acting as a lender, this type of credit is classified as non-institutional for the purpose of this study.

<sup>8</sup> Gage, *Tobacco Industry*, 28.

<sup>9</sup> *Ibid.*, 29.

and [local] financiers.”<sup>10</sup> When a local dealer acted as a *refaccionista*, he also received the tobacco leaf after the harvest and maintained warehouses where the leaf was classified according to grade, where potential buyers visited to inspect the leaf, and where the leaf was packed for shipment after its sale.

Loans from tobacco leaf dealers were similar in structure to those of the *refaccionistas*: the tobacco farmer would receive money on a week-by-week basis in exchange for a formal contractual obligation of the tobacco crop at the end of the harvest.<sup>11</sup> Unlike the merchants, leaf dealers would settle a farmer’s account when the tobacco was delivered, not when it was later marketed.

There were a few leaf dealers that traded in fairly large volume. These dealers were usually located in an urban center, had a number of employees, and had connections with all the American buyers that came to the island. In addition, although leaf dealers often paid better farm prices for tobacco, all transportation, warehousing, curing and fermenting costs would be the responsibility of the farmer, thus canceling any benefit that a slightly higher price per *quintal* would have had.

Owners of larger farms often dealt with volume traders, since their capital needs were greater and volume traders were capable of providing larger loans. An example is found in a *contrato de refacción*, dated December of 1927, between Julio Esteves Solá, owner of 286 cuerdas in Aguas Buenas, Cupey and Trujillo Alto, and Fernando Álvarez

---

<sup>10</sup> Ibid., 30.

<sup>11</sup> Maurice Perkins et al., *Credit and Related Problems in the Agriculture of Puerto Rico*, report prepared for the Department of Agriculture, Economic Development Administration, the Government Development Bank for Puerto Rico, the Land Authority for Puerto Rico, the Puerto Rico Industrial Development Co., and the Autoridad de Energía Eléctrica, December 1956, 37-38.

Cabeza, a leaf dealer and *refaccionista* from San Juan.<sup>12</sup> Álvarez Cabeza loaned Esteves Solá \$11,250 to cultivate 150 *cuerdas* of tobacco in his properties (\$75 per *cuerva*). The contract stipulated that Esteves Solá would receive the money in small amounts “as needed” and that employees of Álvarez Cabeza would have access to all tobacco fields at any time deemed necessary. Esteves Solá was allowed to sell his tobacco to a third party, but he would incur a penalty of \$1 per *quintal*. The loan would be due in June 1928, roughly six months after the contract date. There was no rate of interest specified in the contract, although there was a \$150 charge for expenses.

Tobacco manufacturing companies also acted as *refaccionistas*, as was the case with C.W. Boom, owner of a cigar factory in Caguas, the largest tobacco-growing municipality of the eastern highlands.<sup>13</sup> In one *contrato de refacción* dated December 2, 1927, Boom agreed to lend \$800 to Manuel Quiñones and Belén Alverio, owners of almost 60 *cuerdas* in Caguas, to cultivate 10 *cuerdas* of tobacco.<sup>14</sup> Thus, the costs of cultivation were estimated to be about \$80 per *cuerva*. The funds would be disbursed weekly throughout the duration of the growing season. A few days later, Boom signed another *contrato de refacción* with Dionisio Maldonado and Juana Laguna, owners of 15 *cuerdas* in Guaynabo.<sup>15</sup> The couple secured a loan for \$750 to cultivate 10 *cuerdas* of tobacco (\$75 per *cuerva*). Both of these contracts specified a 9% interest rate and an additional \$100 for expenses, and would be payable in June 1928.

---

<sup>12</sup> “Contrato de refacción agrícola,” Andrés Mena Latorre, Tomo 3 no. 597 (December 2, 1927), 1662, Oficina de Protocolos Notariales, Caguas, Puerto Rico (hereafter cited as AML 3).

<sup>13</sup> For a fascinating and detailed history of the tobacco industry in Caguas, see Juan David Hernández, “El tabaco de Caguas” (Archivo Histórico de Caguas, photocopy).

<sup>14</sup> “Contrato de refacción agrícola,” AML 3 no. 598 (December 2, 1927), 1668.

<sup>15</sup> “Contrato de refacción agrícola,” AML 3 no. 618 (December 14, 1927), 1732.

*Refaccionistas* also entered into contracts with farmers that included capital for other disbursements, such as mortgage payments and rent expenses. Rafael Ocasio and Juana Cruz, owners of a 14-*cuerda* farm in Caguas, entered into a “*Contrato de refacción, hipoteca y arrendamiento*” (production credit contract, mortgage and lease of land) with Isidoro Álvarez González, also from Caguas.<sup>16</sup> Their contract was quite complicated but perhaps typical. The couple’s farm was first mortgaged for \$1,700 in 1924; the contract does not specify the lender for the first mortgage. In early 1927, the couple secured a second mortgage for \$1,900 from Isidoro Álvarez González, which they had not yet been able to pay. In this contract, dated December 14, 1927, they agreed to give Álvarez González the title to the property in Caguas in lieu of payment. Álvarez González agreed to lease the farm back to Ocasio and Cruz for four years, at a price of \$150 per year, and gave the couple the option to buy the farm at the end of the four years for \$1,900.<sup>17</sup> In addition, Álvarez González lent them \$700 to cultivate 10 *cuerdas* of tobacco. The money would be disbursed in several payments: \$300 payable immediately and then \$20 per week for 20 weeks, roughly the length of the tobacco growing season. The *contrato de refacción* would be due in May 1928.

There is no doubt that *contratos de refacción* could be problematic for farmers. The same person who acted as the lender was also the buyer of the harvest and the marketer of the final product, thereby having an extraordinary amount of control over the price paid to the farmer for his tobacco irrespective of actual market prices at harvest

---

<sup>16</sup> “Dación en pago, arrendamiento y contrato de refacción agrícola,” AML 3 no. 626 (December 19, 1927), 1756.

<sup>17</sup> Some contracts included the designation “*venta y retroventa*” or “*venta con pacto de retroventa*.” Ocasio and Cruz contract did not include this designation, although it is clear that a *retroventa* was agreed upon. For details, see Chapter 3.

time. Once the tobacco was taken to the financier's warehouse, he classified it according to grade. Instead of paying the farmer according to the price fixed by the New York tobacco market on a particular date for that particular grade, the *refaccionista* calculated the stock he had on hand, what he expected to receive from other borrowers, and then he determined the price to be paid to the farmer.

The contract between C.W. Boom and Manuel Quiñones and Belén Alverio to cultivate 10 *cuerdas* of tobacco cited above is an example of this. The average farm price paid for tobacco leaf was 25.07 cents per pound and the average yield per *cuerva* was 669 pounds during the harvest of 1928. Quiñones and Alverio cultivated 10 *cuerdas* of tobacco, which would have yielded 6,690 pounds of tobacco leaf at the end of the harvest. If Boom took the standard deduction of 10% of the total weight to account for weight loss after curing, then the total weight recorded for payment to Quiñones and Alverio would have been 6,021 pounds. At a price of 25.07 cents per pound, this would amount to a payment of \$1,509.46. The debt owed Boom totaled \$972 (\$800 principal, plus \$72 in interest, plus \$100 for expenses), assuming that no other expenses were added for the processing of the leaf. This would leave a profit of \$537.46. If Quiñones and Alverio spent the average 40% of their income on labor, their final net profit from the cultivation of tobacco would be \$322.46 (21% of the farm value of the crop).<sup>18</sup> It is safe to make the assumption that the couple also spent the average of 39 cents per day for

---

<sup>18</sup> Average farm price per pound, average export price per pound, and average yield per *cuerva* from Jorge Serrallés, Jr. and Martín Vélez, Jr., "Precio del tabaco en rama al agricultor en Puerto Rico del 1907-1940," *Boletín de la Estación Experimental Insular*, 60 (June 1941): 5, 7. Labor expense figure from Jorge J. Serrallés, Jr., Ramón Colón Torres, and Frank J. Juliá, "Analysis of the Organization and Factors Influencing the Returns on 194 Small Tobacco Farms in Puerto Rico, 1935-1936," *Bulletin of the Agricultural Experiment Station* 46, (March 1938): 20 (hereafter cited as *BAES*).

food for their family, totaling another \$142.35 for the year.<sup>19</sup> The remainder of the money, \$180.11 would have to settle whatever other debts the family had incurred for clothing, other cultivation materials for secondary crops, and home supplies. In the event that there was money left after the repayment of all debt, it would need to last for one year until new *contratos de refacción* could be signed prior to the following tobacco season. Most tobacco growers were once again in debt before the next tobacco season began.

In contrast, Boom became the owner of 6,021 pounds of leaf tobacco, which according to average prices of 46.96 cents per pound in the export market of 1928, would be valued at \$2,827.46. Boom almost doubled his investment with a profit of \$1,318. In the crop year of 1928, there was a difference of almost 22 cents per pound (87%) between the price paid to farmers and the price paid for tobacco in the market. Clearly, if tobacco prices paid to farmers had been based on the average price of tobacco in the export market, farmers would have increased their earnings. Instead, being the lender, buyer and marketer of the leaf allowed the *refaccionista* to set a price based on his existing stock and other tobacco still owed under *contratos de refacción*, thus keeping the farm price at levels which were well below actual market prices. Providing agricultural production loans was very good business indeed for lenders.

Farmers could try to approach different buyers to secure better prices, but as demonstrated by the *contratos de refacción* cited above, most contracts included a clause exacting a significant penalty if a sale to a third party was made. For already cash-poor

---

<sup>19</sup> Chardón Carlos, Commissioner of Agriculture and Labor, *Annual Report of the Commissioner of Agriculture and Labor Submitted to the Governor of Porto Rico, 1924-25* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1926), 62. Average food expense was based on the typical farmer's diet of rice, beans, cod, corn flour, sugar, coffee, tubers, and lard.

farmers, any penalty, regardless of how small, was a great economic hardship. Some lenders would also charge the farmer for warehousing costs, transportation to the new buyer's facilities, and any other expense deemed necessary by the lender.<sup>20</sup> In fact, financing was so problematic, that some farmers reported losses amounting to between \$3.50-7.50 per *quintal* of tobacco.<sup>21</sup>

As a response to criticism over the lack of institutional credit options for small farmers, the insular government, with the support of the agricultural sector, pressured the federal government for extension of agricultural credit laws enacted in the United States to alleviate farmers' economic stresses.

### **Institutional Credit Structures**

The development of the institutional banking and credit structure in Puerto Rico is intimately tied to the development of similar institutions in the United States. Farmers in Puerto Rico were continuously updated regarding the latest laws enacted by the United State's Congress through newspaper and magazine articles and advertisements, radio broadcasts, and personal visits by government agents and agricultural organizers. Understanding the benefits of these laws, farmers constantly lobbied for their extension to the island.

The initial U.S. legislation of importance to Puerto Rican farmers was the Federal Farm Loan Act of July 1916.<sup>22</sup> This act established twelve Federal Land Banks that

---

<sup>20</sup> Rafael Arce Rollet, "Los contratos de refacción," parts 1 and 2, *El agricultor puertorriqueño* 1, no. 3 (December 26, 1925): 7; no. 6 (January 16, 1926): 10 (hereafter cited as *EAP*).

<sup>21</sup> Chardón, *Report 1924-25*, 21.

<sup>22</sup> The literature on the development and effects of agricultural legislation in the United States is long-standing and extensive. For good background articles, see G.C. Henderson, "The Agricultural Credits Act

would make long-term first mortgages to farmers at low interest rates.<sup>23</sup> The United States' treasury supplied the original capital for these banks, but they were designed as financial cooperatives where borrowers would eventually become the owners of the institution. To this end, borrowers were required to purchase stock in the bank equal to 5% of their loan amounts. The Federal Land Banks captured 10% of the farm mortgage market in less than 10 years of operations, but this rapid expansion was due in part to incredibly high lending rates in particularly high-risk areas.<sup>24</sup> Defaults on Federal Land Bank loans in these areas brought a shift to more conservative and stringent lending policies.

In Puerto Rico, Governor Arthur Yager, farmers, and the insular legislature lobbied in Washington for the extension of this law to the island. As part of this effort, the recently created Department of Agriculture prepared an extensive survey of the economic conditions of Puerto Rico and a study of the advantages that farm loan legislation would have on the farmers of the island.<sup>25</sup> The arguments were persuasive,

---

of 1923," *The Quarterly Journal of Economics* 37, no. 3 (May 1923): 518-522; Howard H. Preston and Victor W. Bennett, "Agricultural Credit Legislation of 1933," *Journal of Political Economy* 42, no. 1 (February 1934): 6-33; and Harold W. Torgerson, "Agricultural Finance in the United States," *Journal of Land and Public Utility Economics* 16, no. 2 (May 1940): 196-206. For an interesting legal explanation of the Rural Rehabilitation Loan Program, see Monroe Oppenheimer's article "The Development of the Rural Rehabilitation Loan Program" in *Law and Contemporary Problems* 4, no. 4 (October 1937): 473-488. Most of these programs were designed for ranchers, cotton producers and tobacco farmers, although they benefited agriculture across the U.S. For a discussion of how agricultural programs affected the tobacco sector, see B.U. Ratchford, "Federal Agricultural Policy in Relation to Tobacco," *The Journal of Politics* 11, no. 4 (November 1949): 655-677.

<sup>23</sup> Federal Farm Land Banks were established in Springfield, Massachusetts; Baltimore, Maryland; Columbia, South Carolina; Louisville, Kentucky; New Orleans, Louisiana; St. Louis, Missouri; St. Paul, Minnesota; Omaha, Nebraska; Wichita, Kansas; Houston, Texas; Berkeley, California; and Spokane, Washington. The land bank in Baltimore served Puerto Rico.

<sup>24</sup> William G. Murray, "Farm Mortgages and the Government," *Journal of Farm Economics* 17, no. 4 (November 1935): 3-4.

<sup>25</sup> M. Camuñas, Commissioner of Agriculture and Labor of Porto Rico, *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1919. From the Report of the Governor of Porto Rico, 1919, pages 685-713 inclusive* (Washington, D.C.: Government Printing Office, 1919): 689.

but there was concern over the mandatory stock purchase option that had been so problematic for American farmers. Nevertheless, on October 1<sup>st</sup>, 1922 the Federal Land Bank began operations in San Juan.<sup>26</sup> Mortgages from the Federal Land Bank were granted up to \$10,000 at 6% interest and lasted for 20 years. Table 3.1 below details the number of loans and their value during the initial years of operation.

**Table 3.1**  
**Federal Land Bank Loans, 1922-1926**

Year	Number of Loans	Value of Loans
1922-1924	2,118	\$6,329,000.00
1925	833	\$2,757,500.00
1926	827	\$2,517,000.00

*Source:* Data for 1922-1925 from Chardón, *Report 1924-25*, 33. Data for 1926 from Carlos Chardón, Comisionado de Agricultura y Trabajo, *Informe del Comisionado de Agricultura y Trabajo al Honorable Gobernador de Puerto Rico, 1925-1926* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1927), 20.

The main problem with the Federal Land Bank programs in the U.S and in Puerto Rico was that the only credit provided by the institution was long-term financing. Although helpful to farmers who could mortgage their properties to pay for farm expenses, the true nature of the credit problem for both American and Puerto Rican farms was the absence of options for short-term production credit. As early as 1913, the U.S. Congress determined that the “real cause for inadequate financing was due in part at least to the fact that the commercial banking machinery of the country was ill-adapted to

---

<sup>26</sup> Chardón, *Report 1924-25*, 32-33.

making certain loans for the periods required by the farmer.”<sup>27</sup> Because farmers needed credit for short to intermediate periods, for the six months of a tobacco harvest or for one year to make farm improvements, banking institutions were created to accommodate such needs. The Federal Intermediate Credit Banks (FICB) were established under the Agricultural Credit Act of March 1923. Twelve FICB were established to provide loans to cooperative associations, banks, and other credit institutions.<sup>28</sup> Those credit associations or local credit institutions would redistribute the money provided by the FICB to individual farmers according to need. It would be up to the farmers to form cooperative organizations that could be funded through the FICB and then apply for individual loans to the associations. The FICB would be fully owned by the government, thereby eliminating the added expenses of mandatory stock purchases in order to secure a loan. Unfortunately, private banks seldom asked the FICB for loan monies, mostly because smaller banks looked at FICB as competition, and not as partners.<sup>29</sup> Ultimately, this kept farmers in the U.S. and Puerto Rico from accessing monies available from FICB for seasonal production.<sup>30</sup>

The Agricultural Act of 1923 addressed some of the problems with the Federal Land Bank legislation of the previous decade. Under Title III of the Act, the maximum loan amount from the Federal Land Bank was raised to \$25,000 from \$10,000.<sup>31</sup> To address continuing concerns over access to short-term credit, the Act allowed the

---

<sup>27</sup> V. P. Lee, “The Intermediate Credit Banks,” *Journal of Farm Economics* 7, no. 4 (October 1925): 425.

<sup>28</sup> Henderson, “Act of 1923,” 518-519.

<sup>29</sup> Lee, “Intermediate,” 431.

<sup>30</sup> Preston and Bennett, “Legislation of 1933,” 30.

<sup>31</sup> Henderson, “Act of 1923,” 521.

Secretary of Agriculture to make short-term production loans directly to farmers. With the enactment of this Act, the structures were set in place to provide access to long, intermediate and short-term credit. In 1924, Title I of the law, which dealt with the establishment of FICB, was extended to Puerto Rico and was heralded as a “blessing from heaven” by the agricultural press.<sup>32</sup>

To take advantage of FICB monies, Puerto Rican tobacco farmers immediately founded cooperative organizations in San Lorenzo, Comerío, Cayey and Aibonito.<sup>33</sup> A few years later, there was at least one cooperative organization in each of the major tobacco-growing municipalities and in 1927, farmers in Puerto Rico attempted to consolidate these into one insular cooperative association, a decision approved and heralded by the *Asociación de Agricultores Puertorriqueños*.<sup>34</sup> It is evident that tobacco farmers were aware of the benefits of credit available under federal programs and that they took the necessary steps to avail themselves of that credit.<sup>35</sup> There is also evidence

---

<sup>32</sup> “Lo que significa el crédito intermedio para Puerto Rico,” *EAP* 1, no. 13 (March 6, 1926): 9. This article explains the basic tenets of the FICB legislation. More details of the FICB program were published in M. González Quiñones, “Las ventajas del Banco Federal de Crédito Intermedio,” parts 1 and 2, *EAP* 1, no. 15 (March 20, 1926): 10; no. 18 (April 10, 1926): 10. As an example, the article mentions that Tabacaleros de Aibonito, Inc. bought their fertilizer from only one supplier and paid \$10 less per ton than non-affiliated farmers.

<sup>33</sup> Chardón, *Report 1924-25*, 21. The annual report of the *Comisión para Proteger el Tabaco de Puerto Rico* for 1930 described the trouble that cooperative organizations were having when dealing with the Federal Land Bank and lamented “never having accomplished a perfect adjustment and partnership between the organized farmers and the directors of the Federal Bank to make decisions that would have secured the stability of these organizations.” In *Comisión para Proteger el Tabaco de Puerto Rico, Informe Anual de la Comisión para Proteger el Tabaco de Puerto Rico* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1930), 23-24. For a detailed discussion of the establishment of tobacco cooperative associations, see Chapter 4.

<sup>34</sup> Minutes of the *Asociación de Agricultores Puertorriqueños*, July 19, 1927; Colección: Asociación de Agricultores de PR; Serie: Actas de la Junta Directiva; Microficha: 1924-1937; Centro de Investigaciones Históricas, University of Puerto Rico, Río Piedras, Puerto Rico.

<sup>35</sup> In fact, articles were published on a regular basis discussing, criticizing and advocating for federal credit programs. For example, Ramón Gandía Córdova explained the intricacies of the latest Federal Farm Loan Act in a series of articles published in 1928. See “Comentarios a la Ley Federal de Préstamos Agrícolas,”

that local banks did participate in the FICB programs and that they, in turn, provided production credit for farmers.

For example, Manuel Soto Aponte, a tobacco grower in Caguas, signed a *contrato de refacción* for \$2,000 with American Colonial Bank of Puerto Rico to cultivate 60 cuerdas of tobacco in 1927. One thousand dollars was paid immediately and another \$1,000 was paid in December. It is interesting to note that the interest rate was set at 9% and that the harvested tobacco had to be delivered to warehouses specified by the bank.<sup>36</sup> Both of these contract stipulations were no different than the ones found in the *contratos de refacción* from non-institutional lenders cited above. All of the contracts cited as examples, including this one from the American Colonial Bank, are from 1927. It is apparent from the similarities in the contracts that there was much more connection between the institutional and non-institutional credit establishments than previously thought. If credit could be obtained under similar terms from either institutional or non-institutional establishments, then farmers may have decided to request credit from already familiar lenders and this could partly explain why participation rates in institutional credit systems remained so low.

By December of 1925, the other provisions of the Agricultural Credit Act had not yet been extended to Puerto Rico. E.B. Thomas, Director of the Federal Land Bank, met with representatives of the *Asociación de Agricultores Puertorriqueños*, to discuss the other sections of the Act, in particular Title III, which would raise the limit of the Federal

---

parts 1-5, *EAP* 5, no. 9 (May 15, 1928): 19-20; no. 10 (May 31, 1928): 24-25; no. 11 (June 15, 1928): 23-24; 6, no. 4 (August 31, 1928): 15-17; no. 10 (November 30, 1928): 20-21. Ramón Gandía Córdova was a civil engineer who served as Sub-Commissioner of the Department of Agriculture and Labor from 1916 to 1922. He founded the *Revista de Agricultura* in 1917 and continued his involvement in agricultural projects in Puerto Rico throughout the remainder of his life.

<sup>36</sup> “Contrato de refacción agrícola,” *AML* 3, no. 551 (October 27, 1927), 1532.

Farm Bank loans to \$25,000.<sup>37</sup> This meeting occurred at the same time that the Federal Land Bank was reevaluating their loan policies due to high foreclosure rates in the U.S. Farmers in Puerto Rico, who were aware of the problems and who were afraid of defaulting on their Federal Land Bank loans at the same high rates as American farmers, were asking for blanket extensions to all loans made to Puerto Rican farmers. Such requests could not have come at a worse time, since both the insular legislature and the farmers' association were intensely campaigning for the extension of the Agricultural Credit Act in its entirety to the island. An editorial in *El agricultor puertorriqueño* encouraged farmers to repay their loans without an extension: "The extensions will perhaps be granted, but it would greatly affect the solid credit that the farmers have earned with the Federal Bank... this allows us to ask for a greater credit amount that will reach \$25,000."<sup>38</sup> Unfortunately, the defaults could not be prevented and the new loan maximum under Title III of the Agricultural Credit Act was not made available to Puerto Rican farmers.

Although tobacco farmers were willing to deal with institutional credit, non-institutional systems were still very much in place and were either supplemented with or used in lieu of institutional credit. The case of José Muñoz López, owner of a 90-*cuerda* tobacco farm in San Lorenzo, is an interesting example of difficulties with the Federal Land Bank program and the availability and utilization of non-institutional credit. Although the exact date of the transaction is not known, Muñoz López secured a 20-year mortgage from the Federal Land Bank of Baltimore for \$3,015.68. Because he was having trouble paying the Federal Land Bank, Muñoz López obtained a second mortgage

---

<sup>37</sup> "Visita con Mr. E.B. Thomas, Director del Federal Land Bank," *EAP* 1, no. 6 (January 16, 1926): 10.

<sup>38</sup> "Sección editorial: El crédito," *EAP* 2, no. 8 (August 28, 1926): 1.

in 1927 for \$1,000 from Pedro Orcasitas Muñoz, another local landowner.<sup>39</sup> The new mortgage was payable in one year, at the rate of 1% interest per month plus \$200 for expenses.

After the market crash of 1929, delinquent loans and foreclosures increased both in the United States and in Puerto Rico. As a response, the United States Congress enacted emergency measures intended to provide the necessary credit to continue agricultural production. First, the loan conditions of Federal Land Banks were amended to make short-term credit easier to obtain for cooperative associations. In Puerto Rico, the Federal Land Bank of Baltimore offered production loans from 6 months to three years. To prevent heavy losses the borrowers could only secure loans worth 75% of the expected crop.<sup>40</sup> Additional production loans were granted by the Federal Rehabilitation Commission, managed through the “Porto Rican Hurricane Relief Commission,” which had been established after the devastating hurricane San Felipe II struck the island in 1928. These rehabilitation loans, as specified in an official memorandum from the federal agency published in *El agricultor puertorriqueño*, were granted to individual farmers that suffered significant damage to their crops, farms, or other buildings (such as curing ranches) because of the hurricane.<sup>41</sup> Loan limits were set at \$25,000 and payments were made on a monthly basis.

Federal agricultural legislation continued to evolve and became more sophisticated as it responded to the changing reality of farmers in the U.S. and Puerto

---

<sup>39</sup> “Hipoteca,” AML 3, no. 511 (October 7, 1927), 1424.

<sup>40</sup> “Los préstamos agrícolas hechos en Puerto Rico,” *EAP* 7, no 8 (April 30, 1929): 16.

<sup>41</sup> “Reglas que deben seguir los agricultores que han de gestionar Préstamos Federales autorizados por la Comisión Rehabilitadora,” *EAP* 7, no 8 (April 30, 1929): 20-22

Rican farmers who closely followed changes in federal credit laws. The Federal Farm Board (FFB) was created under the Agricultural Marketing Act of 1929 to provide funds to stabilize prices through marketing programs, such as compiling data on prices, existing stock, and domestic and foreign demand for agricultural products.<sup>42</sup> The FFB would make these data accessible to agricultural producers so that farmers would be well informed when they sold their products in the market. The FFB also encouraged the establishment of marketing cooperatives and provided funds to build structures that would help in the distribution of agricultural products, including warehouses to store tobacco.<sup>43</sup> The FFB would also be allowed to make loans to any cooperative association. The law was extended to Puerto Rico in 1930.<sup>44</sup>

Even when the laws were extended in their entirety to the island, the local population could be unhappy with the results. Barely a month after the FFB programs had been approved for Puerto Rico, representatives of the *Asociación de Agricultores Puertorriqueños* asked Governor Theodore Roosevelt, Jr. and Resident Commissioner Félix Córdova Dávila to lobby in Washington for an additional \$1,000,000 in loan money. Although “grateful” to the U.S. Congress for the initial approval of \$6,000,000

---

<sup>42</sup> “Texto íntegro de la ley que crea la Junta Federal y Agrícola y cuyos beneficios se han extendido a Puerto Rico,” parts 1 and 2, *EAP* 10, no. 7 (October 15, 1930): 26; no. 8 (October 31, 1930): 25-27. Additional information and updates on the FFB activities were published in “Comentarios a la Ley de Compraventa Agrícola. Reglas de interpretación acordadas por la Junta Agrícola Federal,” *EAP* 10, no. 9 (November 15, 1930): 23-26.

<sup>43</sup> “La atención de préstamos de la Junta Federal Agrícola de Estados Unidos se considera posible por los fruteros de Puerto Rico,” *EAP* 9, no. 1 (January 15, 1930): 20.

<sup>44</sup> “Texto íntegro,” part 1, 25. FFB representative Chris L. Christensen visited Puerto Rico in November of 1930 to discuss the cooperative associations of Puerto Rico and to determine the aid that the FFB could provide the farmers of the island. An announcement of his visit was published in “El Representante de la Junta Federal Agrícola de Estados Unidos, estará en Puerto Rico el día 17 de noviembre,” *EAP* 10, no. 9 (November 15, 1930): 9.

for loans, the amount only funded 3,000 of the 5,000 applications in the system.<sup>45</sup> An additional appropriation would be necessary if all of the applicants were to be funded. The determination with which Puerto Rican farmers constantly pressured the insular and federal legislators to act on their behalf was remarkable. There was no reluctance and no intimidation on the part of the farmers and their representatives when dealing with governmental authorities in San Juan or in Washington.

Puerto Rican farmers were not only looking toward the mainland to solve production credit problems. In a General Assembly of the *Asociación de Agricultores Puertorriqueños* of 1930, the membership approved Resolution #29, which asked the insular legislature to set the interest on loans at 9%. In addition, the members passed Resolution #37, which would establish a commission to study the feasibility of establishing the “Agricultural Bank of Puerto Rico”<sup>46</sup>

Further evidence that Puerto Rican farmers applied pressure to effect changes in financial decisions that affected them can be found in 1931, when the Puerto Rican branch of the Federal Land Bank of Baltimore put a blanket stoppage on all loans granted to farmers. Farmers throughout Puerto Rico quickly and publicly criticized the seemingly arbitrary nature of the decision. As a response, representatives of the bank visited the island to address their concerns.<sup>47</sup> Representatives met with Governor

---

<sup>45</sup> “Gestiones que a solicitud de la AA llevará a cabo en Washington el Gobernador Roosevelt y el Comisionado Residente,” *EAP* 10, no. 10 (November 30, 1930): 9, 11.

<sup>46</sup> “Resoluciones aprobadas por la Asamblea de Agricultores,” *EAP* 9, no. 1 (January 15, 1930): 31, 36.

<sup>47</sup> The visit was published in the “El Banco Federal y los agricultores,” *EAP* 11, no. 16 (August 31, 1931): cover page. The letter from the directors of the bank and response from the *Asociación de Agricultores Puertorriqueños* were published in the same issue, “Carta de los Directores del Banco Federal al Presidente de la AA,” 2, 31; and “Acuerdos de la Junta Directiva de la AA, en relación con la carta de los Sres. Directores del Banco Federal de Baltimore,” 3. Additional details of the visit were published in “Notas

Roosevelt, Commissioner of Agriculture Edmundo Colón, and the President of the *Asociación de Agricultores Puertorriqueños*, José Pesquera. After their visit, the bank decided to reinstitute borrowing for those farmers who would qualify and made their decision public with a letter published in its entirety in *El agricultor puertorriqueño*. The AAP made a commitment to meet with farmers throughout the island to make everyone aware of the results of the visit with the bank directors.

Further changes to U.S. agricultural legislation once again affected Puerto Rican farmers as the Great Depression continued. The Reconstruction Finance Corporation, which was created on January 22, 1932, was responsible for making agricultural loans to banks, insurance companies, mortgage companies, and local credit unions for the financing of both long and short-term loans. The RFC would also establish twelve regional agricultural credit corporations, one in each of the federal land bank districts; Puerto Rico would be included in the RFC corresponding to Baltimore.<sup>48</sup> This branch was assigned \$3,000,000 for production loans and Puerto Rico would be able to take advantage of these. Local realities, however, fueled demands for additional assistance. That same year, the island was devastated by hurricane San Ciprián. Farmers demanded that both the insular and federal governments assist the agricultural sector with additional emergency funding. As a response, the federal government created the Puerto Rico Rehabilitation Commission to offer second mortgages on agricultural property.<sup>49</sup>

---

sobre la visita de los Directores del Banco Federal de Baltimore,” *EAP* 11, no. 17 (September 15, 1931): 3-4, 29-30.

<sup>48</sup> “La corporación de crédito agrícola,” *EAP* 12, no. 19 (October 30, 1932): cover page.

<sup>49</sup> “La Administración de Créditos Agrícolas y el establecimiento de sus agencias en Puerto Rico,” in Rafael Menéndez Ramos, Comisionado de Agricultura y Comercio, *Informe Anual del Comisionado de Agricultura y Comercio correspondiente al fiscal 1933-1934* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1934), 156.

Perhaps no other legislation had as much effect on Puerto Rican tobacco growers as the Agricultural Relief Act of 1933, part of Franklin D. Roosevelt's relief program to help stabilize the U.S. economy. The Agricultural Relief Act was an extensive agricultural program that attempted to stabilize agricultural markets through relief payments to farmers, crop reduction to support prices, and access to credit. Several pieces of legislation quickly followed. The Emergency Farm Mortgage Act of May 12, 1933 dealt with the problem of delinquent mortgage loans by providing the necessary funds to refinance all mortgages held by companies other than federal land banks. A reduction in the interest rate was mandated to 4.5% in the United States and 5% in Puerto Rico, which were later reduced again to 3.5% and 4% respectively.<sup>50</sup> In addition, extensions on all federal land bank loans would be granted to all borrowers facing repayment difficulties. The maximum amount for a loan was increased from \$25,000 to \$50,000 and most important, federal land banks were now authorized to make loan directly to farmers.<sup>51</sup> By 1935, the Federal Land Bank had become the most important mortgage lender for tobacco farmers in the island, and the second most important lender for coffee and sugar farmers. (See Table 3.2 and Figure 3.1.) Just two years later, the Federal Land Bank was the most important mortgage lender for farmers in all three major crops. (See Table 3.3 and Figure 3.2.) However, individual lenders still held a large share of the mortgages for tobacco and sugar farms.

---

<sup>50</sup> Torgerson, "Agricultural Finance," 199.

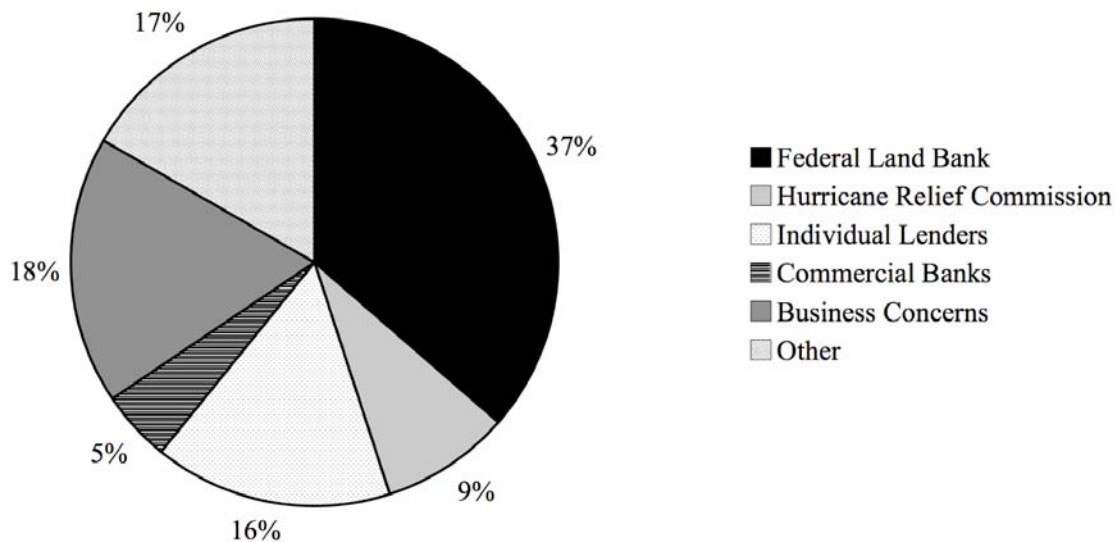
<sup>51</sup> Preston and Bennet, "Legislation of 1933," 12-13.

**Table 3.2.**  
**Percent of Mortgages Held by Type of Lender, 1935**

Lender	Tobacco	Sugar	Coffee
Federal Land Bank	36.7%	26.7%	29.8%
Hurricane Relief Commission	8.7%	6.0%	34.8%
Individual Lenders	33.3%	48.7%	16.8%
Commercial Banks	4.7%	3.8%	6.4%
Other	16.7%	14.8%	12.2%
Total	100%	100%	100%

Source: Division of Agricultural Economics, Agricultural Extension Service, *Annual Report of the Division of Agricultural Economics of the Agricultural Extension Service, 1934-1935* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1935), 145.

**Figure 3.1**  
**Percent of Tobacco Farm Mortgages Held by Type of Lender, 1935**



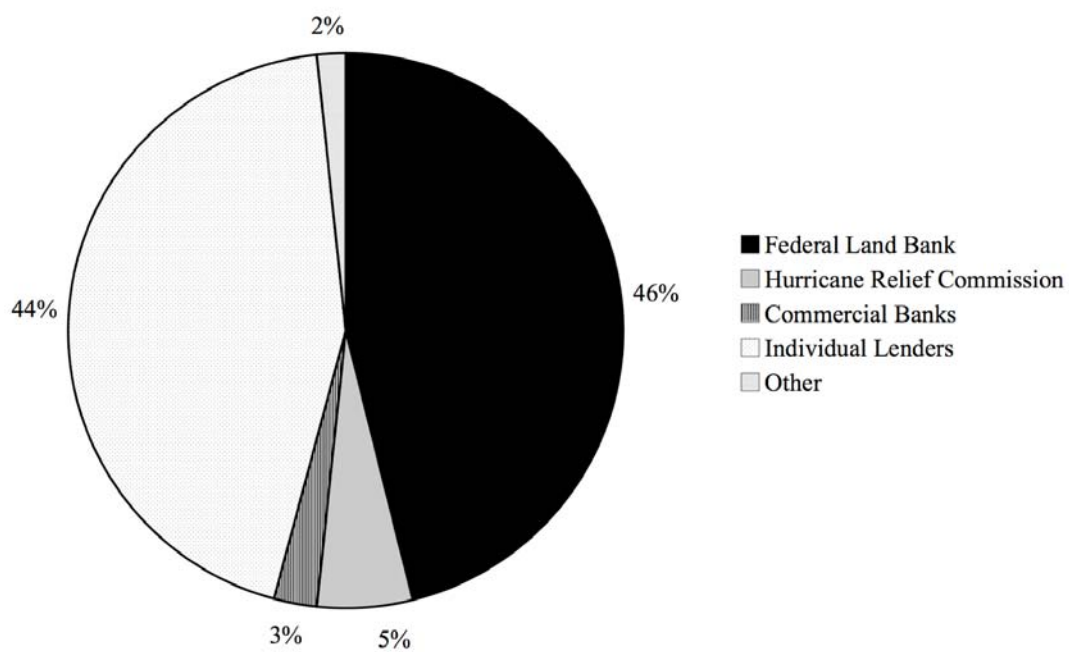
Source: Same as Table 3.2.

**Table 3.3**  
**Percent of Mortgages Held by Type of Lender, 1937**

Lender	Tobacco	Sugar	Coffee
Federal Land Bank	46.2%	54.3%	43.5%
Hurricane Relief Commission	5.4%	3.8%	27%
Commercial Banks	2.5%	0%	0%
Individual Lenders	44.3%	38.5%	19.7%
Other	1.6%	3.4%	9.8%
Total	100%	100%	100%

Source: Pérez, *Living Conditions*, 61.

**Figure 3.2**  
**Percent of Tobacco Farm Mortgages Held by Type of Lender, 1937**



Source: Same as Table 3.3.

The Farm Credit Act enacted on June 16, 1933 specifically addressed the problem of access to short-term credit for cultivation by establishing a production credit corporation in each of the federal land bank districts. Although the production credit corporations did not themselves lend money to farmers, they were charged with promoting the organization of farmers' credit associations and of supervising those associations' financial operations. The United States would be divided into twelve federal districts, each with a Federal Land Bank, a Federal Intermediate Credit Bank, a Corporation of Production Credit and a Bank for Cooperatives. Puerto Rico would fall under District #2, and would be served by the Baltimore organizations.

The Annual Report of the Commissioner of Agriculture and Commerce of 1933-34 devoted an entire section to the Farm Credit Act and its effects on the farmers of Puerto Rico.<sup>52</sup> Carlos Chardón, Commissioner at the time, stated that “due to, in great part, the efforts of the insular Department of Agriculture and Commerce... all credit programs [under the Farm Credit Act] had been made available on the island. To such aim, the Commissioner traveled to [Washington] on November of 1933, presenting to the authorities the case of Puerto Rico and the need on the island to establish the different credit agencies of the Farm Credit Administration.”<sup>53</sup> During his visit to Washington, Commissioner Chardón met with George H. Stevenson, President of the Production Credit Corporation of Baltimore, and with Dr. F. H. Bomberger, President of the Bank for Cooperatives, both of whom assured him of their commitment to establish said agencies in Puerto Rico within the shortest time frame possible.<sup>54</sup> These promises were

---

<sup>52</sup> “Administración,” 154-166.

<sup>53</sup> Ibid., 155.

<sup>54</sup> Ibid., 159.

kept, and the Puerto Rico Production Credit Association and the Bank of Cooperatives were established on the island less than a year later.

Miles H. Fairbanks, representing the Production Credit Corporation of Baltimore, established its branch in Puerto Rico on March 1, 1934. Table 3.4 and Figure 3.3 below detail all of the Production Credit Associations that were quickly established to take advantage of new financing opportunities. Although more than half of the total capital available (63%) was divided among five sugar cane Production Credit Associations, the largest single allocation was made to the one tobacco Production Credit Association, which received 24% of the available capital. Considering that typical loans averaged 9 to 12% interest, these production loans, at 5% fixed interest, were seen as a godsend by farmers across the island.<sup>55</sup>

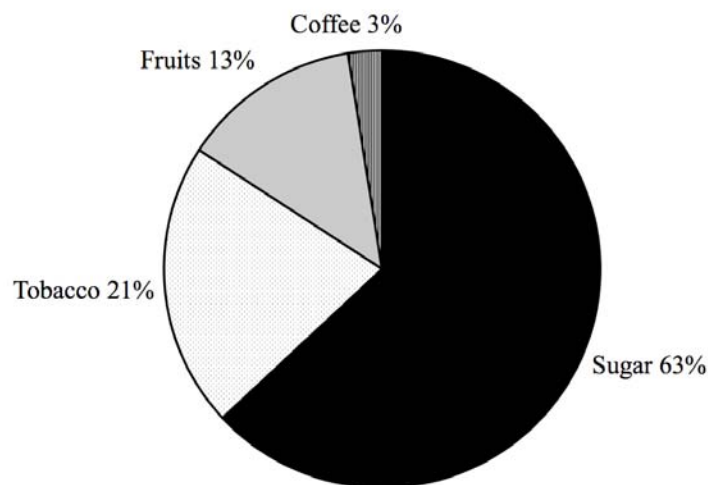
**Table 3.4**  
**Production Credit Associations established in Puerto Rico in 1934.**

<b>Name</b>	<b>Agricultural Product</b>	<b>Capital</b>
Asociación de Créditos Refaccionarios de Cafeteros	coffee	\$50,000.00
Asociación de Créditos Refaccionarios para Frutas	citrus fruits and pineapple	\$250,000.00
Asociación de Créditos Refaccionarios de Cosecheros de Tabaco	tobacco	\$400,000.00
Asociación de Créditos Refaccionarios del Norte Central	sugar cane	\$150,000.00
Asociación de Créditos Refaccionarios del Norte	sugar cane	\$200,000.00
Asociación de Créditos Refaccionarios del Noroeste	sugar cane	\$200,000.00
Asociación de Créditos Refaccionarios del Este Central	sugar cane	\$200,000.00
Asociación de Créditos Refaccionarios del Sur	sugar cane	\$250,000.00
Asociación de Créditos Refaccionarios del Sureste	sugar cane	\$200,000.00

*Source:* “Administración,” 159.

<sup>55</sup> *Ibid.*, 160. The details of the Farm Credit Act programs and the Production Credit Corporations were also discussed in the local agricultural press in “Organización de la Administración de Créditos Agrícolas,” *EAP* 14, no. 1 (January 1934): 4.

**Figure 3.3**  
**Percentage of Production Credit Capital for Major Crops, 1934**



*Source:* Same as Table 3.4.

Agricultural loans made by the Puerto Rican Production Credit Association continued and the capital available increased for the next several years. Table 3.5 below details the total value of the loans made by the association for the years 1936-1938. A year later, under the leadership of Ramon C. Parés, the association announced that interest rates would be reduced from 5½% to 5% annually.<sup>56</sup> Parés is quoted as saying, “It is hoped that this reduction... will serve to encourage those farmers who are not yet receiving the benefits of this institution to solicit from it.”<sup>57</sup>

<sup>56</sup> “Puerto Rican Production Credit Association,” *EAP* 19, no. 3 (March 1939): cover page.

<sup>57</sup> *Ibid.*, 2.

**Table 3.5**  
**Value of Loans Made by the Puerto Rican**  
**Production Credit Association, 1936-1938**

Year	Amount
1936	\$1,246,386.96
1937	\$1,411,294.79
1938	\$1,843,314.06

*Source:* "Operaciones de la Asociación de Crédito para la Producción," *EAP* 18, no. 8 (August 1938): 10.

Loans made by the Bank for Cooperatives in Puerto Rico would finance the construction of necessary buildings, including factories and warehouses, for the processing of agricultural products. The life of the loan would be from 5 to 10 years, at an interest rate of 4.5%.<sup>58</sup> Additionally, loans would be made for 1 year at 4% interest to assist in the marketing of products. Considering that the single largest physical expense for a tobacco grower was the building of an appropriate curing barn, these loans were crucial to the financial solvency of tobacco farms. Tobacco cooperatives applied for loans to build ranches that their members could use for a nominal fee.

The final law tied to the Agricultural Relief Act was the Agricultural Adjustment Act of 1933 (Public law 73-10 of May 12, 1933), which was an attempt to regulate prices by limiting the quantity of a particular agricultural product marketed. To do this, parity payments would be made to farmers who left land unplanted. For American tobacco, the goal was to reduce plantings by 30%. A specific quota would be set for each planter based on his total acreage, past production, and resources available to cultivate his land. To make sure tobacco farmers' income was not further reduced, benefit payments would

---

<sup>58</sup> "Administración," 161.

make up the difference in receipts. These subsidies could be made in the form of rent for unused land, adjustments on the market price of tobacco, or deficiency payments for tobacco production that fell below the specified allotment.<sup>59</sup> If farmers wanted to receive benefit payments, they signed contracts adhering to their allotments. Farmers who did not sign contracts, or who grew tobacco over their quota would be taxed from 25% to 33% of the market price.<sup>60</sup> The Act also created the Agricultural Adjustment Administration (AAA), a federal agency that would be responsible for establishing and managing the program.

In Puerto Rico, where the tobacco sector was still recovering from the bumper crop of 1927, the AAA provided a structure whereas tobacco farmers could reduce plantings without sacrificing income.<sup>61</sup> Shortly after the AAA was passed by the United States' Congress, the Director of the Tobacco Program of the AAA in Washington, Dr. J. B. Hutson visited Puerto Rico. During his meeting with Commissioner Chardón, he made a commitment to do everything possible to extend AAA benefits to Puerto Rico and in March of 1934, James Bernard Gibbs was appointed to supervise AAA allotments in the island.<sup>62</sup>

Over 11,000 tobacco farms (396,380 *cuerdas*) were affected by AAA contracts when the Agricultural Adjustment Act was extended to Puerto Rico. Because the 1933-

---

<sup>59</sup> Ratchford, "Federal Policy," 660.

<sup>60</sup> Such taxing was allowed under the Kerr-Smith Tobacco Control Act passed in June of 1934 to penalize tobacco growers who did not sign Agricultural Adjustment Administration contracts for reduction in acreage. This act was ruled unconstitutional by the United States Supreme Court on April 1935. Amendments to the Agricultural Adjustment Act in 1938 allowed for penalties of 5 to 10 cents per pound for tobacco sold in excess of quotas.

<sup>61</sup> For a detailed explanation of the bumper crop of 1927, see Chapter 1.

<sup>62</sup> "Administración," 165.

34 planting was already in the ground when the law was applied to the island, adjustments were made to the benefit payment structure. Farmers who either destroyed or greatly reduced the second planting of 1933-34 would receive \$10-15 for each destroyed *cuerva* of tobacco, depending on the classification of the tobacco.<sup>63</sup> For the crop years 1934-35 and 1935-36 farmers would receive \$30 for each unplanted *cuerva* and another payment at the end of the harvest for 30% of the value of the crop that would have been planted. This is the same amount as American tobacco farmers were receiving. In the crop year 1935-36, tobacco farmers received an average AAA payment of \$61, totaling 17% of their annual income.<sup>64</sup> Table 3.6 below details the acreage under contract for the crop years beginning in September of 1934, 1935 and 1939. AAA allotments were made in almost every single municipality of the island, but the designated “tobacco regions” in this study were assigned from 88.7% to 93.3% of the allotment. The eastern highland region received three quarters of the tobacco allotment.

---

<sup>63</sup> The first planting of the 1933-34 was already finished by the time the AAA benefits were made available to Puerto Rico, so the benefits would apply only to the second planting.

<sup>64</sup> Serrallés, Colón and Juliá, “194 Tobacco Farms,” 17.

**Table 3.6**  
**AAA Acreage Allocation for Tobacco Farms, 1934-1939**

	1934	1935	1939
<b>Total Allocation in Puerto Rico</b>	31,945.0	40,271.0	29,698.4
<b>Total Allocation in Tobacco Regions</b>	29,805.0	36,942.0	26,349.6
<b>Percentage of Allocation in Tobacco Regions</b>	93.3%	91.7%	88.7%
<b>Eastern Highlands</b>			
	1934	1935	1939
Total Allocation in Eastern Highlands	23,108.0	28,242.0	18,888.8
Percentage of Allocation in Eastern Highlands	77.5%	76.4%	71.7%
<b>Western Highlands</b>			
	1934	1935	1939
Total Allocation in Western Highlands	6,697.0	8,700.0	7,460.8
Percentage of Allocation in Western Highlands	22.5%	23.6%	28.3%

*Source:* Figures for 1939 from United States Department of Labor, Wage and Hour Division, Research and Statistics Branch, *Puerto Rico: The Leaf Tobacco Industry* (Washington, D.C.: Government Printing Office, 1941), 59. Figures for 1934 and 1935 from Gage, *Tobacco Industry*, 14.

AAA subsidies were funded through a tax levied on processors of agricultural products. In 1936, the Agricultural Adjustment Act was declared unconstitutional by the Supreme Court of the United States because the processing tax was placing undue pressure on one group of farmers to benefit another. The Soil Conservation and Domestic Allotment Act of 1935, which made benefit payments to farmers who planted soil conservation crops instead of market crops, covered some of the payments made by the AAA until a second Agricultural Adjustment Act was approved on February 16, 1938 (Public Law 75-430). Because this act paid for subsidies through a general tax, it was acceptable to the Supreme Court.

Tobacco farmers in Puerto Rico benefited from AAA payments, increasing the income derived from tobacco by as little as 1% to as much as 48%. Table 3.7 below details the price per pound tobacco farmers received from 1933 to 1940, including benefit payments made by the AAA.

**Table 3.7**  
**Farm Price for Tobacco and AAA Payments, 1933-1940**  
*prices in cents per pound*

Crop Year	Farm Price	Farm Price Including AAA payments	Difference in income	Percentage of Increase in Income Due to AAA Payment
1933-1934	14.18	18.81	4.63	32.7%
1934-1935	17.22	17.41	0.19	1.1%
1935-1936	15.32	22.79	7.47	48.8%
1936-1937	14.96	15.59	0.63	4.2%
1937-1938	11.81	12.36	0.55	4.7%
1938-1939	16.86	19.98	3.12	18.5%
1939-1940	13.87	15.74	1.87	13.5%

*Source:* Serrallés and Vélez, "Precio," 5, 8.

Although many more legislative changes would occur between 1935 and 1940, agricultural credit legislation took a back seat to far-reaching programs of land reform. The Resettlement Administration (1935), later incorporated into the Farm Security Administration (1937 and 1938 in Puerto Rico), and the Puerto Rican Reconstruction Administration (1935) made funds available for farm ownership, resettlement programs, and subsistence cultivation.<sup>65</sup> The Bankhead-Jones Farm Tenant (1937) made loans available for land and equipment purchases and production credit became the responsibility of the Emergency Crop Loan Office.<sup>66</sup> However, the change in Puerto

<sup>65</sup> A detailed discussion of the PRRA is beyond the scope of this study. For a detailed explanation of the land reform program of the PRRA, see Sol L. Descartes, "Land Reform in Puerto Rico," *The Journal of Land and Public Utility Economics* 19, no. 4 (November 1943): 397-417. For an evaluation of the reforms, see Keith S. Rosenn, "Puerto Rican Land Reform: The History of an Instructive Experiment," *The Yale Law Journal* 73, no. 2 (December 1963): 334-356. The documents of the PRRA are well catalogued and accessible both in Washington and in San Juan. There is a wealth of archival material on the establishment of the PRRA and its overall plan of permanent land reform in the Centro de Investigaciones Históricas of the University of Puerto Rico in Río Piedras. Among these records are the correspondence between local administrators and the Department of the Interior in Washington, which provide insight into the often contentious but necessarily candid relationship between insular and federal administrators.

<sup>66</sup> Details about the Bankhead-Jones Act can be found in Oppenheimer, "Rehabilitation," 473-488, and in Torgerson, "Agricultural Finance," 201. Emergency crop loans were made available to Puerto Rican farmers as of 1939. See "Préstamos para pequeños agricultores (Nota Oficial)," *EAP* 19, no. 8 (August 1939): 12. See also "Farm Security Administration. La Administración de Protección Agrícola hace los

Rico from an agricultural economy to an industrial one that began in 1940 shifted the financial interest of the federal and insular legislators from agricultural concerns to capital incentives for corporate investment.

## **Conclusion**

Agricultural credit for Puerto Rican tobacco farmers was available from both institutional and non-institutional sources. The majority of tobacco farmers obtained credit from non-institutional sources, such as *refaccionistas*, lenders who were local landowners, merchants, or leaf traders. *Refaccionistas*, in addition to being production credit providers, also acted as buyers and marketing agents of the leaf they had financed, thereby exerting a tremendous amount of control over the price paid to farmers. Interest rates for *contratos de refacción* varied, from 9% to 15% or higher, and often included additional charges for warehousing, transportation, or simply “expenses.” This arrangement led to abuses on the part of the lenders, and the farm price paid to tobacco farmers was barely enough to cover expenses. In fact, many tobacco growers were in debt before the tobacco season began, and this debt did not include whatever production credit may have been acquired later.

It is no wonder, then, that federal and insular administrators, American observers, and agricultural representatives bemoaned the credit structure of the island, calling it “evil” and “dirty.” Because the situation was equally difficult for farmers in the United States, the federal government had, since 1916, been involved in enacting agricultural legislation to improve the standard of living of American farmers. Most of the legislation

---

primeros préstamos en Puerto Rico: arrendatarios y medianeros serán dueños de fincas,” *El heraldo de extensión* 1, no. 1 (January 1939), 1.

had to do with the establishment of credit institutions that would provide the necessary money for farmers to cultivate their crop, improve their land and buildings, and finance their home. It was due to pressure from the insular government and the agricultural sector of the island that these laws were extended to Puerto Rico.

By 1940, there was a well-established institutional credit structure in Puerto Rico made up of federal and insular banking institutions and commercial private banks.<sup>67</sup> Credit was available at reasonable rates and for any length of time that a farmer needed. The Farm Credit Administration, through the Federal Intermediate Credit Bank of Baltimore and the Puerto Rico Production Credit Association, provided short and intermediate term credit. The Federal Land Bank of Baltimore, and its subsidiaries in San Juan, provided long-term credit. The Baltimore Bank for Cooperatives provided operating capital and commodities loans for cooperative associations to lend to their members at a nominal interest rates. It is perhaps surprising that with all this activity, only a small number of Puerto Rican farmers were taking advantage of federal credit programs.

In a study of small farms conducted by the Department of Labor and the Puerto Rican Reconstruction Administration in 1936, only 1% of the farms studied obtained financing from commercial banks.<sup>68</sup> Non-institutional lenders still served as the principal source of credit for small tobacco, sugar, coffee and minor crop farms, even after 20 years of available institutional credit. Fifty three percent of tobacco farms reported that they received credit from *refaccionistas*.<sup>69</sup> It appears that institutional credit programs,

---

<sup>67</sup> Perkins et al., *Credit*, vii, 10.

<sup>68</sup> Pérez, *Living Conditions*, 44.

<sup>69</sup> *Ibid.*, 12.

although well intentioned, only served those farmers who had a track record with other banks, were in a stable financial situation, or perhaps were the largest producers.

Debt, either mortgage debt or agricultural debt, continued to be a fact of life for most farmers of Puerto Rico. In 1942, 86.6% of farmers reported debt and 49% of those reported mortgage debt.<sup>70</sup> This suggests that over one half of the farmers who reported debt, although not specified in the report, had incurred some type of production debt, whether for cultivation supplies, equipment, or labor. Federal credit programs were successful in the long-term credit market, but the evidence suggests that for short and intermediate credit, Puerto Rican farmers preferred or had more access to non-institutional credit.

---

<sup>70</sup> Ibid., 14.

#### **Chapter 4: Tobacco Growers and Agricultural Organizations in Puerto Rico, 1917-1937**

Puerto Rico's absorption into the United States market after 1898 created new and dynamic economic and political opportunities for the island's farmers. In the highland regions of Puerto Rico the expansion of the tobacco market resulted in a boom in tobacco cultivation that transformed the region and provided an arena for political participation and activism. Tobacco growers became involved in democratic organizations to exert control over their economic sector. They also participated in protests, strikes, political campaigns, and lobbying efforts in Washington and San Juan to demand fair prices for their product, economic incentives, and social programs.

Scholars of Puerto Rico have, since the 1930s, described the effects of the American occupation as a simple dichotomy. Some scholars argue that American imperialism created economic and social chaos, resulting in the pauperization of the farmer and in the exclusion of Puerto Ricans from their own government. Others argue that Americans "saved" Puerto Ricans from a backward society, making the ideals of democracy, freedom, and economic progress a reality for the island.<sup>1</sup> The fundamental problem with these arguments is that Puerto Ricans are invisible, either victims of an abusive imperial power or observers of phenomenal changes in their daily lives. The evidence presented in this chapter will demonstrate that Puerto Ricans were neither victims nor observers. Instead, Puerto Ricans took advantage of the democratic guarantees provided by the colonial government to become advocates for change.

---

<sup>1</sup> For a detailed discussion of the historiography of Puerto Rico, see the Introduction.

This chapter will discuss the participation of tobacco growers in *ligas agrícolas* and local and insular cooperative societies, and in the *Asociación de Agricultores Puertorriqueños* and its official publication *El agricultor puertorriqueño*. Tobacco growers' involvement in such organizations resulted in improvements in their social, economic, and political positions. Their participation in all levels of the insular and federal governments demonstrate that, rather than being victims or passive observers, they were collaborators and activists.

### **The *ligas agrícolas* and cooperative societies**

Tobacco growers increasingly became affiliated with *ligas agrícolas*, local agricultural societies that served as the farmers' advocates to the insular government during the early years of the 20<sup>th</sup> century. Although *ligas agrícolas* existed during the Spanish administration of the island, their numbers increased rapidly after the American occupation. As farmers throughout the island joined existing societies and created new ones, the insular state encouraged such affiliation and the establishment of *ligas agrícolas* in every municipality became official agricultural policy. In fact, Manuel Camuñas, the first Commissioner of the Department of Agriculture and Labor, argued that *ligas agrícolas* should be considered an important element of agricultural modernization. "Rural organization," he wrote in his 1917 annual report, "should be a preferred object of the law and should cover the needs of country life, in order to make agricultural pursuits agreeable, beneficial and profitable."<sup>2</sup> The state's cooperation in the establishment of

---

<sup>2</sup> Manuel Camuñas, Commissioner of Agriculture and Labor, *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1917. From the Report of the Governor of Porto Rico, 1917, pages 545-562 inclusive* (Washington, D.C.: Government Printing Office, 1917), 545.

agricultural societies was “the best means to carry out the social and economical purposes of rural organization.”<sup>3</sup> Camuñas hoped that once farmers were affiliated with *ligas agrícolas*, they could be persuaded to create cooperative societies.

As expected, the tobacco growers who initially became intensely involved in the *ligas agrícolas* were those who had already been active under the Spanish Crown.<sup>4</sup> These growers tended to be owners of large parcels of land. They would often rent part of their land for others to farm or hire managers to run the operation of the farm.<sup>5</sup> The challenge to the agricultural administrators of the insular government and to the landowners who were already involved, was how to incorporate the great majority of tobacco farmers, who were generally owners of small parcels of land, had little technical knowledge of scientific cultivation methods, and were skeptical of the benefits of affiliation.<sup>6</sup> To facilitate the process of organization, the Bureau of Agriculture within

---

<sup>3</sup> Ibid., 545.

<sup>4</sup> The Solá brothers, tobacco growers and businessmen from Caguas, are a good example. Marcelino and Modesto Solá owned large tobacco farms and several businesses under the moniker Solá Hermanos. In 1876, Solá Hermanos founded a commercial-agricultural society to make loans to smaller growers and to find good markets for tobacco. The brothers and their descendants appear in the membership rosters of the *liga agrícola* in Caguas. They also participated in the establishment of the agricultural experimental station in Caguas, the founding of the *Asociación de Agricultores* and were active in town politics. Details of Marcelino and Modesto Solá’s economic activities can be found in José Ramón Abad, *La exposición agrícola e industrial de tabaco realizada en Puerto Rico, diciembre 1883. Memorias de la Junta Directiva*, (Ponce, P.R.: Establecimiento Tipográfico EL VAPOR, 1884), 49.

<sup>5</sup> Juan José Baldrich argued that the great landowners became involved because they were the most threatened by the influx of American capital. He mentioned men such as José L. Pesquera, Agustín Fernández, and Tomás Rodríguez, all tobacco growers who were early members of the *Asociación de Agricultores* and later became de facto leaders of the *no siembra*. José L. Pesquera and Agustín Fernández both served as President of the *Comisión para proteger el tabaco de Puerto Rico*. See Juan José Baldrich, *Sembraron la no siembra. Los cosecheros de tabaco puertorriqueños frente a las corporaciones tabacaleras, 1920-1934* (Río Piedras, P.R.: Ediciones Huracán, 1988), 23-27.

<sup>6</sup> It is difficult to pinpoint farmers’ attitudes, since there were no farmer-run publications at this time and illiteracy rates were around 50% throughout the island. However, a review of official government and agricultural publications suggests that agricultural agents constantly struggled with selling the idea of cooperation to the farmers. The 1920 Agriculture and Labor report states that the “mission of organizing the country encountered at first distrust and apathy.” From the Bureau of Insular Affairs, *Report of the Governor of Porto Rico, 1920, pages 503-566 inclusive*, (Washington, D.C.: Government Printing Office, 1920), 517 (hereafter cited as *Governor 1920*). In 1921, the report read, “There is a lack of earnestness in

the Department of Agriculture and Labor assigned an agronomist and a deputy inspector to each agricultural district.<sup>7</sup> These agents were charged with, among other duties, promoting involvement in the *ligas agrícolas* and encouraging the establishment of cooperative societies for the purchase of all cultivation materials, for the sale of their farm products, and for the securing of credit.<sup>8</sup> The agricultural agents worked closely with those farmers who were already members of *ligas agrícolas* to visit unaffiliated farmers and present public lectures on the benefits of affiliation. Simply stated, the agents and the active farmers began a publicity campaign to create *ligas agrícolas* throughout the island.

The campaign was boosted by rapidly changing economic conditions. After the First World War, when the market for tobacco expanded, supply could not meet demand. By 1920, prices paid to farmers for tobacco reached 52 cents per pound (up from 30 cents per pound), the highest they would ever be.<sup>9</sup> These high prices accelerated investment in tobacco planting and supply increased so rapidly in Puerto Rico that the market could not absorb the additional product. Just a year later, prices plummeted to a little over 18 cents

---

farmers due to discouragement caused by economic crisis.” From Manuel Camuñas, Commissioner of Agriculture and Labor, *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1921. Report of the Governor of Porto Rico, 1921, pages 448-503 inclusive* (Washington, D.C.: Government Printing Office, 1921), 462. It was not until Commissioner Chardón’s report of 1925, that there was evidence that “the attitude of farmers towards modern [cultivation] methods underwent important changes.” From Carlos Chardón, Commissioner of Agriculture and Labor, *Annual Report of the Commissioner of Agriculture and Labor submitted to the Governor of Porto Rico, 1924-25* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1926), 5. After 1925, the editors of *El agricultor puertorriqueño* published countless articles about the importance of participation and of adopting modern agricultural methods. They regularly commented on the serious consequences of apathy and encouraged farmers to become involved.

<sup>7</sup> For a detailed explanation of the structure of the Department of Agriculture and Labor, see Chapter 5.

<sup>8</sup> Manuel Camuñas, Commissioner of Agriculture and Labor, *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1919. From the Report of the Governor of Porto Rico, 1919, pages 685-713 inclusive* (Washington, D.C.: Government Printing Office, 1919), 687.

<sup>9</sup> Jorge Serrallés, Jr. and Martín Vélez, Jr., “Precio del tabaco en rama al agricultor en Puerto Rico del 1907-1940,” *Boletín de la Estación Experimental Insular* 60, (June 1941): 5.

per pound.<sup>10</sup> Tobacco farmers held on to their product with the hope that shortages would once again increase prices. However, tobacco buyers circumvented Puerto Rican growers and obtained the tobacco they needed from Cuban growers. This created an economic crisis for most tobacco farmers, who were unable to repay the cultivation loans they had secured and which were guaranteed against their harvest. The crisis, together with the possibility that buyers could manipulate prices by bringing in tobacco from other islands, was the push growers needed to become involved and join agricultural leagues. So many farmers had dedicated land to tobacco, that it was no longer the owners of larger tobacco farms that were interested in affiliation.<sup>11</sup> Thirty-six *ligas agrícolas* were established between 1919 and 1920. Almost sixty percent of the *ligas* and almost half of all members were in tobacco growing municipalities. (See Table 4.1 and Map 4.1.)

---

<sup>10</sup> Serrallés and Velez, p. 5. For a detailed explanation of the tobacco market cycles, see Chapter 2.

<sup>11</sup> Silvia Álvarez Curbelo, “La patria agrícola: la ideología de los agricultores de Puerto Rico, 1924-1928” (master’s thesis, University of Puerto Rico, 1986), no page numbers.

**Table 4.1**  
**Agricultural Leagues in Tobacco Regions, 1920**

Municipality	Founding Date	Members
Aguas Buenas	March 28, 1920	84
Aibonito	January 11, 1920	80
Arecibo	January 25, 1920	355
Barceloneta	March 7, 1920	61
Barranquitas	January 25, 1920	40
Bayamón	September 11, 1919	45
Caguas	January 18, 1920	250
Camuy	April 4, 1920	27
Ciales	March 17, 1920	54
Comerio	March 9, 1919	50
Corozal	March 2, 1920	58
Hatillo	March 21, 1920	45
Isabela	April 5, 1920	38
Jayuya	November 29, 1919	200
Juncos	March 7, 1920	100
Morovis	March 7, 1920	15
Orocovis (Barros)	January 18, 1920	110
Quebradillas	May 8, 1920	66
San Lorenzo	February 29, 1920	203
Utua	October 11, 1919	315
Yabucoa	May 23, 1920	67
<b>Total Members in Puerto Rico (36)</b>		<b>4,245</b>
<b>Total Members in Tobacco Regions (21)</b>		<b>2,101</b>
<b>Percentage of Members in Tobacco Regions</b>		<b>49.5%</b>

*Source: Governor 1920, 522.*

**Map 4.1**  
***Ligas Agrícolas* Active in the Tobacco Regions in Puerto Rico, 1920**



As the *ligas agrícolas* increased their membership and were more accepted among the farmers, so did the interest in establishing tobacco-sector specific organizations, including purchasing, marketing and credit cooperative societies. One of the first tobacco-specific organizations was organized in Cayey in 1921 as the *Asociación de Cosecheros de Tabaco de Puerto Rico*. The objective of the association was to promote the most efficient cultivation methods, improve the selection, packaging and sale of the tobacco leaf, and to purchase all cultivation materials in bulk. The *Cosecheros* were also concerned that prices would remain low if tobacco buyers continued importing tobacco from Cuba. Since Cuban tobacco paid a low tariff when imported to Puerto

Rico, tobacco buyers would do all the processing in Puerto Rico and then export the finished product to the United States. Because the tobacco product would be coming from Puerto Rico, instead of Cuba, it would be tariff-free when it entered the United States.

To combat such possibilities, the *Cosecheros* joined two other societies, the *Liga Agrícola de San Lorenzo* and the *Liga Agrícola de Comercio*, and sent representatives to Washington in support of a bill that would raise the tariff of imported tobacco to 35 cents a pound.<sup>12</sup> A higher tariff for tobacco imported into Puerto Rico would mean that tobacco buyers would no longer find it profitable to go to alternative sources and would pay fair prices for Puerto Rican tobacco. When the bill was later ratified, it became known as the *ley de sellos* because, in addition to the tariff raise, it also demanded that each exporter and manufacturer use a stamp on the package to indicate the percentage of native and foreign tobacco in a cigar.<sup>13</sup>

Involvement in *ligas agrícolas* paved the way for the establishment of cooperative societies, membership-based organizations that operated as marketing agencies for tobacco and provided members with credit.<sup>14</sup> Farmers needed credit to run their farms, regardless of the size of the operation. Tobacco growers, like other farmers in Puerto Rico, would get a *contrato de refacción* from a lender.<sup>15</sup> This agricultural contract

---

<sup>12</sup> Camuñas, *Report 1921*, 449.

<sup>13</sup> “La dirección de la Agencia de Garantía del Tabaco de PR en NY,” *El agricultor puertorriqueño* (hereafter cited as *EAP*) 3, no. 3 (February 15, 1927): 18-9.

<sup>14</sup> Cooperative societies were legally approved in the Extraordinary Legislative Session of the Puerto Rican legislature of 1920 as “Act No. 3, For the Incorporation and Regulation of Cooperative Associations of Production and Consumption.” Described in the *Tenth Annual Report of the Insular Experimental Station of the Dept of Agriculture and Labor of Puerto Rico, Fiscal Year 1919-20* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1920), 5.

<sup>15</sup> For a detailed discussion of credit arrangements, see Chapter 3.

advanced a determined sum of money at a particular interest rate based on what the harvest was expected to sell for. Because prices paid to the farmer were fixed in the contract and were irrespective of real market prices at harvest time, many farmers found themselves either in debt after the harvest was sold or unable to begin the following year's cultivation without another loan. Supporters of cooperatives argued that if tobacco farmers were to set up cooperative banks, then they would be in control of their finances. Tobacco banks, as these cooperatives were called, would secure loans from federal or private banks and then lend to individual farmers at lower interest rates than speculators and companies. The cooperative associations would also handle the storage, delivery, and management of the crop until its sale. All of the members' tobacco would then be and marketed and sold in bulk by the cooperative.

The first attempt at establishing a cooperative association occurred in 1920 when members of the *ligas agrícolas* in Comerío, Jayuya, Caguas and San Lorenzo decided to combine their product and sell it directly to the market. Their effort secured prices that were higher than those paid to any other grower in those municipalities.<sup>16</sup> The success of these growers, together with a campaign led by the newly established *Asociación de Agricultores de Puerto Rico*, an island-wide farmers' association, created excitement among the farmers for affiliation into cooperative societies, including tobacco banks, purchasing cooperatives, and marketing associations.

During the decade of the 1920s, there was a dramatic increase in the number of tobacco farmers who joined cooperatives. *Tabacaleros de Comerío, Inc.* was organized

---

<sup>16</sup> *Governor 1920*, p. 523.

on August 15, 1925 with \$10,260 in capital and 57 shareholders.<sup>17</sup> The cooperative held 2,954 *quintales* of tobacco valued at \$126,736.85.<sup>18</sup> A year later, the cooperative recorded a profit of \$1,591.41, a return of over 15%. Most municipalities in the tobacco-growing regions of Puerto Rico followed suit. Two hundred and fifty tobacco growers established a cooperative in Morovis on May 23, 1926. That same month, another 200 growers met in Caguas and contributed \$100,000 to incorporate *Tabacaleros de Caguas*.<sup>19</sup> Naranjito growers organized their *Banco Tabacalero* with \$6,000, and *Tabacaleros de San Lorenzo Inc.* had \$10,000 from 47 shareholders when they began.<sup>20</sup> Their investment in 3,000 *quintales* of tobacco was valued at \$113,165.06. *Tabacaleros de Aibonito, Inc.* originally had 60 shareholders and its initial operating capital was \$12,000, which they invested in 3,360 *quintales* of tobacco that was later valued at \$356,477.55. In addition, part of their initial capital was used to build a warehouse to hold over 10,000 *quintales* of tobacco.<sup>21</sup> The growers of Cayey also built a warehouse. Their *Tabacaleros de Cayey, Inc.* had 102 founding shareholders with a capital of almost \$11,000.<sup>22</sup> Shareholders invested in 8,447 *quintales* of tobacco valued at \$362,315.25. *Banco Tabacalero de Utuado* was established with \$3,000 in capital.<sup>23</sup> The tobacco

---

<sup>17</sup> “Los Bancos Tabacaleros siguen prosperando,” *EAP* 2, no. 3 (July 24, 1926): 18.

<sup>18</sup> A *quintal* is the equivalent of 100 pounds, also called a hundredweight.

<sup>19</sup> “Organizaciones agrícolas,” *EAP* 1, no. 25 (May 29, 1926): 4.

<sup>20</sup> *Tabacaleros de San Lorenzo* was established on June 14, 1925. The *Banco Tabacalero de Naranjito* was established in June of 1926. See “Naranjito organiza su Banco Tabacalero,” *EAP* 1, no. 28 (June 19, 1926): 10.

<sup>21</sup> “Tabacaleros de Aibonito, Inc.,” *EAP* 1, no.30 (July 3, 1926): 6; and “Tabacaleros de Aibonito, Inc. construyen su almacén,” *EAP* 2, no. 6 (August 14, 1926): 9.

<sup>22</sup> Established July 16, 1925. “Tabacaleros de Cayey, Inc.,” *EAP* 2, no. 1 (July 10, 1926): 9; and “Tabacaleros de Cayey, Inc. progresa,” *EAP* 2., no. 6 (August 14, 1926): 9.

<sup>23</sup> The decision to establish the bank was made in 1926, but it was not until February 27, 1927 that it was actually operational. “La unión hace la fuerza,” *EAP* 1, no. 30 (July 3, 1926): 6; and “Se organiza el Banco Tabacalero de Utuado,” *EAP* 3, no. 5 (March 15, 1927): 17.

growers of Corozal set up their bank on August 15, 1926.<sup>24</sup> The *Tabacaleros de Bayamón* was established in 1927 and they quickly advertised in *El agricultor puertorriqueño*.<sup>25</sup> That same year, growers in Manatí, Barceloneta and Morovis decided to join forces and establish one cooperative association that represented the growers of all three municipalities.<sup>26</sup> In short, there were cooperative societies in operation in all the largest tobacco-producing municipalities during the 1920s.

Such enthusiasm would not be enough to guarantee the success of the cooperative associations. In 1927, the tobacco crop yielded a dramatic fifty million pounds, double what the market could absorb. This led to severe price declines, from approximately 38 cents a pound in 1926 to 19 cents a pound in 1927. Although there was modest recovery in 1928 and in 1930, prices never came close to 1926 levels again. In addition, smokers' rapidly shifting preference from expensive cigars to cheap cigarettes meant that the cheaper grades of tobacco sold more than the expensive ones.<sup>27</sup> The switch to less expensive cigarettes had devastating consequences for the cooperatives, whose members took great pride in the high quality of their tobacco and relied on selling the higher priced grades to balance their books at the end of the season. Many tobacco cooperative societies struggled financially into the 1930s, when the tobacco industry in the island began its downward spiral.

In response to this financial crisis, tobacco growers became interested in insular cooperative societies. A *Cooperativa Insular de Tabacaleros de Puerto Rico*, an insular

---

<sup>24</sup> "Nuestra asociación en la isla," *EAP* 2, no. 7 (August 21, 1926): 3.

<sup>25</sup> "Prestigiando al país," *EAP* 3, no. 7 (April 15, 1927): 21.

<sup>26</sup> The establishment of *Tabacaleros de Manatí, Morovis y Barceloneta, Inc.* was reported in "Importante reunión de Tabacaleros de Manatí," *EAP* 3, no. 11 (June 15, 1927): 30.

<sup>27</sup> For a detailed discussion of the commercial cycles of the tobacco leaf market, see Chapter 1.

tobacco cooperative that combined five existing local cooperative societies, was established in 1928.<sup>28</sup> By 1929, the *Tabacaleros de Puerto Rico*, as it was known, was meeting regularly and was being visited by insular agricultural administrators and representatives from the insular legislature.<sup>29</sup>

*Tabacaleros de Puerto Rico* was an attempt to create a sophisticated financial organization by becoming involved in every aspect of the production and distribution of tobacco leaf.<sup>30</sup> *Tabacaleros* would assist their members from the very beginning of the cultivation process by purchasing all materials needed, such as seeds, fertilizers, and farming tools. The cooperative would then promote cultivation methods that would guarantee a high quality product. Once the tobacco was harvested, the cooperative would assist their members in the curing, storage, and classification of the leaf. Finally, the cooperative would package the leaf to sell to the market, advertise in industry publications, and organize transportation to deliver the leaf once sold. *Tabacaleros* would support existing tobacco banks, lobby elected officials both in Puerto Rico and the United States, and maintain relationships with agents from the federal banks. This was the most comprehensive mission for a cooperative society thus far. Although it was

---

<sup>28</sup> See Minutes of the *Asociación de Agricultores Puertorriqueños*, July 19, 1927; Colección: Asociación de Agricultores de PR; Serie: Actas de la Junta Directiva; Microficha: 1924-1937; Centro de Investigaciones Históricas, University of Puerto Rico, Río Piedras, Puerto Rico (hereafter cited as *CIH*). Resolution also reported in “Resoluciones de la Asamblea General de la Asociación de Agricultores,” *EAP* 4, no. 2 (July 31, 1927): 26-32. The members resolved that the Executive Board of the AAP should designate someone to study the possibility of establishing an insular cooperative. This study included a meeting with farmers from all tobacco growing municipalities. The first meeting of the cooperative is detailed in “Pormenores de la primera reunión para constituir la Cooperativa Insular de Tabacaleros,” *EAP* 5, no. 2 (January 31, 1928): 25-31.

<sup>29</sup> “La Cooperativa Insular Tabacalera celebró una importante reunión en Cayey,” *EAP* 5, no. 3 (February 15, 1928): 19.

<sup>30</sup> “Texto del discurso leído por el Sr. E. Landrón ante la Asamblea de Agricultores que se llevó a efectos en la Estación Experimental de Río Piedras,” *EAP* 11, no. 3 (February 15, 1931): 4-7, 35.

successful in helping its members secure better financial returns, it did not have an effect on the overall decline of the tobacco sector.

Perhaps the most successful cooperative society was the Puerto Rico Tobacco Marketing Cooperative Association. *La Marketing*, as it became known, was founded in 1934 to find new markets for Puerto Rican tobacco, improve the living conditions of tobacco farmers, and secure needed services for their members. “It is our mission to concern ourselves with the progress of our tobacco industry, to adequately contribute to the improvement of our agricultural economy, and to inspire and assure the man who works in the tobacco field.”<sup>31</sup> The Commission to Protect the Tobacco Industry of Puerto Rico granted *La Marketing* a \$24,000 loan to establish a bank with the assistance of the Federal Farm Credit Bank of Baltimore and the Baltimore Bank for Cooperatives.<sup>32</sup> By 1938, it was the largest cooperative society in Puerto Rico. (See Table 4.2.) *La Marketing* provided the most comprehensive member services of any cooperative society in the island, including life, fire and hurricane insurance, lower interest loans, and seed distribution programs. It also supplied cultivation materials, such as zinc, cloth, insecticides, and fertilizers.<sup>33</sup> In addition, *La Marketing* consistently paid members better prices for tobacco than what buyers paid throughout the island.<sup>34</sup> (See Table 4.3.)

---

<sup>31</sup> *La Marketing: un logro del tabacal. Organización y vida de la Puerto Rico Tobacco Marketing Association* (Santurce, P.R.: Publicaciones Yocauna, 1956), 1.

<sup>32</sup> *Ibid.*, 8.

<sup>33</sup> *Ibid.*, 13-6, 18. Agricultural loans carried interest rates from 7 to 10%, but *La Marketing* would lend at no more than a 5.4% interest rate.

<sup>34</sup> *Ibid.*, 17. The exception was the crop of 1936-1937, when prices were lower than those paid by outside buyers.

**Table 4.2**  
**Membership and Capital Report of *La Marketing*, 1934-1940**

<b>Year</b>	<b>Members</b>	<b>Capital</b>
1934-35	1,326	\$35,904.87
1939-40	4,832	\$66,324.00

*Source: La Marketing, 10.*

**Table 4.3**  
**Price Report of *La Marketing*, 1934-1940**

<b>Year</b>	<b>Prices Paid by Private Buyers</b>	<b>Prices Paid by <i>La Marketing</i></b>
1935	\$17.41	\$19.39
1940	\$15.74	\$17.13

*Source: La Marketing, 17.*

The expansion of the tobacco sector and the resulting economic changes provided opportunities for farmers to become involved in democratic processes, both at the local and the insular level. Such participation, however, was not particular to tobacco growers. Sugar planters, coffee farmers, and fruit and vegetable producers were also members of *ligas agrícolas* and cooperative societies. Farmers throughout the island, like the tobacco growers, recognized that their power would be greatly expanded if they united. The result of these activities was the formation of the *Asociación de Agricultores Puertorriqueños*

### ***The Asociación de Agricultores Puertorriqueños***

The *Asociación de Agricultores Puertorriqueños* (AAP) was established in June of 1924. Héctor Scoville, a prominent fruit exporter, called a meeting of farmers to discuss the effects of a possible quarantine of Puerto Rican fruit. Eighty-one farmers representing cane, tobacco and fruit cultivation, came together to foster the mutual assistance and protection of all members and to bring together all “agricultural forces for the purpose of obtaining scientific agriculture based on modern methods [of cultivation].”<sup>35</sup> In addition, the AAP committed itself to “promoting, implementing and developing, on the farmer’s initiative and with the Government’s cooperation, credit and production cooperatives.”<sup>36</sup> The AAP was interested in not only supporting the farmers, but also in securing the progress of the rural areas of Puerto Rico. Their mission statement also included the demand to create a solid rural infrastructure that would include roads, schools, medical services, mail routes, telegraph, public safety, and hygiene. The AAP would be “...a defender of agricultural interests, a servant to the farmers, a promoter of the union of all those who work the land, a sentry of his rights and the spokesman of his being.”<sup>37</sup>

Foremost in their attempt to reach these goals was the organization of local AAP committees in every municipality. Founding members of the AAP, among them tobacco growers Rafael Arce Rollet from Caguas and Pablo Morales Cabrera from Toa Alta, visited municipalities throughout the island to explain the goals of the AAP and to

---

<sup>35</sup> “Asamblea Organizadora de la Asociación de Agricultores de PR,” *CIH* (June 27, 1924).

<sup>36</sup> *Ibid.*

<sup>37</sup> “Nuestros propósitos,” *EAP* 1, no. 1 (December 12, 1925): 2.

discuss the importance of joining the organization.<sup>38</sup> Those farmers who had already been involved with the *ligas agrícolas* were enthusiastic about the AAP.

It is not clear from the minutes of the organization what fee members would pay to join the organization, although it is certain that a contribution was expected. In the first general assembly, a resolution was passed that allowed the Executive Board to determine a contributive amount for each municipality based on the agricultural resources of the locality. It would then be the responsibility of the local committees to decide on the membership fee for their particular municipality. The idea was that the membership fee collected by the local committee would be more than the contributive amount imposed by the Executive Board and that the remainder of the money would remain in the coffers of the local committee for expenses.<sup>39</sup>

It is a testament to the importance given to the AAP by insular and federal government officials that a year after the AAP was established both the Resident Commissioner in Washington, Felix Córdova Dávila, and the Governor, Horace Mann Towner attended the meeting of July 12, 1925. Governor Towner addressed the participants, expressing his support for the goals of the AAP.

Every year, the AAP held a general assembly in which members analyzed economic and political issues affecting farmers, discussed problems specific to a particular crop, and organized lobbying efforts, both in Washington and with local politicians. The first general assembly occurred on December 20, 1925 in Ponce. The AAP had 60 local committees and 6,000 members by this time. Fifty-five of those local

---

<sup>38</sup> *CIH* (March 27, 1925).

<sup>39</sup> “Resumen de los acuerdos tomados por la Asamblea General de la AAPR en el teatro Broadway de Ponce, el día 20 de diciembre de 1925,” *EAP* 1, no. 4 (January 2, 1926): 11.

AAP committees were represented at the general assembly.<sup>40</sup> The main issue before the membership in 1925 was concern over a scheduled visit to Washington by Governor Towner and several local legislators. The AAP was concerned that these officials would “deceive the federal authorities with their tales of grandiose progress of the island.”<sup>41</sup> Members argued that since “*los poderes no están en Puerto Rico, están en Washington,*” a commission of farmers representing the AAP should join the Governor and “truly represent the economic situation in the island.”<sup>42</sup> This commission should also lobby for the extension of federal economic laws that would be favorable to Puerto Rico, in particular, the Curtis-Aswell project, which was being debated in the U.S. legislature at the time and would allow the creation of cooperative marketing societies and more importantly, would give cooperatives the power to limit production.<sup>43</sup> It was also determined that the commission should ask for federal sanctions so that the 500-acre law would be respected.<sup>44</sup> Finally, the commission should negotiate AAP’s affiliation with the American Farm Bureau Federation.<sup>45</sup> The membership would raise \$3,000 to cover

---

<sup>40</sup> Ibid., 11-12; and “La Asamblea,” *EAP* 1, no. 2 (December 19, 1925): 3.

<sup>41</sup> *CIH* (April 5, 1926).

<sup>42</sup> “La Asamblea,” 3. Also in *CIH* (July 19, 1926).

<sup>43</sup> The Curtis-Aswell project (Senate Bill No. 2844) “created an Interstate Farm Marketing Association. Its purpose was to promote and stimulate the orderly flow of agricultural commodities in commerce; to remove burdens and restraints on such commodities; and to provide for the processing, preparing for market, handling, pooling, storing, and marketing of agricultural commodities through co-operative marketing associations.” From “Speech of Charles Curtis accepting the Nomination for the Vice Presidency” given in Topeka, Kansas on August 18, 1928. For full transcription, see <<http://www.vpcharlescurtis.net/ksstudies/speech.htm>>. Association members would have the power to decide “the increase or decrease of production necessary to provide an adequate supply,” meaning that the cooperatives would be allowed to limit planting as they saw fit. From John D. Black, “The Role of Public Agencies in the Internal Readjustments of the Farm,” *Journal of Farm Economics* 7, no. 2 (April, 1925): 153-175.

<sup>44</sup> The 500-acre law, enacted in 1900 and included in the Jones Act of 1917, stipulated that no corporation could own more than 500 acres of land. There had been no enforcement of the law.

<sup>45</sup> *CIH* (February 26, 1926).

the expenses of the trip.<sup>46</sup> (See Table 4.4.) The AAP requested that Governor Towner support the commission. So determined were the members to be successful in their petition, that the organization committed itself to a negative public relations campaign in the event that the governor ignored the request.<sup>47</sup> Governor Towner heeded the request and such a campaign was not necessary. The AAP commission visited Washington in April of 1926 and met Secretary of War Davis and General McIntyre.

**Table 4.4**  
**Contributions for Expenses for**  
**Washington Trip, 1926**

Adjuntas	\$ 50
Aguadilla	\$ 100
Aibonito	\$ 50
Bayamón	\$ 80
Caguas	\$ 200
Cayey	\$ 50
Comerío	\$ 100
<i>El Agricultor Puertorriqueño</i>	\$ 25
Guayanilla	\$ 50
Individual Donations	\$ 890
Isabela	\$ 55
Lajas	\$ 100
Lares	\$ 50
Manatí	\$ 100
Mayagüez	\$ 175
Ponce	\$ 320
P.R. Lead Tobacco Co.	\$ 100
San Germán	\$ 100
Toa Baja	\$ 10
Yauco	\$ 100
<b>Total</b>	<b>\$2,705</b>

*Source: CIH (May 25, 1926).*

The AAP publicized every detail of the commission's visit to Washington in the *El agricultor puertorriqueño*, the official publication of the AAP. The members of the

---

<sup>46</sup> *CIH* (April 5, 1926).

<sup>47</sup> "Resumen de los acuerdos," 11.

commission presented their formal report at the general assembly meeting held on July 11, 1926.<sup>48</sup> The fact that a commission of Puerto Rican farmers was able to meet with the Committee of Insular Affairs, General McIntyre, and representatives of the Department of Agriculture suggests that rather than a one-sided colonial relationship, there was participation from the Puerto Rican population affected by federal laws. The record of the conversations between all the parties concerned show remarkable candidness and a no-holds barred attitude on the part of the AAP representatives to make the situation in Puerto Rico known to U.S. officials. For example, Enrique Landrón spoke of the extreme levels of poverty in the island. He then criticized the level of taxes paid by the Puerto Rican taxpayer when compared with the American taxpayer, arguing that for Puerto Ricans this amount represented a hardship and a heavier burden than for their American counterparts.<sup>49</sup> Later in their visit, the commission met with Lloyd S. Fenny from the Bureau of Rural Economics to lobby for an agricultural survey of the island.<sup>50</sup> The Bureau of Agricultural Economics of the federal Department of Agriculture eventually conducted and paid for the survey.

Visits to Washington and to U.S. politicians by members of the AAP became a regular occurrence. In 1926, the AAP requested that any time the Committee for Insular Affairs decided to hold hearings regarding Puerto Rico, the AAP should be notified. A few months later, the AAP received a letter from Edgar A. Kieso, chairman of the Committee for Insular Affairs, stating that he would grant a public hearing to any

---

<sup>48</sup> “Nuestra comisión en Washington,” *EAP* 1, no. 22 (May 8, 1926): 5. Also reported in “La comisión de la Asociación de Agricultores,” *EAP* 2, no. 3 (July 24, 1926): 6-7.

<sup>49</sup> “Comisión en Washington,” 6.

<sup>50</sup> *Ibid.*, 7. Also in *CIH* (January 21, 1926 and February 26, 1926).

commission that came from Puerto Rico.<sup>51</sup> In 1927, José L. Pesquera gave a detailed report of his meeting with President Coolidge and Secretary of War Davis.<sup>52</sup> This suggests that federal and insular officials recognized the importance of the AAP and that, rather than making decisions without consultation, there was a willingness to discuss repercussions and examine alternatives.

The AAP leadership, with the support of the general membership, lobbied both insular and federal politicians and bureaucrats to secure the funds, laws, or commitment they needed to carry forward their agenda. They had great success. In 1928, an extraordinary session of the AAP was held to discuss the devastation after Hurricane San Felipe II hit the island on September 18, causing a great deal of destruction to many agricultural districts. It was decided that a cable would be sent to Washington describing the dire situation of the island and to “solicit that the American Congress approve legislation to liberally extend credit to Puerto Rican farmers to save the only source of wealth for the country.”<sup>53</sup> A few months later, the AAP received a visit from Senator Hiram Bingham, Chair of the Committee on Territories and Insular Possessions to witness the effect of the hurricane and relief funds followed shortly thereafter.<sup>54</sup>

A resolution was passed during the 1930 general assembly to solicit the U.S. Congress to immediately approve the extension of the Smith-Lever and Purnell laws to

---

<sup>51</sup> *CIH* (February 26, 1926 and April 5, 1926).

<sup>52</sup> José L. Pesquera was one of the founding members of the AAP. He was later elected President of the AAP and in 1932 became the Resident Commissioner of Puerto Rico in Washington, D.C. The report of his meeting can be found in *CIH* (June 6, 1927).

<sup>53</sup> *CIH* (September 21, 1928).

<sup>54</sup> *CIH* (November 20, 1928).

Puerto Rico.<sup>55</sup> The Smith-Lever Law would create agricultural extension services and the Purnell Law would provide support to the agricultural experiment stations. Both programs enjoyed widespread support from the farmers, and both laws were extended to Puerto Rico shortly thereafter. An AAP commission traveled to Washington in 1931 to solicit additional funds for economic recovery after San Felipe. Their efforts resulted in the creation of a Rehabilitation Commission with an appropriation of \$6,000,000 in agricultural rehabilitation loans, \$2,000,000 for repairs to schools and roads, and \$100,000 for the purchase and distribution of seed to farmers.<sup>56</sup> In addition, the commission lobbied successfully for temporary tax reductions for those affected by the hurricane. These examples suggest that farmers were not only involved at all levels of the island's governmental structure, but had learned how to skillfully lobby and influence the policies of the U.S. government which directly affected their interests.

The AAP agenda was not only concerned with agricultural issues. The AAP also dealt with matters that affected everyday life in rural Puerto Rico, including improvement in roadways, fair and uniform valuation of rural property, workers' compensation programs for farmers, regulations for women and children's labor, the creation of a rural police force, and the construction of new schools.<sup>57</sup> From the meeting minutes of the AAP and the articles and reports published in *El agricultor puertorriqueño*, it is clear that the members of the AAP were heavily involved in economic issues. For example, in 1925, the AAP asked local committees to gather farmers to protest unjust appraisals of

---

<sup>55</sup> "Resoluciones aprobadas por la Asamblea General de Agricultores, celebrada el día 28 de diciembre de 1930 en la ciudad de Ponce, Puerto Rico," *EAP* 11, no. 1 (January 15, 1931): 15-21.

<sup>56</sup> M. González Quiñones, "Pasando balance, parte II," *EAP* 11, no. 24 (December 31, 1931): 1-2.

<sup>57</sup> "Memorial presentado por la directiva de la Asociación de Agricultores a la Legislatura de Puerto Rico, y en su nombre a los presidentes de ambas cámaras Hon. Antonio R. Barceló y Hon. José Tous Soto," *EAP* 3, no. 1 (January 15, 1927): 11.

rural property, which would lead to higher taxes. The insular government, facing a budgetary crisis, had decided property appraisals should occur throughout the island. Residents would then pay taxes according to the new valuations assigned to their properties. The AAP expected that these values would be much higher than in the past, placing an additional burden on the already struggling farmers. The AAP began a campaign criticizing the property reappraisals, declaring that the association would not “support any government [expenditure] earmarked for improvements exclusively in the urban zones, forgetting the needs of the countryside.”<sup>58</sup> In addition, the AAP drafted a detailed proposal for the legislature in which they specified how any reappraisal should be conducted: land values should be the same within categories (i.e., all tobacco lands should be worth the same, all sugar lands the same, etc.); corporations should not have special appraisals; farmers should be represented in all taxation committees; and that any new taxation should only be imposed once all property has been reappraised.<sup>59</sup> The plan was presented to the insular legislature at the end of 1926.<sup>60</sup> Although the AAP did not succeed in suspending the reappraisals, subsequent communications between insular government officials and the AAP demonstrate that the development of the rural areas remained central to government policy.

The AAP was equally involved in the political arena, although the official AAP mission statement stated that it was not a political organization. In 1927, the AAP became involved in several political campaigns, supporting candidates that were friendly to farmers. An attempt at creating a political platform was made that same year. At the

---

<sup>58</sup> Ibid.

<sup>59</sup> *CIH* (November 15, 1926).

<sup>60</sup> “Memorial,” 11-14.

general assembly on March 25, 1928, the membership agreed that the AAP should support “their men” in the upcoming elections for the insular Senate and the House of Representatives. These men would serve with the “principal objective to promote the wellbeing of the agricultural sector, and by extension of the country, free of political compromises when [legislation] is incompatible with the prosperity of the agricultural class.”<sup>61</sup> The AAP went as far as declaring that they would put all of their economic resources and political influence at the service of the political party which best represented the interests of the farmers.<sup>62</sup>

Evidence of the complex relationship between the AAP and the insular and federal government can be found in the pages of *El agricultor puertorriqueño*. The AAP openly criticized the Governor, other insular elected officials, and the federal government when decisions seemed unfair. This candor seems remarkable within the context of a government which has been considered part of an oppressive colonial system by most scholars and it also undermines democratic space created by Puerto Ricans within the colonial system to effectively comment on critical issues facing them in their daily lives. Editorials in *El agricultor puertorriqueño* called both the insular and federal government uncaring, abusive, unfair, and willing to sell out the farmers when politically convenient.<sup>63</sup> Governor Towner’s administration was not well liked. After the 1927 tobacco harvest, when it became apparent that tobacco growers were facing financial

---

<sup>61</sup> “Resoluciones aprobadas por la Asamblea,” *EAP* 5, no. 7 (April 15, 1928): 26-27.

<sup>62</sup> *Ibid.*, 28. For a detailed explanation of the AAP political platform, see “El programa legislativo de la Asociación de Agricultores,” *EAP* 6, no. 12 (December 31, 1928): 12-15.

<sup>63</sup> For an example see “Editorial,” *EAP* 1, no. 3 (December 26, 1925): 1, where the editors criticize the lack of government’s care in land owners losing their farms because they can’t afford taxes. See also “Sección Editorial: La valoración de nuestra propiedad,” *EAP* 1, no. 21 (May 1, 1926): 1. Governor Towner had recently submitted his 1926 report where he cited the low valuation of the land (and the low taxes paid by owners) as a budgetary problem.

difficulties, the AAP requested that the Governor convene an extraordinary session of the legislature to discuss possible solutions. Governor Towner declined the request. The editors of *El agricultor puertorriqueño* criticized the Governor for refusing to deal with the tobacco crisis and accused him of being unethical:

“Of he who directs the displacement of Puerto Ricans, with the criminal complicity of the political fanfare, nothing can be expected except an indirect contribution to the bankruptcy of Puerto Ricans. Governor Towner’s administration should receive no gratitude for any rebuilding of our meager riches. Instead, he leaves us a mortgage of fifty million... with which he capriciously manipulated our political establishment.”<sup>64</sup>

Governor Towner and the legislature had to respond. The result was Law #53 enacted on March 23, 1928 that created the Commission for the Protection of Puerto Rican Tobacco.<sup>65</sup> The Commission would fall under the jurisdiction of the insular Department of Agriculture and Labor and would be financed by the issuing of a \$3,000,000 bond. It would then be supported by a contribution of 1 cent per pound of tobacco grown, processed or sold in Puerto Rico, to be paid by farmers, manufacturing companies, and tobacco buyers. The Commission was charged with providing credit for tobacco cooperatives, acting as the intermediary between growers and buyers, and regulating the acreage of tobacco plantings. The law also required that all “persons, firms or corporations that are dedicated to the financing of the cultivation of tobacco... must be authorized to do so with a license issued by the Commission.”<sup>66</sup> Those operating without said license would be fined \$100-\$1,000 per infraction. Governor Towner vetoed the

---

<sup>64</sup> “La crisis del tabaco y el gobernador de Puerto Rico,” *EAP* 4, no. 6 (September 30, 1927): 12.

<sup>65</sup> “Texto íntegro del Proyecto de Ley aprobado por la Legislatura sobre el tabaco,” *EAP* 5, no. 8 (April 30, 1928): 30-34. The details of the tobacco growers’ assembly where the members of the Commission were elected can be found in “La Magna Asamblea de Tabacaleros celebrada en San Juan,” *EAP* 8, no. 3 (August 15, 1929): 18-20.

<sup>66</sup> “Texto íntegro,” 34.

law. It was once again enacted by the insular legislature on February 18, 1929 only to be vetoed again in a “new destructive action” by the Governor.<sup>67</sup> This time, however, the Governor’s veto did not stand and the Commission was established.

The influence of the AAP on local legislators was crucial in the enactment of this law. The inclusion of five tobacco growers, to be chosen from a list of 15 candidates submitted to the Governor by the AAP on behalf of a general assembly of tobacco growers, was a triumph for the AAP and for tobacco growers throughout the island. Unfortunately, the Commission was unable to meet the goals of the law, mostly because the required contribution proved too costly for already struggling farmers. In addition, tobacco manufacturers actively resisted the application of licensing fees, which would have guaranteed operating funds for the Commission.<sup>68</sup> Although it remained operational for a few more years, the Commission was ineffective and was dissolved.<sup>69</sup>

The AAP continued its struggle on behalf of tobacco growers and in 1935 it pressured the legislature to establish the Tobacco Institute, an organization dedicated to conducting scientific research that would address tobacco’s cultivation problems.<sup>70</sup> The Institute was also charged with assisting farmers in the implementation of improved cultivation methods. Unlike the Commission for the Protection of Puerto Rican Tobacco, the Tobacco Institute was funded by the insular legislature as a budget line item. Additional funding was acquired through the levying of a 15-cent tax on each *quintal* of tobacco sold in Puerto Rico. The Institute would have a full-time director, to be

---

<sup>67</sup> “El Gobernador veda el proyecto del tabaco. Un nuevo aspecto de la acción destructora del Gobernador,” *EAP* 7, no. 9 (May 15, 1929): 26.

<sup>68</sup> “Demanda contra la Comisión Protectora del Tabaco declarada sin lugar,” *EAP* 14, no. 6 (June 1934): 15.

<sup>69</sup> For a detailed discussion of the Tobacco Institute, see Chapter 5.

<sup>70</sup> Carlos Esteva Jr., *Third Annual Report of the Tobacco Institute of Puerto Rico (1938-1939)* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1940), 5.

appointed by the Governor from a list of candidates submitted by the AAP. In 1937, when Governor Winship submitted nominations for the director's position, the AAP protested and stated that they were not bona fide farmers and that they would not recommend that the farmers cooperate until the "nominations are corrected."<sup>71</sup> The Tobacco Institute set up a facility that included Agronomy and Chemistry departments, regularly published scientific findings in both the local and American press, and lobbied the insular legislature for additional funding and for laws that would protect the Puerto Rican tobacco industry.<sup>72</sup>

During the decade of the 1930s, when the AAP reported a record 10,000 members, it became a "champion of the nation" and equated agricultural prosperity with the success of the Puerto Rican nation. In 1932 the AAP created a Regional League for the Consumption of Native Products to encourage the population to stop buying imported products and "go native."<sup>73</sup> Front and center was a campaign to establish "Patriotic Fridays," when no Puerto Rican would eat imported food. From January 1, 1933, the campaign would add Wednesday and from July, Mondays would also be included. The pages of *El agricultor puertorriqueño* have many examples of advertisements printed in support of this campaign.

The AAP was a leader in the campaign to establish cooperative associations. In 1927, a meeting was dedicated to a discussion of how to create momentum for the

---

<sup>71</sup> *CIH* (September 7, 1937).

<sup>72</sup> For an example of a publication in the local press, see M.A. Manzano, "Apuntes sobre la química de los tabacos claros para cigarillos," *Revista de Agricultura, Industria y Comercio de Puerto Rico* 31 (1939): 209-211. In the American press, see F.H. Bunker, "Many Economic and Field Problems Facing Puerto Rican Leaf Planters," *Tobacco* 107, no. 26 (1938): 8-11. See also Chapter 5.

<sup>73</sup> "10,000 miembros en la AAPR," *EAP* 9, no. 4 (February 28, 1930): 8. Also in "Al país," *EAP* 12, no. 7 (April 15, 1932): 5, 12.

cooperative movement in Puerto Rico. It was “urgently necessary” to support the establishment of cooperatives and even more so “for all social classes to join it as a matter of patriotism.”<sup>74</sup> Subsequent editorials in *El agricultor puertorriqueño* frequently advocated for the organization of all farmers, especially tobacco farmers, into cooperatives to negotiate for better prices, cheaper cultivation materials, and fairer credit standards. The magazine regularly reported the activities of tobacco cooperatives, updating the membership and capital available, and announcing meetings or particular campaigns in order to drum up attendance and support.<sup>75</sup>

*El agricultor puertorriqueño* was the main propaganda instrument for the AAP. Billed as “useful and necessary for the farmer as is his tractor, his plough, or his yoke,” *El agricultor puertorriqueño* cost 5 cents per issue or \$3 per year.<sup>76</sup> The editors often commented on the hot topic of the time, whether it was absentee landowners, the latest insular political scandal, or the nutritionally poor diet of the typical Puerto Rican farmer.<sup>77</sup> The magazine published letters from farmers, legislators, and insular and federal government bureaucrats, as well as interesting news from the United States and the world. There were also articles on nutrition, agricultural techniques, botany and literature, and advertisements for farm equipment, fertilizer, college courses, and

---

<sup>74</sup> “Fomentemos las Cooperativas,” *EAP* 4, no. 5 (September 15, 1927): 1.

<sup>75</sup> For example, “Mensaje del Presidente de la AAPR a la Asamblea General Ordinaria del día 11 de julio de 1926,” *EAP* 2, no. 2 (July 17, 1926): 4, is full of praise for farmers who joined credit cooperatives (also called “banks”). The editorial in *EAP* 2, no. 24 (December 25, 1926): 2, describes the benefits of joining cooperative societies. The editors also described their visits to tobacco regions to speak of credit cooperatives in “La Asociación de Agricultores aconseja a los cosecheros no forzar las ventas hasta que hayan precio remuneradores,” *EAP* 3, no. 8 (April 30, 1927): 24.

<sup>76</sup> “Sección agrícola,” *EAP* 2, no. 17 (October 30, 1926): 12.

<sup>77</sup> For examples, see “Pesquera y la política nacional,” *EAP* 12, no. 20 (November 15, 1932): 1; “El ausentismo,” *EAP* 2, no. 16 (October 23, 1926): 1; or Pedro González Iglesias, “Una de las causas de nuestra pobreza,” *EAP* 10, no. 4 (August 31, 1930): 20. For a running commentary on the status of the Puerto Rican infrastructure, see the magazine section titled “Cómo andan los servicios públicos en Puerto Rico,” which first appeared in *EAP* 11, no. 5 (March 15, 1931).

insurance. Perhaps the most important section of the magazine was titled “Market and Prices” and it listed the latest prices paid to farmers for products such as sugar, tobacco, and citrus fruits.

Many farmers contributed articles to the *El agricultor puertorriqueño*. These articles dealt with a variety of topics, from tobacco cultivation techniques to larger agricultural issues, such as banking and credit.<sup>78</sup> The ever-changing tax code received plenty of coverage and the magazine usually included copies of official forms, surveys, or names and contact information of those who should be called for questions.<sup>79</sup> Farmers also commented on the living conditions and general wellbeing of the population of the countryside.<sup>80</sup>

The AAP’s support of tobacco growers included reports in *El agricultor puertorriqueño* of meetings, incessant comments on the status of the crop, and the

---

<sup>78</sup> For examples of tobacco-specific articles, see J.D. Stubbes, “La selección de la semilla del tabaco en Puerto Rico,” *EAP*, 1, no. 6 (January 16, 1926): 13; M. Meléndez Muñoz, “El presente y el porvenir del tabaco en Puerto Rico,” parts 1 and 2, *EAP* 1, no. 8 (January 30, 1926): 15-17 and 1, no. 9 (February 6, 1926): 7-9; or Agustín Fernández, “El cultivo de tabaco en Puerto Rico,” *EAP* 11, no. 15 (August 15, 1931): 12, 21-22. Rafael Arce Rollet, tobacco grower from Caguas, wrote a two-part article on the *contratos de refacción*, or agricultural contracts, arguing the disadvantages of borrowing money from speculators or merchants and instead promoted the use of banks for agricultural loans. See “Los contratos de refacción,” parts 1 and 2, *EAP* 1, no. 3 (December 26, 1925): 7; and no. 6 (January 16, 1926): 9-10. For other articles on banking and credit, see “Lo que significa el crédito intermedio para PR,” *EAP* 1, no. 13 (March 6, 1926): 9; or “Las ventajas del Banco Federal de Crédito Intermedio,” *EAP* 1, no. 15 (March 20, 1926): 10. Ramón Gandía Córdova wrote a fascinating 5-part article on the Federal Farm Loan Act. See “Comentarios a la Ley Federal de Préstamos Agrícolas,” parts 1-5, *EAP* 5, no. 9 (May 15, 1928): 19-20; no. 10 (May 31, 1928): 24-25; no. 11 (June 15, 1928): 23-24; 6, no. 4 (August 31, 1928): 15-17; and no. 10 (November 30, 1928): 20-21.

<sup>79</sup> See “Plan completo para hacer la tasación de fincas rústicas,” *EAP* 1, no. 7 (January 23, 1926): 10-14; or “Modo de hacer la tasación de las fincas agrícolas,” *EAP* 1, no. 2 (December 19, 1925): 7.

<sup>80</sup> For comments on nutrition, see M. Meléndez Muñoz, “La habitación campesina en sus relaciones con la higiene y la moral. Alimentación del campesino,” *EAP* 1, no. 11 (February 20, 1926): 7. For general economic and living conditions, see Ignacio Lizardi Flores, “Problemas rurales,” parts 1-4, *EAP* 11, no. 19 (October 15, 1931): 16-7; no. 21 (November 15, 1931): 8, 22; no. 22 (November 30, 1931): 3, 19; and no. 24 (December 31, 1931): 14. For issues of general interest, see Sandalio Torres Monge, “Las corporaciones y las tierras,” *EAP* 8, no. 9 (November 15, 1929): 29-30.

publication of every minute transaction during the buying season.<sup>81</sup> Through the magazine, the AAP disseminated information to tobacco growers regarding global market conditions, including the quantity and quality of tobacco grown in places as far as India and the Philippines and commenting on potential buyers of Puerto Rican tobacco. *El agricultor puertorriqueño* regularly reported the quantity of tobacco in the hands of American buyers and the names and corporate affiliation of tobacco buyers visiting the island.<sup>82</sup>

The *Asociación de Agricultores Puertorriqueños* continued to increase its membership throughout the years and it still exists to this day. Farmers established the AAP to address cultivation problems in the island and to act as the public voice of the farmer in the insular and federal legislature to guarantee the enactment of laws beneficial to the agricultural sector. The AAP was consistently successful, particularly in their efforts to support tobacco growers. Through their affiliation with the AAP, tobacco growers became a political force, and this culminated in the establishment of the Commission for the Protection of Puerto Rican Tobacco in 1929 and the Tobacco Institute in 1936. The shining moment of collaboration between the AAP and the tobacco growers was the coordination of the *no siembra*, a no-planting protest organized

---

<sup>81</sup> Read the eyewitness report by a member of the editorial board of the 1926 tobacco crop in “Tabaco,” *EAP* 2, no. 22 (December 11, 1926): 13. Also see “La Asociación de Agricultores aconseja a los cosecheros no forzar las ventas hasta que hayan precio remuneradores,” *EAP* 3, no. 8 (April 30, 1927): 24, for an example of AAP’s market reports. See “Los engaños en el abono para tabaco,” *EAP* 10, no. 8 (October 31, 1930): 16, for a report of refunds begin given for tainted fertilizer and instructions on how to apply.

<sup>82</sup> Foreign and American tobacco buyers visited the island on a regular basis to determine the quality and availability of the product and to buy tobacco after the harvest. Among these were representatives from the American Cigar Company, Rosenstadt and Waller, American Tobacco Company, Congress Cigar Company, Stern Mendelsohn Co. Inc., Durlach Bros., Webster Cigar Co., and Union Cigar Co. There were also local buyers, such as Ortiz Hermanos and Casa Valiente y Co.

by tobacco growers to reduce the size of the tobacco crop and thus affect prices in their favor.

### **Tobacco growers, the *Asociación de Agricultores* and the *no siembra***

The first report of any intent to limit the tobacco crop occurred in the AAP general assembly of 1925, where it was reported that the farmers of Comerío had agreed to leave the second picking of tobacco in the field.<sup>83</sup> Each tobacco growing season had two pickings: the first one was of a better quality leaf and garnered the best prices; the second picking was of lower quality and therefore worth less. Tobacco buyers would often wait for the second picking to occur before buying product, thus creating a glut of tobacco in the market and paying lower prices for both the first quality tobacco and for that of the second picking. In deciding not to carry out the second picking of tobacco, farmers were looking to stabilize prices by reducing the quantity and increasing the quality of tobacco in the market. Less and better tobacco would mean higher prices. The AAP supported the Comerío decision and sent a copy of the final resolution as approved in the general assembly to the local committees in tobacco-growing municipalities.<sup>84</sup>

In January of 1926, the *El agricultor puertorriqueño* reported that meetings were held in many tobacco municipalities to discuss whether the second picking of the tobacco

---

<sup>83</sup> The minutes of the meeting can be found at *CIH* (December 20, 1925). For an explanation of the process by which the second picking affects the market, see “Por qué no debe cogerse el segundo cosecho del tabaco,” *EAP* 3, no. 2 (January 31, 1927): 38.

<sup>84</sup> “Resumen de los acuerdos tomados por la Asamblea General de la Asociación de Agricultores Puertorriqueños en el Teatro Broadway de Ponce, el 20 de diciembre de 1925,” *EAP* 1, no. 4 (January 2, 1926): 11.

crop should occur.<sup>85</sup> Most growers who belonged to cooperative societies supported the no-pick agreement, with the exception of the growers of Utuado. A month later, members of the cooperatives in Cayey, San Lorenzo, Comerío, and Aibonito, met with E.B. Thomas, Director of the Federal Bank, and Carlos Chardón, Commissioner of Agriculture and Labor to discuss the financial repercussions of a reduced crop if the buyers held out. It was agreed that the Federal Bank would extend the necessary credit to pay off outstanding loans so that the cooperatives could hold on to their tobacco as long as necessary.<sup>86</sup> Fortunately, tobacco prices remained high that season, averaging \$35 to \$40 per *quintal*, and the no-pick strategy was not necessary.

In 1927, however, tobacco acreage expanded greatly, resulting in a massive crop of fifty million pounds. The market had absorbed thirty million pounds in 1926 and the AAP believed that such an increase would be disastrous. In addition, 25% of the 1926 crop still remained in the hands of tobacco manufacturers, reducing the quantity of tobacco that they would buy by at least that much. Fearing a dramatic drop in prices, the AAP and the tobacco growers affiliated with it decided that drastic action needed to be taken. The first resolution to reduce the acreage planted in tobacco for the 1928 season occurred during the AAP general assembly in July of 1927, followed by an agreement from the tobacco cooperatives in a meeting that took place a month later.<sup>87</sup> At that

---

<sup>85</sup> In the farmers' words: "Let's not pick the seconds and the crop will be smaller and of better quality, and we'll see what story they will invent to lower the prices." The report of the meetings can be found in "Los cosecheros de tabaco," *EAP* 1, no. 7 (January 23, 1926): 7, 18.

<sup>86</sup> "Importante reunión de cooperativas tabacaleras. Existe absoluta unión entre todas," *EAP* 1, no. 11 (February 20, 1926): 9; and "Importante mensaje de D. Modesto Cobián Rivera, Presidente de 'Tabacaleros de Comerío Inc.', a la reunión de Cooperativas Tabacaleras," *EAP* 1, no. 11 (February 20, 1926): page number unknown.

<sup>87</sup> *CIH* (July 19, 1927). The full report can be found in "Tabaco. Se discute la necesidad de reducir las siembras," *EAP* 3, no. 13 (July 15, 1927): 10. Proceedings of the tobacco assembly were described in

meeting, representatives from the tobacco cooperatives agreed that acreage should be reduced by 50% and that all tobacco growers should meet in every municipality to sign a contract of reduction. In addition, growers agreed to form a committee that would ensure compliance. The cover of the October 1927 issue of *El agricultor puertorriqueño* proclaimed, “The planting of tobacco is reduced.”<sup>88</sup> The efforts for the 1928 crop were not successful: the reduction was minimal; prices remained low; and the amount of tobacco remaining in the hands of manufacturers remained considerable.

Yet another resolution was passed to attempt to limit the 1929 planting. Citing the low prices paid for the last two crops and the great amount of tobacco that still existed in the hands of American buyers, the AAP wholly supported the reduction in tobacco acreage. The AAP tried to force the hand of farmers who were not interested in reducing plantings by meeting with representatives from the Federal Bank so that all agricultural loans would carry a commitment from the grower to reduce plantings.<sup>89</sup> For the next few months, the campaign to reduce the tobacco planting became front and center news in *El agricultor puertorriqueño*. Some members, like tobacco grower M. Meléndez Muñoz, wrote letters of support for the reduction. A member who was a “known tobacco grower from Manatí” wrote, “It was calculated that there are more than 500,000 *quintales* of tobacco in existence. Estimating that the market needs 250,000 *quintales*, we have enough to cover the next two years.”<sup>90</sup> The campaign was moderately successful: many

---

“Importante asamblea de tabacaleros. Se ha acordado restringir las siembras para la próxima cosecha,” *EAP* 4, no. 3 (August 15, 1927): 4-5.

<sup>88</sup> “Se reducen las siembras de tabaco,” *EAP* 4, no. 7 (October 15, 1927): cover page.

<sup>89</sup> “Resoluciones aprobadas por la Asamblea General de Agricultores de Ponce,” *EAP* 6, no. 2 (July 31, 1928): 29.

<sup>90</sup> M. Meléndez Muñoz, “La situación tabacalera en la Isla. Opiniones y comentarios,” *EAP* 8, no. 8 (October 31, 1929): 7-9.

members voluntarily reduced their plantings for 1929, but prices were ultimately not dramatically affected. Another year of reductions would be necessary.

Wondering if a reduced planting would actually solve the problem, the AAP criticized the tobacco buyers for making their purchases in July, when loan payments were due. With loan payments looming over them, farmers were willing to sell their product for whatever price was offered. The AAP argued that this manipulation needed to be stopped.<sup>91</sup> The AAP also criticized the tobacco growers who had not reduced their planting, and called for their participation as the only way to guarantee higher prices.<sup>92</sup> Tobacco growers who had not joined a cooperative society were urged to do so as the only safeguard against the abuses of the buyers. By 1931, the campaign had wide support among cooperative members, who decided that the 1932 season should be one of *no siembra* or no planting at all. *El agricultor puertorriqueño* described the tobacco growers' campaign as being "life or death for tobacco agriculture":

"Never had the spirit of collective action been manifested with such vehemence by the tobacco growers, who tired of suffering from the abuse of those who monopolize the buying, are willing, for the first time in the history of the country, to defend themselves through a quasi-revolutionary civic movement, with the goal of preventing tobacco plantings this year."<sup>93</sup>

Because support for the *no siembra* was not universal, the AAP continuously published editorials, articles and letters in defense of the campaign.<sup>94</sup> If there was any mention in the press about growers planting tobacco, the AAP would immediately

---

<sup>91</sup> "¿Resuelve la limitación de la cosecha el problema tabacalero?," *EAP* 9, no. 10 (May 31, 1930): 1.

<sup>92</sup> Rafael Arroyo Zeppenfeldt, "Su Majestad el 'Esmayao'," *EAP* 11, no. 14 (July 31, 1931): 1-2.

<sup>93</sup> "Sección del Secretario," *EAP* 11, no. 17 (September 15, 1931): 2.

<sup>94</sup> For examples, see "Notas varias," *EAP* 11, no. 17 (September 15, 1931): 10, 27; "El obrero y la huelga contra la siembra de tabaco," *EAP* 11, no. 18 (September 30, 1931): 1-2; or "Notas editoriales: La hora de los débiles," *EAP* 11, no. 19 (October 15, 1931): 1.

respond. For example, there had been reports in the press that some growers in Caguas and Aguas Buenas had prepared their land for cultivation. “Prominent tobacco growers” from Caguas responded to the allegation by writing a letter to a local newspaper stating that “we are convinced that no planting this year is necessary... and we want to make public our commitment to cooperate with the success of the campaign.”<sup>95</sup> José L. Pesquera, President of the AAP and a tobacco grower, explained that some farmers in Caguas and Aguas Buenas expected the *no siembra* to be changed to a limited planting. They had thus prepared their land in the event such a change would be made. Pesquera also reported that 1,200 tobacco growers met in Caguas, most who supported the *no siembra*.<sup>96</sup> A Special Committee of the AAP visited those farmers who had not signed on for the *no siembra* to explain the importance of joining a cooperative society and of supporting the campaign. As tobacco growers joined the *no siembra*, they were congratulated in the pages of *El agricultor puertorriqueño*. “These honorable friends are worthy of our most heartfelt congratulations for their noble and patriotic attitude in rectifying their mistake.”<sup>97</sup>

As protection against the possibility of a tobacco shortage, the Puerto Rican Leaf Tobacco Company, the largest manufacturer in the island, expanded the planting on their lands in Cayey.<sup>98</sup> This resulted in a violent escalation of the *no siembra* campaign, as tobacco growers burned PRLTC warehousing ranches in protest. Other fires followed in towns where support for the *no siembra* was widespread and where the cooperatives were

---

<sup>95</sup> “Notas varias,” 10.

<sup>96</sup> José L. Pesquera, “Cumplirán su deber,” *EAP* 11, no. 19 (October 15, 1931): 9, 19.

<sup>97</sup> José L. Pesquera, “Rectificaciones que honran,” *EAP* 11, no. 20 (October 31, 1931): 4.

<sup>98</sup> For a detailed discussion of the workings of the Puerto Rican Leaf Tobacco Company and of the effect their participation in the 1932 planting affected the *no siembra* campaign, see Baldrich, *No siembra*, 40-42, and for the resulting fires, 91-103.

well established. Curing ranches, warehouses, and even recently harvested tobacco were burned. Under pressure from the PRLTC and other tobacco growers affected by the fires, the insular state intervened, arresting those suspected of arson. Police involvement stopped the burnings and the *no siembra* campaign continued without incident through the remainder of the 1932 season.

Although the *no siembra* reduced the acreage planted and the tobacco available for the 1932 season, it did not have the dramatic effect hoped for by the AAP and the tobacco growers who supported it. It was, however, successful in creating a “national conscience” for tobacco growers, who participated in an island-wide struggle to assert control over their economic sector.<sup>99</sup> The *no siembra* also demonstrates the extent of the collaboration between the AAP and the tobacco growers, and the commitment of the AAP to fight for its constituents, even if the struggle was outside of the legislative chambers.

## **Conclusion**

The new political and economic structure after 1898 profoundly and permanently altered society in the eastern highlands of Puerto Rico, where tobacco quickly became the main cash crop. Farmers in the region, through their affiliations in local and insular-level organizations, took advantage of opportunities created by the expansion of markets for tobacco. At the local level, tobacco growers joined local *ligas agrícolas*, invested in cooperative societies, and demanded legislature to safeguard their economy. Tobacco growers attended meetings, drafted proposals and letters, voted in support or against

---

<sup>99</sup> Ibid, 125-136.

resolutions, and passionately debated the status of their industry. Together with many farmers in Puerto Rico, tobacco growers created political capital by establishing the *Asociación de Agricultores Puertorriqueños* and contributing to *El agricultor puertorriqueño*. The AAP accepted their self-appointed role as the public voice of the farmers in the insular and federal legislatures, successfully lobbying for legislature that was not only beneficial to the agricultural economy, but that would foment the development of the rural areas and demonstrate the government's commitment to raising the standard of living of all rural residents.

The new political system, colonial to be sure with ultimate power vested in Washington, ironically created space for these organizations to exist and flourish, space that Puerto Ricans quickly and enthusiastically filled with *ligas agrícolas*, cooperatives, committees, and institutes. Governors, Presidents, Senators, and other administrators were visited by the representatives of Puerto Rican tobacco growers, publicly challenged, and criticized. Insular and federal officials responded to such challenges, as evident in the case of Governor Towner's approval of Law #53 creating the Commission for the protection of Puerto Rican Tobacco or in the case of Senator Bingham's visit to the island after hurricane San Felipe. Puerto Ricans were hardly powerless within the colonial structure; they rapidly learned how to maneuver the new governmental structure and efficiently used the freedom of the press and the ability to affiliate to effect change. Rather than observing from a distance and being victims of a tyrannical colonial government, Puerto Ricans were involved in every level of government. Their activities had a direct impact on both insular and federal policies and legislation and affected their everyday lives.

## **Chapter 5: The Science of Tobacco**

The development of tobacco as a profitable export product after the American occupation of Puerto Rico occurred, in part, because scientists, tobacco corporations, tobacco farmers, and the insular and federal governments supported the science of tobacco, from research to the practical application of scientific discoveries on the cultivation fields. Because government officials believed that the main obstacle to the continued expansion of the agricultural sector was a lack of sophistication in farming techniques, they looked to science to provide solutions.<sup>1</sup> Puerto Rican and American scientists, already focused on the particular problems of sugar, were called upon to begin a careful agronomic study of the tobacco plant and its cultivation, including its life-cycle, pests and diseases, and efficient planting techniques.

The insular government had to disseminate such information; after all, scientific discoveries would only be useful if they translated into actual changes in agricultural techniques. To do this, the insular authorities, with the assistance of the federal government, established the Department of Agriculture and Labor and funded the development of agricultural experiment stations. These institutions were responsible for both agricultural research and for its application in the field. Tobacco growers, like other farmers throughout the island, became involved in scientific study by attending lectures and demonstrations where new agricultural techniques were presented, applying these techniques on their farms, and by lobbying the insular legislature for funding for research

---

<sup>1</sup> The idea of a science-led model of agricultural modernization is eloquently presented by Stuart McCook in "Promoting the 'Practical': Science and Agricultural Modernization in Puerto Rico and Colombia, 1920-1940," *Agricultural History* 75, no. 1 (2001): 52-82.

into tobacco. Insular legislators, at the insistence of tobacco growers and other members of the *Asociación de Agricultores*, lobbied the United States Congress for the extension to Puerto Rico of laws that would support agricultural science. When government agencies were unable to meet the research needs of the tobacco sector, growers pressured the insular legislature to establish independent institutions dedicated to tobacco research. The *Comisión para Proteger el Tabaco de Puerto Rico* and the *Instituto de Tabaco* were established with the financial support of the insular government and the cooperation of the federal and insular scientific communities.

The big tobacco corporations were also interested in improving tobacco through seed selection and in obtaining higher yields per *cuerda*, which would guarantee a steady and uniform supply of the product they needed. Like tobacco growers, corporations became involved in scientific inquiry when the insular government's funding proved inadequate by investing in experimental fields, hiring tobacco specialists, and collaborating with the Agricultural Experiment Station and the Department of Agriculture in ongoing experiments.

The scientific communities in Puerto Rico and the United States were interested in the socioeconomic improvement of the island. Scientists, with the support of federal and insular government officials, recognized that agricultural progress would require not only investment in the study of advanced scientific cultivation methods, but of socioeconomic issues affecting the everyday life of farmers as well. The science of tobacco widened to include both economic studies that discussed access to credit, land tenure, and marketing cooperatives, and social studies that dealt with such issues as rural living conditions and proper nutrition.

The science of tobacco provided an arena for extensive cooperative relations between tobacco interests, scientists and the insular and federal governments. The development and practical application of the science of tobacco demonstrates that, rather than observers of rapid economic change, such as the one in the tobacco sector, Puerto Ricans were actively taking advantage of programs that would improve their economic situation and of the democratic freedoms guaranteed under the American colonial structure.

### **The Beginnings of Scientific Inquiry and Experimental Stations**

The interest in scientific research was not new to post-1898 society. The last three decades of the 19<sup>th</sup> century were characterized by an unprecedented interest in scientific study.<sup>2</sup> During this period, the Spanish Crown canceled all import taxes levied on machinery and other cultivation tools, and reduced duties on many agricultural products. In addition, agricultural leaflets began circulating throughout the island describing new agricultural techniques.

This interest, combined with the new opportunities provided by the loosening restrictions from the Spanish Crown, culminated in 1876, when Puerto Rican agriculturalists petitioned colonial authorities for the enforcement on the island of a *Real Orden* that mandated agricultural instruction throughout the colonies via the establishment of agricultural schools and experimental farms.<sup>3</sup> This royal decree specified that the colonies would be assisted by the royal authorities in order to comply

---

<sup>2</sup> Isabel Becerra de Weierich, "Las primeras estaciones agronómicas en Puerto Rico" (master's thesis, University of Puerto Rico, 1969), 29.

<sup>3</sup> Ibid., 35, 40, 41.

with the mandate. Although the Crown agreed to cede the land to the Puerto Rican government, the project was officially suspended in 1883 due to lack of funds.

In 1887, the Crown once again received a petition to establish two agricultural stations (one in Bayamón and the other in Mayagüez) dedicated to the study of plants, insects, land and water, the training of foremen to work in the fields, and the distribution of cultivation machinery. Both stations were also charged with the study of tobacco in order to improve the quality of the crop.<sup>4</sup> The plan was approved in 1888 and the stations began operating shortly thereafter. Unfortunately, lack of funds forced the closing of the stations by 1897 and all materials and equipment were sold in a public auction in 1898.<sup>5</sup> The interest in scientific inquiry remained, however, and when investment in agriculture after the American occupation resulted in new possibilities for scientific study, Puerto Rican farmers were enthusiastic about participation.

The United States Department of Agriculture quickly established an agricultural station in Mayagüez, and the scientists who worked there were mostly interested in experiments designed to find new agricultural products appropriate for Puerto Rico's climate and topography. The diversification of Puerto Rico's agricultural sector was of no interest to established sugar planters who wanted to see investments in sugar-specific research.<sup>6</sup> Accordingly, the Porto Rico Sugar Growers Association founded the Experiment Station of Río Piedras, an agricultural research facility that would deal with

---

<sup>4</sup> Ibid., 47, 102.

<sup>5</sup> Ibid., 161-167. Also in McCook, "Promoting the Practical," 54.

<sup>6</sup> McCook, "Promoting the Practical," 55.

sugar cultivation issues.<sup>7</sup> The station was established on 200 *cuerdas* of land in Río Piedras bought from Francisco Robledo y García on July 25, 1910.

Although the station was focused on sugar, there was much pressure from farmers throughout the island for scientists to conduct research on other crops, such as tobacco, citrus, and coffee. In fact, J.T. Crowley, the director of the station during its initial years, indicated that many farmers wanted to establish substations dedicated to research on non-sugar crops and he commented on the “cordial spirit of cooperation” he found among them.<sup>8</sup> Because the station was on land that bordered Caguas, the largest tobacco-growing municipality at the time, tobacco was the second major research project for the station and systematic studies of tobacco problems began in 1912.<sup>9</sup> A year later, George B. Merrill, an entomologist on the station’s staff, conducted a comprehensive experiment that focused upon insects plaguing tobacco farms out of a substation in Aibonito, another center of tobacco cultivation.<sup>10</sup>

In 1914, the Board of Commissioners of Agriculture decided that the station should not belong solely to sugar planters and that it should be an organization of the insular state. The station was thus donated to the insular government with a mandate that there “must be a general broadening of the station activities to include other Puerto

---

<sup>7</sup> Nilsa Díaz de Acín, “La participación de la Estación Experimental de Agricultura de la Universidad de Puerto Rico en el desarrollo agrícola de Puerto Rico” (master’s thesis, University of Puerto Rico, 1967), 4.

<sup>8</sup> J.T. Crowley, “Organization of the Station and Cultivation of Sugar Cane in Porto Rico,” *Boletín de la Estación Experimental Agrícola* 1, (1911): 6.

<sup>9</sup> Caguas cultivated 1,974,900 pounds of tobacco, over a million pounds more than Cayey, the next largest tobacco-growing municipality. In Bureau of the Census, *Thirteenth Census of the United States Taken in the Year 1910. Statistics for Porto Rico* (Washington, D.C., 1913), 72-77

<sup>10</sup> Mention of the experiment is made in Board of Commissioners of Agriculture, *Third Report of the Board of Commissioners of Agriculture for the period from July 1, 1913 to July 1, 1914* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1915), 24. Merrill’s full report was included as “Report of the Tobacco Insect Investigation” in Board of Commissioners of Agriculture, *Fourth Report of the Board of Commissioners of Agriculture for the period from July 1, 1914 to July 1, 1915* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1916), 50 (hereafter cited as *BCA 1914-15*).

Rican crops.”<sup>11</sup> The transfer was approved by the legislature of Puerto Rico with the enactment of Law #13 on March 28, 1914. The law also changed the station’s name to Insular Agricultural Experiment Station (IAES).

### **The Agricultural Experiment Station, the Department of Agriculture, and Tobacco Research**

Research on tobacco expanded immediately and there was an increase in the number of scientists dedicated to the study of all aspects of the tobacco sector, from seedbed plantings to the manufacturing process. John A. Stevenson, a tobacco pathologist, studied the problem of cigar mold that tended to appear several days after manufacture.<sup>12</sup> R. T. Cotton studied the life cycle of the tobacco flea-beetle, considered “the worst enemy to tobacco.”<sup>13</sup> A year later, Cotton was in charge of planting an experimental tobacco plot on IAES grounds.<sup>14</sup> In 1917, tobacco scientists were busy studying *lapas*, limpets or suck-flies, and detailed a plan of action to treat the problem.<sup>15</sup> In short, tobacco became as central a project for the IAES as research on sugar cane, and this reflected the increasing importance of tobacco as a commercial product for export.

---

<sup>11</sup> *BCA 1914-15*, 9.

<sup>12</sup> John A. Stevenson, “Report of the Pathologist,” in *BCA 1914-15*, 41.

<sup>13</sup> R.T. Cotton, “Report on Tobacco and Vegetable Insects,” in Board of Commissioners of Agriculture, *Fifth Report of the Board of Commissioners of Agriculture for the period from July 1, 1915 to July 1, 1916*. (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1917), 86.

<sup>14</sup> R.T. Cotton, “Report of the Assistant Entomologist,” in Insular Experiment Station of Puerto Rico, *Annual Report of the Insular Experiment Station of Puerto Rico for the Period from July 1, 1916 to July 1, 1917* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1917), 107.

<sup>15</sup> Insular Experiment Station of the Department of Agriculture and Labor of Puerto Rico, *Eighth Annual Report of the Insular Experiment Station of the Department of Agriculture and Labor of Puerto Rico for the Period from July 1, 1917 to June 30, 1918* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1919), 50, 128.

The Organic Act of March 2, 1917 created the Department of Agriculture and Labor (DAL).<sup>16</sup> It divided the island into 12 agronomical districts with a sub-inspector in charge of each district. With this act, responsibility for the wellbeing of the agricultural sector fell in the hands of the insular state, as the Commissioner of Agriculture and Labor clearly understood. He observed as follows:

“The legislature [must] now shape an organization of [agricultural] services... in order that the best practices shall be established in accordance with the conditions of the country for increasing and improving production, bettering the existing practices, and introducing new ones that shall contribute to the economic development of the island.”<sup>17</sup>

The department took their charge seriously, and a strong relationship between the DAL and the IAES was cemented when Joint Resolution #18, signed on November 39, 1917 transferred the jurisdiction of IAES to the DAL.<sup>18</sup>

The transfer made administrative sense, since there had been a great deal of cooperation between scientists at the IAES and those at the United States' Department of Agriculture and the Bureau of Plant Industry, Soils, and Agricultural Engineering (BPIASE). This cooperation was ongoing, with scientists repeatedly traveling between insular and federal stations for training, demonstrations, and experiments. For example, during 1919, a joint experiment was conducted with Harry Ardell Allard, a scientist in the

---

<sup>16</sup> Manuel Camuñas, Commissioner of Agriculture and Labor, *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1917. From the Report of the Governor of Porto Rico, 1917, pages 545-562 inclusive* (Washington, D.C.: Government Printing Office, 1917), 545. The Organic Act of 1917, also known as the Jones Act, was an amendment to the Organic Act of 1900, also known as the Foraker Act, which established a civilian government after the American occupation of the island. The Jones Act granted American citizenship to all Puerto Ricans and established a locally elected legislature, among other amendments.

<sup>17</sup> *Ibid.*, 545.

<sup>18</sup> Díaz de Acín, 8.

Office of Tobacco Investigations of the BPIASE.<sup>19</sup> E. E. Barker, a scientist in the Department of Plant Breeding of Cornell University, was in Puerto Rico in 1920 to conduct seed selection experiments throughout the tobacco zones.<sup>20</sup> George N. Wolcott was appointed as the staff entomologist at the IAES, and conducted the first studies on the *gusano de candela*, a tobacco split worm, in 1922.<sup>21</sup>

Puerto Rican scientists were involved in all aspects of tobacco research at the station. J. A. B. Nolla joined the IAES staff in the early 1920s and by 1926 was in charge of the tobacco field laboratory.<sup>22</sup> Carlos Chardón, perhaps the most important agricultural researcher, who later became an influential economic policy maker, began his tenure as a public officer by working on tobacco experiments at the IAES.<sup>23</sup> Such extensive participation in the scientific life of the island by both American and Puerto Rican scientists suggests that federal agricultural agencies were as interested in the modernization of agricultural practices as insular ones and that scientists on the island and the mainland were in constant communication. Puerto Rican scientists were involved

---

<sup>19</sup> *Tenth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1919-20* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1920), 25 (hereafter cited as *IES 1919-20*).

<sup>20</sup> *Eleventh Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1920-21* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1921), 32 (hereafter cited as *IES 1920-21*).

<sup>21</sup> *Thirteenth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1922-23* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1924), 24.

<sup>22</sup> Francisco A. López Domínguez, *Seventeenth Annual Report of Director of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1926-27* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1929), 30. Nolla later served as the Director of the Tobacco Institute.

<sup>23</sup> Carlos Chardón was educated at the University of Mayagüez and at Cornell University. He returned to Puerto Rico in 1921 and worked at the IES. He was appointed Commissioner of Agriculture in 1923 and later Rector of the University of Puerto Rico in 1930. He was also appointed as Executive Director of the Puerto Rico Land Authority in 1941.

in scientific inquiry as project leaders, auxiliary staff and in high-level administrative positions.

The collaboration between the DAL and the IAES was crucial to the application of scientific findings throughout the rural areas. The two institutions not only delved into all aspects of scientific study, but they were actively involved in the campaign to organize farmers throughout the island. Each of the agricultural divisions of the DAL – sugar, tobacco, and citrus – was assigned an agronomist and deputy inspector. Among their duties were the popularization of “modern agricultural methods” and the urging of farmers to establish cooperative societies and loan associations.<sup>24</sup> By 1920, agricultural inspectors had made 1,984 visits to the northern areas and 1,777 to the southern areas of the island.<sup>25</sup> They noted living conditions, the number of *cuerdas* dedicated to each crop, the average yield per acre, and prices that were paid for the crop. Inspectors also advised and instructed farmers on the latest methods for pest control, the most productive application of fertilizers, and offered ideas on how to effectively market their crop. Lastly, inspectors conducted live demonstrations and discussed the latest scientific findings. Table 5.1 details the number of lectures delivered and the number of people in attendance. It is interesting to note that over 50% of all lectures were delivered in tobacco districts. Almost half of all people who attended lectures did so in tobacco regions. It is certain that those in attendance were tobacco growers and their active

---

<sup>24</sup> Manuel Camuñas, Commissioner of Agriculture and Labor, *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1919. From the Report of the Governor of Porto Rico, 1919, pages 685-713 inclusive* (Washington, D.C.: Government Printing Office, 1919), 687.

<sup>25</sup> Ramón Gandía Córdova, Commissioner of Agriculture and Labor, *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1920. From the Report of the Governor of Porto Rico, 1920, pages 503-566 inclusive* (Washington D.C.: Government Printing Office, 1920), 518-519.

participation indicates that tobacco farmers were enthusiastic about scientific discoveries and their applications that would improve the quality, and quantity of their crops.

**Table 5.1**  
**Lectures Held in Tobacco Growing Municipalities**  
**and Attendance, 1920.**

<b>Municipality</b>	<b>Number of Lectures</b>	<b>Attendance</b>
Aguas Buenas	5	159
Aibonito	3	98
Arecibo	8	731
Barceloneta	4	222
Barranquitas	1	60
Caguas	12	448
Camuy	5	236
Cayey	1	90
Ciales	1	50
Comerio	2	400
Corozal	6	245
Hatillo	5	328
Humacao	2	26
Isabela	12	606
Juncos	9	290
Las Piedras	2	65
Morovis	1	200
Orocovis	2	108
Quebradillas	6	322
San Lorenzo	14	610
Utua	16	909
<b>Total in Puerto Rico</b>	<b>228</b>	<b>13,048</b>
<b>Total in Tobacco Regions</b>	<b>117</b>	<b>6,203</b>
<b>Percentage in Tobacco Regions</b>	<b>51.3%</b>	<b>47.5%</b>

*Source: Córdova, Report 1920, 518-519.*

Tobacco improvement continued to be a major element in the work of the IAES as well. New breeds, better understanding of cultivation and curing methods, and up-to-date knowledge of insects and diseases contributed to the development in the field laboratories of a more uniform crop, higher yields per acre, and better product quality.<sup>26</sup>

<sup>26</sup> *IES 1919-20, 25.*

IAES administrators were committed to the dissemination of scientific findings through “intimate and continuous contact” with farmers throughout the island.<sup>27</sup> The results of all experiments were published in their entirety in the monthly *Bulletin of the Agricultural Experiment Station*, published in Spanish and English, and excerpted in local magazines and newspapers. In addition, shorter essays and advice columns were widely disseminated among farmers by station scientists working at the local substations. By 1920, the bulletin had a circulation of over 600 copies, more than 400 of them in Spanish. A year later, the number of Spanish subscriptions had doubled.<sup>28</sup>

Beginning in 1920, a change in attitude became evident in the scientific community and in the governmental agencies that dealt with agriculture. Scientists, as well as the government official affiliated with them, recognized that agricultural research and the application of scientific findings would only guarantee a healthy crop, and that true modernization and steady agricultural development would require the involvement of other agencies and the improvement of the island’s economic and physical infrastructure. IAES scientists, with the support of the DAL, began lobbying for an expanded role and for conducting studies that would improve economic and social conditions throughout Puerto Rico. The high cost of transporting agricultural goods from the interior of the island to shipping facilities, the establishment of adequate agricultural credit structures, the shortage of fuel wood and material for rural construction, and the lack of organizations to facilitate the marketing of agricultural products were as much a factor in

---

<sup>27</sup> Ibid., 57.

<sup>28</sup> IES 1920-21, 14. Also in *Twelfth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1921-22* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1922), 13.

the ability of tobacco growers to make a living as the type of seed planted.<sup>29</sup> This marked the beginning of the expansion of the mission of the IAES, from an organization purely dedicated to agricultural research to one interested in the modernization of rural areas and the generalized development of Puerto Rican agriculture.

The decade of the 1920s was one of outreach and growth for the IAES. Francisco A. López Domínguez, Director of the IAES during that time, observed that "...the interest of the public in the work of the Station, and the general desire awakened in the intelligent farmer to improve his methods and procedure, have created a demand for more and more cooperation on the part of the Station with the planters and even the industrialists of the island, in the form of direct help in the immediate solution of their everyday problems."<sup>30</sup> This interest resulted in the creation of an outreach program in which scientists visited working farms to teach farmers new cultivation techniques. Because of the challenge of disseminating information even to illiterate farmers, field visits and demonstration farms became the most effective tools for outreach. Demonstration farms were either built independently by the IAES or were set up in private farmland donated by local farmers. For tobacco growers, these farms were an opportunity to see for themselves the success of modern methods of cultivation such as protecting seed beds with cloth, using appropriate quantities of fertilizers, and adequate leaf curing and storage methods. Those unable to travel to the demonstration farms took advantage of field visits by IAES scientists and Department of Agriculture specialists.

---

<sup>29</sup> The new and expanded mission for the IES is outlined in "Opportunities for Service" in *IES 1919-20*, 58. For a detailed description of the credit structure in Puerto Rico, see Chapter 3.

<sup>30</sup> Francisco A. López Domínguez, *Fifteenth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1924-25* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1926), 21.

These men and women visited thousands of farms and gave hundreds of Sunday lectures throughout the island. They demonstrated new planting techniques, answered questions about government programs and explained changes in relevant legislature, and discussed market conditions for particular crops. Farmers' participation in such programs was constant and demonstrated a willingness to experiment with better cultivation methods and modern, scientific techniques that could provide better returns on their investments. The 1929-1930 IAES Report noted that, "farmers have availed themselves to a greater extent of the opportunities of service offered by the Station"<sup>31</sup>

A brief discussion of the changes in the average yield of tobacco leaf per *cuerda* in the tobacco regions from 1910 to 1940 will illustrate the impact that IAES programs had on tobacco cultivation. Tobacco specialists at the IAES had defined the depletion of minerals from soil used in tobacco cultivation and the poor quality of tobacco seed throughout the island as two immediate problems to be addressed by research at the station. Experiments with different types and proportions of fertilizers as well as plant breeding experiments began in 1916 and continued through 1938.<sup>32</sup> The goal was to increase yield per *cuerda* to an average of 800 pounds so that acreage in tobacco could be reduced and vacant fields could then be used for other crops such as vegetables, tubers, or fruits.<sup>33</sup> In addition, "new varieties of greater yielding capacity, good quality and

---

<sup>31</sup> Insular Experimental Station, Department of Agriculture and Labor of Puerto Rico, *Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1929-30* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1931), 5 (hereafter cited as *IES 1929-30*).

<sup>32</sup> Cotton, "Entomologist," 107.

<sup>33</sup> Agricultural Experiment Station, College of Agriculture and Mechanic Arts, University of Puerto Rico, *Annual Report of the Agricultural Experiment Station. Fiscal Year 1937-38* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1939), 100.

resistance to diseases [would] allow the farmer to restrict his plantings to his better lands without reducing his total production.”<sup>34</sup>

IAES scientists, who had achieved success in field experiments, shared the new techniques with farmers across the tobacco regions. In 1910, the average yield per *cuerva* in the tobacco regions was 515 pounds of tobacco leaf per *cuervas*. After thirteen years of experimentation, the IAES report of 1923 stated that tobacco cultivation had become more profitable and that the “selection of more productive varieties, better cultural methods for the seedbeds and field plantings, use of fertilizers and adoption of control methods to check disease and insect damage have done wonders.”<sup>35</sup> By 1940, average yields had increased to 698 pounds per *cuerva*, an increase of 35% from 1910. (See Table 5.2.) Because tobacco-cultivated soil does not miraculously replenish itself, it is reasonable to assume that the improvement in yield was due to changes in the use of fertilizers, seeds, or other general cultivation methods. In addition, 82% of all tobacco growing municipalities increased their yield per *cuerva* from 1910 to 1940, a remarkable achievement and evidence that IAES programs were effective. Furthermore, the widespread increase in yields suggests that it was not only one or two large farms that adopted scientific methods of cultivation, but that in fact, a large number of small-scale farmers must have done so as well.

---

<sup>34</sup> Ibid., 46.

<sup>35</sup> *Fourteenth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1923-24* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1931), 18.

**Table 5.2**  
**Yield per Cuerda in the Tobacco Regions, 1910-1940**  
*in pounds per cuerda*

<b>Eastern Highlands</b>	1910	1920	1930	1940
Aguas Buenas	432	583	662	814
Aibonito	552	502	685	791
Barranquitas	378	528	666	784
Bayamón	33	546	573	628
Caguas	565	648	670	864
Cayey	561	644	672	828
Cidra	465	706	607	837
Comerío	400	502	565	723
Corozal	529	434	514	606
Gurabo	454	489	537	682
Humacao	535	629	462	587
Juncos	545	424	402	576
Naranjito	306	431	540	606
San Lorenzo	187	467	515	868
Toa Alta	668	402	495	620
Yabucoa	620	567	344	580
Average for Eastern Highlands	482	562	589	747
<b>Western Highlands</b>	1910	1920	1930	1940
Arecibo	723	399	424	553
Barceloneta	431	282	506	623
Camuy	561	271	540	416
Ciales	366	356	395	653
Hatillo	601	361	658	580
Isabela	627	453	819	671
Manatí	404	366	674	687
Morovis	323	426	482	636
Orocovis	383	470	541	748
Quebradillas	461	476	727	589
Utua	507	360	516	664
Average for Western Highlands	549	376	570	648

*Source:* Data for 1910 from *Thirteenth Census of the United States Taken in the Year 1910. Statistics for Porto Rico* (Washington, D.C., 1913), 72-77. Data for 1920 from Bureau of the Census, *Fourteenth Census of the United States Taken in the Year 1920. Volume VI, Part 3. Agriculture* (Washington, D.C., 1922), 408-415. Data for 1930 from Bureau of the Census, *Fifteenth Census of the United States: 1930. Outlying Territories and Possessions* (Washington, D.C., 1932), 72-77. Data for 1940 from Bureau of the Census, *Sixteenth Census of the United States: 1940. Reports for Puerto Rico: Census of Agriculture* (Washington, D.C., 1942), 226, 237.

The funding of the IAES was always an issue since its transfer to the insular government in 1914. Until 1917, when the IAES was placed under the jurisdiction of the Department of Agriculture and Labor, funds for its operation were allocated from the insular treasury. Some experiments, however, were funded by the United States Department of Agriculture and its affiliates. To address the lack of a stable operations budget, a fund was created called "*Venta de Productos Agrícolas*," which would deposit all monies collected from the sale of agricultural products cultivated in IAES' experimental fields into an operation fund for the station. Still, the amount of money collected was too small to make a difference and in 1919, a law was enacted that taxed sales of chemical fertilizer at 20 cents per ton and mineral fertilizer at 10 cents per ton, with the objective of funding the IAES.<sup>36</sup> With expanded services and a larger staff, this tax was still not enough to cover expenses at the IAES and another law was approved in 1925 that levied a 20-cent tax for every ton of animal feed sold on the island.

The activities of the IAES were so pervasive that funding continued as an issue into the late 1920s. The solution to these ongoing funding problems was Law #25 of April 23, 1931, which transferred the jurisdiction of the IAES to the University of Puerto Rico's College of Agriculture. The change of jurisdiction meant that the IAES could take advantage of the Hatch-Adams funds and that for the first time, the IAES would in fact have an operating budget that was independent from funds raised through taxation.<sup>37</sup>

Until 1944, the IES would be allocated a budget of \$25,000, at which point it would

---

<sup>36</sup> Díaz de Acín, 9, 12-13.

<sup>37</sup> Ibid., 13. The Hatch Act of 1887 authorized federal funds for the establishment of agricultural experiment stations in connection with a college. The writings of New York reporter Samuel Hopkins Adams sparked the enactment of the Pure Food and Drug Act of 1906. Under this act, funds were available to the Bureau of Chemistry of the Department of Agriculture to conduct experiments to determine the purity of any food product. "Insular territories" were included in these acts.

receive an annual increase of \$5,000 according to the law.<sup>38</sup> The name of the IAES was changed to the Agricultural Experiment Station of the College of Agriculture and Mechanical Arts of the University of Puerto Rico (AES).

Federal funding allowed the AES to finally address the expanded mission statement developed in the 1920s and study “the many economic problems affecting the welfare of farmers and the agricultural industry of Puerto Rico.”<sup>39</sup> A Division of Agricultural Economics was created to address these problems and studies began immediately. A comprehensive credit study that examined the mortgage status of 1,731 farms was conducted in 1935.<sup>40</sup> A year later, two separate surveys of small farms were conducted throughout the island.<sup>41</sup> The first project, called “Hatch Project #1,” attempted to determine labor efficiency, cash flow, and total receipts of small farms. The other project, “Purnell Project #2 and Bankhead-Jones Project #10,” studied 270 tobacco farms to determine the reasons for success or failure.<sup>42</sup> The projects, among many others, contributed to the understanding of the socioeconomic problems affecting not only

---

<sup>38</sup> Agricultural Experiment Station, College of Agriculture and Mechanic Arts, University of Puerto Rico, *Annual Report of the Director for the Year 1933-34* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1935), 6.

<sup>39</sup> Melville T. Cook and José I. Otero, “History of the First Quarter of a Century of the Agricultural Experiment Station at Río Piedras, Puerto Rico,” *BEEA* 44 (1937), 77.

<sup>40</sup> Results of the study are detailed in “A Preliminary Study of the Credit Situation,” in Agricultural Experiment Station, College of Agriculture and Mechanic Arts, University of Puerto Rico, *Annual Report of the Agricultural Experiment Station. Fiscal year 1935-36* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1937), 68-69.

<sup>41</sup> Results of the studies are detailed in “Division of Agricultural Economics,” in Agricultural Experiment Station, College of Agriculture and Mechanic Arts, University of Puerto Rico, *Annual Report of the Agricultural Experiment Station. Fiscal year 1936-37* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1938), 125-130. An additional report on the tobacco farm study can be found in “Special Reports on Projects, Division of Agricultural Economics” in Agricultural Experiment Station, College of Agriculture and Mechanic Arts, University of Puerto Rico, *Annual Report of the Agricultural Experiment Station. Fiscal year 1938-39* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1939), 26.

<sup>42</sup> These projects were so named because of the federal grants that funded them. The Bankhead-Jones Act of 1935 provided additional funding for colleges and universities in Puerto Rico and other locations. The Purnell Act of 1925 provided funds to agricultural experiment stations for agricultural, economic and sociological research.

tobacco farmers, but also the agricultural sector as a whole, and reflected a sincere interest from the scientific community in improving the living conditions of Puerto Ricans in the rural areas.

The decline of tobacco prices throughout the 1930s and the generalized difficulties faced by rural Puerto Ricans during the Great Depression, resulted in scientific inquiry into subsistence crops. At the same time funds appropriated for tobacco-specific research began to diminish. Scientific interest, as noted above, had expanded into other socio-economic areas, and money was diverted to other agricultural industries such as cattle, poultry and dairy. The DAL, which had until then worked side by side with the AES to disseminate scientific information to farmers through the Agricultural Extension Service, reassigned that division to the University of Puerto Rico's College of Agriculture to once again take advantage of the availability of federal funds.<sup>43</sup> By 1940, most of the work being done by the AES was limited to socioeconomic studies.<sup>44</sup> The reduction in funding for tobacco research meant that tobacco corporations and farmers had to become advocates for scientific research in tobacco.

The best example of corporate involvement in scientific research is provided by The Porto Rican American Tobacco Company (PRATC), the most important tobacco processor in Puerto Rico.<sup>45</sup> It elaborated and exported cigars in all price ranges and was

---

<sup>43</sup> The Smith-Lever Act provided funds for the establishment of agricultural educational services as part of a college or university.

<sup>44</sup> Agricultural Experiment Station, College of Agriculture and Mechanic Arts, University of Puerto Rico, *Annual Report of the Agricultural Experiment Station. Fiscal year 1940-41* (Lancaster, PA: Lancaster Press, Inc., 1941), 8.

<sup>45</sup> There is evidence that Porto Rican Leaf Tobacco Company was involved in formal scientific study as early as 1926. That year, the corporation appropriated \$1,000 to the IES to conduct research in tobacco diseases, provided the land for and furnished a field laboratory, and appointed a dedicated field manager,

the principal supplier of cigarettes for local consumption. Although small-scale growers provided most of the tobacco processed by the PRATC, the company became increasingly concerned about the uneven quality of the tobacco produced by Puerto Rican farmers. The PRATC established the subsidiary Porto Rican Leaf Tobacco Company to produce tobacco leaf of uniform quality and the company became a major investor in tobacco research. With the assistance of the tobacco specialist of the Experiment Station, J.A.B. Nolla, it set up experimental farms where high-quality tobacco seedlings were grown under cloths to protect it from the elements. The farms also included extensive seedbeds with carefully selected seeds of varieties that were resistant to pests and diseases. Since one of the most insidious problems faced by the tobacco economy was the lack of proper curing and fermenting facilities, the company also built barns where tobacco leaf could be cured and warehouses where fermentation could occur.<sup>46</sup>

Experimentation with fermentation methods was constant, and included the effect on the leaf of different types and sizes of fermenting structures, temperatures, and length.

Facing further reductions in the funding of tobacco research, tobacco farmers, with the support of the *Asociación de Agricultores*, lobbied the insular legislature for the protection of the tobacco sector. The *Comisión para Proteger el Tabaco de Puerto Rico* and the *Instituto de Tabaco* were established as the result of relentless pressure applied by the farmers through constant lobbying of the insular and federal legislatures, negative press campaigns that portrayed government officials as abusive and indifferent, and the

---

Dr. G.H. Chapman to manage the project. The IES appointed J.A.B. Nolla to collaborate. The details can be found in López Domínguez, *IES 1926-27*, 5, 30. Several years later, the IES report notes that “Large corporations have cooperated by establishing experimental plots all over the island and have aided us in the soil survey.” See *IES 1929-30*, 5.

<sup>46</sup> For a detailed description of the fermenting process, see Chapter 1.

participation of tobacco farmers in agricultural organizations that knew how to pressure and manipulate the colonial bureaucracy.<sup>47</sup>

### **The Commission for the Protection of Tobacco and the Tobacco Institute**

The *Comisión para Proteger el Tabaco de Puerto Rico*, the Commission for the Protection of Puerto Rican Tobacco, was established on February 18, 1929 by the Puerto Rican legislature. Funding for the Commission's operations would come from the personal contributions of each tobacco grower, an amount determined in proportion to production. Almost five months later, on July 8, 1929, a general assembly of the Tobacco Growers of Puerto Rico approved Joint Resolution No. 13 in support of the Commission. An executive board was elected at this meeting from members who had been certified as "bona fide tobacco growers" by the assembly.<sup>48</sup>

The Commission's first order of business was to establish local committees in every municipality where tobacco was grown.<sup>49</sup> Tobacco growers fully participated in the establishment of these *juntas locales* and only one year after the Commission's founding, local committees were operational in all the tobacco districts. The committees assisted the Commission in providing information about the condition of the crop during the planting period, acreage under cultivation, and expected yield per *cuerda*. They also disseminated the Commission's reports regarding acreage restrictions due to Agricultural

---

<sup>47</sup> For a detailed discussion of the legislative processes that established the Commission and the Institute, see Chapter 4.

<sup>48</sup> Elected to the executive board were: Agustín Fernández as President; Julián Gandía as Vice President; Antonio Colón Rivera as Secretary; Miguel Meléndez Muñoz, Rafael Arce Rollet, and Cándido Ramírez as Members at Large; and Francisco M. Zeno as Executive Director. The Treasurer of Puerto Rico and the Commissioner of Agriculture also served as members of the Commission. Details are in *Informe Anual de la Comisión para Proteger el Tabaco de Puerto Rico (1929-1930)* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1930), 3 (hereafter cited as *Comisión 1929-30*).

<sup>49</sup> For a complete list of the 34 municipalities, see *Comisión 1929-30*, 13.

Adjustment Administration programs, market conditions on the island and abroad, and cooperative activities.<sup>50</sup>

The Commission was charged with conducting a “survey of the problem of the tobacco market in Puerto Rico, studying cultivation methods and agricultural administration, and [conducting] any other study conducive or needed to protect and improve the agro-industrial conditions of Puerto Rican tobacco.”<sup>51</sup> With the help of the tobacco specialist of the AES, the Commission set up experimental farms to conduct comparative production tests of tobacco varieties believed to be more resistant to disease and of better overall flavor. Like the AES, the goals of the Commission were wider than scientific discovery and included a study of the development and administration of the tobacco cooperatives that existed in the United States as well as a continuous examination of the worldwide market situation for Puerto Rican tobacco. For example, a bulletin published in 1929 discussed a meeting with representatives from Spain, Austria and Germany to discuss the possibility of opening up new markets for Puerto Rican tobacco.<sup>52</sup>

An important part of the tobacco survey would be a comprehensive tobacco census that would include names of tobacco growers, acreage planted, fertilizers used and amounts, number of curing ranches, average yield per  *cuerda*, and the average cost of cultivation. Agustín Fernández, President of the Commission, met with Dr. W.A. Orton,

---

<sup>50</sup> *Circulares* were Commission bulletins that included press releases, report updates, the latest tobacco cultivation news, and price reports. *Circular* #3, for example, argued that the plantings had to be dramatically restricted for 1931 in order to avoid another year of low prices (30-32). *Circular* #10 reported that Philip Shorin from The American Leaf Tobacco Co. visited the offices of the Commission to inquire about purchasing tobacco (40-41). *Circular* #17 announced that the Commission would act as a selling agent for any grower who needed help negotiating with buyers. In return, the Commission would keep a 1% commission to be deposited into the operating fund (50).

<sup>51</sup> *Comisión 1929-30*, 16-18.

<sup>52</sup> *Circular* #8, 37-38.

President of the Tropical Plant Research Foundation in Washington, to secure an approximate budget of \$45,000 to fund the study.

Under the law, the Commission would assume the leadership of the *Agencia de Garantía del Tabaco de Puerto Rico* in New York (Tobacco Guarantee Agency or TGA).<sup>53</sup> The TGA was founded in 1921 to “discover fraud and adulteration of Puerto Rican tobacco, denounced constantly in the island and in the United States, and to that end, to promote the Puerto Rican product to the national market.”<sup>54</sup> American smokers were not well aware that the tobacco that they enjoyed came from Puerto Rico. As stated in Chapter 1, the qualities of Puerto Rican tobacco made it appropriate for blending with higher-priced Cuban tobacco. This allowed the cigar companies to market the cigars as “Cubans,” commanding a higher retail price per cigar while paying lower wholesale prices for Puerto Rican, not Cuban, tobacco. The TGA was established as a governmental agency that would protect the interests of tobacco growers through the marketing of Puerto Rican tobacco to American consumers and by ensuring that Puerto Rican tobacco was labeled as such. Unfortunately, the TGA was plagued from its

---

<sup>53</sup> F.M. Zeno, *Informe sobre la investigación y el estudio practicados por el Jefe Ejecutivo de la Comisión para Proteger el Tabaco de Puerto Rico* (San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1931) 3.

<sup>54</sup> *Ibid.*, 5-6. “Fraud” referred to the tobacco corporations’ common practice of not detailing the provenance of the tobacco that they used in the manufacture of cigars. American consumers, as a result, were not aware that the tobacco that they enjoyed came from Puerto Rico. “Adulteration” referred to the blending of Puerto Rican tobacco with cheaper cuts of tobacco from other regions in the U.S. or around the world. This problem would continue to plague the Puerto Rican tobacco industry well into the 1940s. It was noted in a special report prepared by the Tobacco Institute that tobacco manufacturing companies “have been very careful to conceal the fact that these cigars of national reputation are manufactured with filler tobacco from Puerto Rico. Continental smokers will never know the composition of their favorite cigars so long as manufacturers resell our tobacco under registered trademarks. By concealing the origin or nature of their tobacco, the manufacturers are free to impose their own prices and terms when buying the product in the market.” See Antonio Rojas, Tobacco Institute of Puerto Rico, *Preliminary Plan to Stabilize the Tobacco Industry Submitted to the Planning, Urbanizing and Zoning Board of Puerto Rico* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1944), 5.

inception by an inadequate budget and frequent staff turnover.<sup>55</sup> Funding for the TGA was supposed to come from the payment of taxes and licensing fees by tobacco corporations, a process that was problematic mostly because corporations would delay or avoid payment.<sup>56</sup> The transfer of jurisdiction to the Commission was intended to provide a more stable budget. The Commission, now acting as direct supervisor of the TGA, would also be responsible for staffing the office in New York. The Commission, however, was overburdened and under-funded and its work with the TGA was ineffective.

Because the Commission's operating budget depended on contributions from tobacco growers, the Commission became an economic burden for growers. Returns on the tobacco crop were often just enough to pay day laborers and cover the *contrato de refacción*.<sup>57</sup> To ask small growers to give up scarce monetary resources was a hardship that could not be required. The Commission continued lobbying the legislature for increases in appropriations for tobacco research, arguing the unfairness of placing the burden of funding research on individuals and not on the insular state. The Commission continued to exist until 1936 but with such limited funding that its work was curtailed to weekly briefings on the state of the industry and to cooperating with lobbying efforts led by the *Asociación de Agricultores*.

Tobacco growers, disappointed with the outcome of the Commission, asked once again for the support of the *Asociación de Agricultores*. Growers recognized the importance of continuing scientific investigations into the problems of tobacco and,

---

<sup>55</sup> Zeno, *Comisión*, 4.

<sup>56</sup> See Truman Clark, *Puerto Rico and the United States, 1917-1933* (Pittsburgh, PA: University of Pittsburgh Press, 1975), 113.

<sup>57</sup> For a detailed discussion on the *contratos de refacción*, see Chapter 3.

together with the *Asociación de Agricultores*, pressured the Puerto Rican legislature to establish an institution whose sole purpose would be to sponsor research that would alleviate the economic and agricultural problems of tobacco growers. The *Instituto de Tabaco de Puerto Rico* was chartered through Joint Resolution #15 of the Puerto Rican legislature on July 22, 1935 as a government agency under the leadership of an executive board made up of the Commissioner of Agriculture and Commerce, two tobacco growers, and two tobacco industrialists appointed by the Governor with consent of the insular Senate.<sup>58</sup> Unlike the Commission, which depended on contributions from tobacco growers, the Institute would derive its budget from a line item appropriation from the insular budget. Additional monies would come from a 15-cent tax per hundredweight of tobacco sold in the island.<sup>59</sup>

The Institute had both agricultural and industrial objectives. Its agricultural mission was to find the “solution to the problems concerning the cultivation of tobacco” and “the post-harvest manipulation of the crop.” To do this, the Institute established research branches in agronomy, chemistry, pathology, and genetics. Its industrial mission was to investigate “possible new markets and new uses for tobacco.” The Institute was also responsible for the promotion of “legislation beneficial to the tobacco industry at large.”<sup>60</sup>

The AES collaborated with the Institute since its inception. In 1935, the University of Puerto Rico ceded 12 *cuerdas* of land to the Institute to establish a physical

---

<sup>58</sup> J.A.B. Nolla, *First Report of the Tobacco Institute of Puerto Rico. Fiscal Year 1936-37* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1937), 7.

<sup>59</sup> Carlos Esteva Jr., *Third Annual Report of the Tobacco Institute of Puerto Rico (1938-1939)* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1940) 5.

<sup>60</sup> *Ibid.*

plant. A newly built structure, funded with monies from the Federal Emergency Relief Administration, housed the Director's office, a conference room, and chemistry, genetics and pathology laboratories.<sup>61</sup> A greenhouse and curing barn were built as well. The Institute also set up a substation in Caguas on 16.5 *cuerdas* with two curing barns and experimental fermentation equipment.<sup>62</sup> Extensive tobacco projects were also established in Cayey, Aibonito and Morovis. Like the AES, the Institute was committed to publishing scientific findings. In addition, the Institute set up a library with copies of agricultural publications that dealt with tobacco cultivation, such as *Tobacco* magazine and the *Revista de Agricultura de Puerto Rico*, as well as scholarly papers presented at local and international conferences.<sup>63</sup>

The Institute became the voice of the industry in the legislature. Due to concerns over the authenticity of tobacco being sold in the United States under the "Tobacco from Puerto Rico" label, the Institute successfully introduced legislation that regulated that labeling. Law #16 was enacted in June 10, 1939 and stated that only tobacco actually grown in Puerto Rico could be labeled as such.<sup>64</sup> Some of the Institute's legislative efforts were not successful. For example, the Institute sponsored Bill No. 718 to establish a uniform classification system for filler tobacco used in cigarettes in order to protect farmers against arbitrary classification of crops by dealers and financiers.

---

<sup>61</sup> Nolla, *Tobacco Institute 1936-37*, 36. The Federal Emergency Relief Administration (1933-1935) provided assistance to unemployed workers through the funding of public works projects. Because the University of Puerto Rico and the Tobacco Institute were public institutions on public land, FERA funds could be used to build facilities like laboratories, greenhouses, or other buildings.

<sup>62</sup> Esteva, *Tobacco Institute 1938-39*, 12-14.

<sup>63</sup> *Ibid.*, 26-27.

<sup>64</sup> *Ibid.*, 28.

Although the bill had strong support from the growers, it faced strong opposition from buyers and never made it to the floor for debate.<sup>65</sup>

The Institute's ability to effect change was greatly curtailed by the continued decline of the tobacco sector. Carlos Esteva recognized those limitations in 1940, when he wrote that:

“It would be folly, for example, to think that the Tobacco Institute of Puerto Rico or any other Insular Government agency is in a position to counter-balance the unfavorable factors [facing the tobacco industry]. Some of the maladjustments stretch out beyond our Insular geographical boundaries. They are the products of the economical and social evolution of the times, of the elastic interplay of forces in a far-away market where our crop is mainly consumed. Not even the concentrated and cooperative efforts of the people of Puerto Rico, their Insular and their Federal Government agencies, can cope with that broad problem in all its various aspects. Evidently the tobacco industry should readjust itself to the changing rhythm of consumers' preferences.”<sup>66</sup>

Although the tobacco industry attempted to “readjust itself,” it never recovered and the Institute became another casualty of the reallocation of funds from agricultural projects to manufacturing ones during the 1950's.

## **Conclusion**

Scientific inquiry and experimentation had a profound impact on agricultural development in general and the tobacco sector in early 20<sup>th</sup> century Puerto Rico. Scientists demonstrated that selecting more productive varieties of tobacco, maintaining better seedbeds, using appropriate fertilizers, and adopting control methods to check disease and insect damage made growing more profitable. The widening of the

---

<sup>65</sup> Ibid.

<sup>66</sup> Carlos Esteva, Jr., *Annual Reports of the Tobacco Institute of Puerto Rico. Fiscal years 1939-1940 and 1940-1941* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1942), 6.

Agricultural Experiment Station's goals to include home economics, farm administration, and rural infrastructure development shows that there was an interest not only in maximizing crop efficiency but in modernizing the entire rural society, and by effect, Puerto Rico as a whole.

Tobacco processing corporations, like the Porto Rican American Tobacco Leaf Company, bought into the better-product-through-science mentality since it meant that the quality and quantity of the leaf they needed would be improved. Their participation may have been self-serving, but they invested important funds in setting up local experimental fields, maintaining seedbeds, building curing ranches that were technologically sound, and continuing pest and disease research that directly benefited Puerto Rican growers.

Tobacco growers adopted new techniques as a result of these efforts and became involved in a collaborative process of scientific exchange. The station provided new technologies and the growers provided practical application, and above all, information about the status of their plantings. Their organization and participation were crucial in guaranteeing that tobacco-specific research continued in the face of diminishing appropriations from the insular government. Their constant pressuring of the insular legislature, with the assistance of the *Asociación de Agricultores*, resulted in the creation of the *Comisión para Proteger el Tabaco de Puerto Rico* and the *Instituto de Tabaco*. The federal legislature did not escape the political pressure from tobacco growers, who won the extension of federal agricultural laws that guaranteed funding for scientific research in Puerto Rico.

The development and implementation of the science of tobacco in early 20<sup>th</sup> century Puerto Rico provides an example of ample collaboration between scientists, tobacco interests, and the state. Tobacco's rise to the second most important position in the export trade by 1918 was not an accident. It occurred because scientists, tobacco corporations and growers, and the insular and federal governments cooperated in the development of the tobacco economy although this was not always amicably and often took place amid constant criticism. The success of the science of tobacco in improving the quality of the products and increasing the earning potential for farmers demonstrates that Puerto Rican legislators, scientists, business owners, and farmers took advantage of the new colonial relationship with the United States to access scientific research funds, create institutions, and participate in federal programs that improved living conditions for Puerto Ricans in the rural areas of the island. Puerto Ricans understood the role of practical science in the modernization of the island, and willingly and enthusiastically participated in scientific experimentation and its practical application on the fields.

## Conclusion

The study of tobacco cultivation in the highland regions of Puerto Rico from 1898 to 1940 provides an opportunity to examine the effects of the U.S. occupation and annexation on the island's economy and society from new perspectives. The evidence presented in this dissertation suggests alternatives to the mostly one-dimensional historical narrative constructed by scholars of early 20<sup>th</sup>-century Puerto Rico, where the characteristics of the development of the sugar sector have become the analytical framework used to evaluate all agricultural development on the island. Additionally, the dynamics of economic, social, and political development in the tobacco regions add complexity to the simple dichotomy presented by scholars who have either demonized or idealized the period of U.S. control prior to the Second World War. The colonial system imposed upon Puerto Rico without consulting Puerto Ricans in any systematic way, was one with many components and may not be unilaterally analyzed through the perspectives of a single economic sector, political party, social class, racial or sex group within the population.

The paradigm of 'victimization' in which Puerto Ricans were simply objects of policies effected without their input and largely beyond their control is challenged by examining the economic, social, and political behavior of Puerto Rican tobacco growers. Instead of a victimized population, the actions of the tobacco growers demonstrate that Puerto Ricans exerted influence and pressures at all levels of the colonial government both in Puerto Rico and in Washington. Ironically, and paradoxically, the freedoms of political action and organization bestowed upon Puerto Ricans as part of the new post

1898 colonial system permitted them to advocate for themselves and they were skilled enough, articulate enough, intelligent enough, and capable enough to take measures in defense of their own self-defined interests and agendas.

The tobacco economy of Puerto Rico experienced periods of expansion and contraction between 1898 and 1940. The growth of the tobacco sector from 1898 to 1917 both in terms of *cuerdas* planted and in terms of total production in pounds was steady. After 1917, however, Puerto Rican tobacco growers responded to the widening demand for American tobacco due to the end of World War I by significantly increasing plantings. This second wave of expansion culminated in 1927 with an enormous crop of over 50 million pounds, an excessive amount that the American tobacco market was unable to absorb. The economic consequences of this bumper crop, which led to falling prices for tobacco leaf, were immediately aggravated by the economic depression that began in 1929 and a shift in smoking preferences from larger, heavier, and more expensive cigars, to smaller lighter, and cheaper cigars and cigarettes. Through the 1930s, Puerto Rican tobacco began a calamitous decline, although there was some recovery from 1933 to 1938 due to federal aid programs and wider credit availability. By 1940, the value of the tobacco sector had fallen to levels seen in the early 20<sup>th</sup> century and would never again recover.

Most of the tobacco in Puerto Rico was cultivated in the eastern and western highland regions. Often referred to as the “poor man’s crop,” tobacco could be efficiently cultivated on very small parcels of land and had relatively low operating expenses, which made the crop an economically viable alternative for farmers with limited land and capital resources. Tobacco cultivation in Puerto Rico in the early 20<sup>th</sup> century was an

owner-operated, small-scale agricultural enterprise, even with heavy private and corporate American investment in the industrial side of the tobacco sector. As the tobacco economy expanded, so did the population in the tobacco regions, both naturally and through migration as people moved into the region to take advantage of economic opportunities. The high rates of population increase among both adult males and females, and in the number of children found in the tobacco districts, suggest that migration was in general a family and not a male-only phenomenon. Although the rural areas of Puerto Rico have historically been discussed as if they were one homogenous unit, it is clear that the arguments made in relation to the development of the sugar sector, such as widespread absentee ownership, the displacement of the small landowner, and high rates of male migration do not apply to the tobacco regions.

There were some similarities between the tobacco, sugar and coffee regions to be sure, such as rapid population growth, the increase in the number of landless families, and the high percentage of family income spent on food products. However, there were important differences in economic organization and patterns of daily life among the three. First, the overall cash earnings of tobacco farmers were much lower than the earnings of sugar and coffee farmers, which limited the material wealth that tobacco farmers could accumulate. Second, because cultivation expenses were the lowest in tobacco regions, tobacco farmers had greater opportunities to participate in a booming agricultural market as independent producers. Third, the tobacco growing season was shorter than both sugar and coffee, and farmers were able to use their land to plant secondary agricultural products for both the local market and family consumption. This increased the total benefit that tobacco farmers derived from the cultivation of their land in comparison with

the other two major economic zones. It was precisely the importance of the production of secondary agricultural items in addition to the cash-earning potential of tobacco that made tobacco farming such an attractive economic alternative for the thousands of farmers in the eastern and western highland regions of Puerto Rico.

Tobacco farmers in Puerto Rico, for the most part, depended on agricultural credit available from both institutional and non-institutional sources to finance the cultivation of their crops. The majority of tobacco farmers obtained credit from non-institutional sources, such as *refaccionistas*, lenders who were local landowners, merchants, or leaf traders. *Refaccionistas*, in addition to being production credit providers, also acted as buyers and marketing agents of the leaf they had financed, thereby exerting a significant level of control over the price paid to farmers. *Contratos de refacción*, with their high interest rates and additional expenses, were criticized as abusive by farmers, insular administrators, and agricultural representatives who in turn applied pressure to the federal government to extend agricultural credit legislation to Puerto Rico. The result was that by 1940 there was a well-established institutional credit structure in Puerto Rico made up of federal and insular banking institutions and commercial private banks that supplied credit at reasonable rates and for any length of time that a farmer needed. Institutional credit was most successful in serving those farmers who had solid credit histories with other banks, were in stable financial situations, or perhaps were the largest producers. Yet, for most small-scale tobacco farmers, non-institutional lenders still served as the principal sources of credit.

Farmers in the tobacco regions sought to be active participants in shaping the parameters of their own lives to the greatest degree possible utilizing the new freedoms

and political structures bestowed upon them by the new U.S.-imposed colonial system. At the local level, tobacco growers joined local *ligas agrícolas*, invested in cooperative societies, and demanded legislation to safeguard their economic interests. They attended meetings, drafted proposals and letters, voted in support or against resolutions, and passionately debated the status of the tobacco industry. Together with many farmers in Puerto Rico, tobacco growers created political pressures on the insular and federal governments by establishing the *Asociación de Agricultores Puertorriqueños* (AAP) and contributing to *El agricultor puertorriqueño*. The AAP accepted its self-appointed role as the public voice of the farmers and successfully lobbied for legislation that was not only beneficial to the agricultural economy, but that would foment the development of rural areas and demonstrate the government's commitment to raising the standard of living of all rural residents. Insular and federal officials were regularly visited by the representatives of Puerto Rican tobacco growers, publicly challenged, and criticized. The political and economic activism of tobacco growers is evidence that Puerto Ricans learned how to maneuver within the new colonial political structures and made use of the democratic guarantees afforded within that system to exert pressures for change.

Scientific inquiry and experimentation had a profound impact on the tobacco sector in early 20<sup>th</sup>-century Puerto Rico. Tobacco's rise to the second most important position in the export trade behind sugar after the U.S. occupation was not haphazard or coincidental. It occurred because scientists, tobacco corporations and growers, and the insular and federal governments cooperated in the development of the tobacco economy although this was not always accomplished amicably and often took place amid constant criticism, debate, and conflict. Scientists affiliated with the Agricultural Experiment

Station (AES), a publicly-funded research institution, demonstrated that selecting more productive varieties of tobacco, maintaining better seedbeds, using appropriate fertilizers, and adopting control methods to check disease and insect damage made growing more profitable.

Tobacco processing corporations such as the Porto Rican American Tobacco Leaf Company collaborated with AES scientists by investing in local experimental farms. Experiments conducted in fields, such as maintaining seedbeds, building curing ranches that were technologically sound, and continuing pest and disease research, directly benefited Puerto Rican farmers. Tobacco growers adopted the new techniques that resulted from these efforts and became involved in a collaborative process of scientific exchange. The AES provided new technologies and the growers provided practical application and real-life experiments. The growers' participation in these projects and continued affiliation with the AAP were crucial in guaranteeing that tobacco-specific research continued in the face of diminishing resources provided by the insular government. Their constant pressuring of the insular and federal legislatures resulted in the creation of the *Comisión para Proteger el Tabaco de Puerto Rico* and the *Instituto de Tabaco* as well as the extension of federal funding for scientific research in Puerto Rico.

Unfortunately, none of the efforts by Puerto Rican tobacco growers, the insular and federal governments, or agricultural associations could reverse the demise of tobacco as an important export product after 1940. Economic hardship across all agricultural sectors of the island created the conditions for a major change in the political arena with the rise to power of the *Partido Popular Democrático* (PPD) under the leadership of Luis Muñoz Marín in the legislative elections of 1940. The PPD's platform of *pan, tierra y*

*libertad* (land, liberty and bread) resonated with the rural population of the island who had dealt with the cyclical highs and lows of forty years of agricultural development. To live up to his promise of a better life for all Puerto Ricans, Muñoz Marín began a comprehensive program of industrialization as a better alternative to agriculture to support the population of Puerto Rico. Although there were attempts at land reform and investment in the promotion of agriculture, these were not successful at reversing the downward trend of the agricultural sector. Insular and federal funds were diverted instead into industrialization programs and agriculture became a relatively unimportant priority for the PPD-dominated government.

The changes of the early 1940s and how these affected the rural population in Puerto Rico have not been explored by scholars, who have focused on the macro-level programs of the new majority party, the PPD. A number of questions, beyond the scope of this study, will undoubtedly be answered by future research. How was the agricultural sector organized after 1940? Were tobacco growers able to maintain at least a minimum standard of living because of continued access to land? Was migration from rural areas to urban ones more severe in tobacco, coffee, or sugar regions? How did the mass migration of Puerto Ricans to the United States during the 1950s and after affect the agricultural sectors?

The themes discussed in this dissertation may be useful as a point for departure for the reinterpretation of several themes in Puerto Rican history from the U.S. invasion of 1898 to 1940. First, the agricultural history of Puerto Rico must not be presented as a one-dimensional narrative of colonial abuse based on the development of the sugar sector. The changes in the tobacco regions demonstrate that there were significant

variations among the agricultural regions of Puerto Rico in terms of land use, social structure, and income possibilities. The debate over the effects of the U.S. occupation on the agricultural sector, and ultimately, on the everyday lives of Puerto Ricans must be re-conceptualized to make room for these particularities.

Second, the well-documented efforts of Puerto Rican tobacco farmers to participate in every level of the new colonial structures demonstrate that they were neither docile nor intimidated. Tobacco growers effectively manipulated the colonial system to effect changes that had a significant impact on their daily lives. The continued discussion of the effects of American colonialism on the people of Puerto Rico must acknowledge that, even though ultimate authority resided in Washington, Puerto Ricans actively challenged and redefined what colonialism meant in terms of their daily lives, with all of the successes and failures of any human endeavor.

## Bibliography

### Archival Collections

*Archivo Histórico de Caguas*, Caguas, Puerto Rico

Sección: Secretaría; Subsección: Beneficiencia y Salud Pública; Serie: Expedientes y Documentos; Subserie: Huracanes; Años: 1819-1932; Caja #13, Sobre: 1932 B.

*Centro de Investigaciones Históricas*, University of Puerto Rico, Río Piedras, Puerto Rico

Colección: Asociación de Agricultores de PR; Serie: Actas de la Junta Directiva; Microficha: 1924-1937.

*Oficina de Protocolos Notariales*, Caguas, Puerto Rico

Mena Latorre, Andrés, 1912-1960, Tomo 3

### Primary Sources

Agricultural Experiment Station, College of Agriculture and Mechanic Arts, University of Puerto Rico. *Annual Report of the Director for the Year 1933-34*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1935.

----- *Annual Report of the Agricultural Experiment Station. Fiscal year 1935-36*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1937.

----- *Annual Report of the Agricultural Experiment Station. Fiscal year 1936-37*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1938.

----- *Annual Report of the Agricultural Experiment Station. Fiscal Year 1937-38*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1939.

----- *Annual Report of the Agricultural Experiment Station. Fiscal year 1938-39*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1939.

----- *Annual Report of the Agricultural Experiment Station. Fiscal year 1940-41*. Lancaster, PA: Lancaster Press, Inc., 1941.

Board of Commissioners of Agriculture. *Second Report of the Board of Commissioners of Agriculture for the period from January 1, 1912 to June 30, 1913. Issued June 30, 1913*. San Juan: Bureau of Supplies, Printing and Transportation, 1913.

----- *Third Report of the Board of Commissioners of Agriculture for the period from July 1, 1913 to July 1, 1914*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1915.

----- *Fourth Report of the Board of Commissioners of Agriculture for the period from July 1, 1914 to July 1, 1915*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1916.

----- *Fifth Report of the Board of Commissioners of Agriculture for the period from July 1, 1915 to June 30, 1916. Issued June 30, 1916*. San Juan: Bureau of Supplies, Printing and Transportation, 1917.

Bureau of the Census, *Thirteenth Census of the United States Taken in the Year 1910. Statistics for Porto Rico; Agriculture; and Volume IV Population 1910, Occupation Statistics.* Washington, D.C., 1913.

----- *Fourteenth Census of the United States Taken in the Year 1920. Volume III, Population; Volume IV Population 1920, Occupations; and Volume VI, Part 3. Agriculture.* Washington, D.C., 1922.

----- *Fifteenth Census of the United States: 1930. Outlying Territories and Possessions.* Washington, D.C., 1932.

----- *Sixteenth Census of the United States: 1940. Bulletin No. 2: Characteristics of the Population; Bulletin No. 3: Occupations and Other Characteristics by Age; and Reports for Puerto Rico: Census of Agriculture.* Washington, D.C., 1942.

Bureau of Insular Affairs. *Report of the Governor of Porto Rico, 1920, pages 503-566 inclusive.* Washington, D.C.: Government Printing Office, 1920.

Camuñas, Manuel. Commissioner of Agriculture and Labor. *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1917. From the Report of the Governor of Porto Rico, 1917, pages 545-562 inclusive.* Washington, D.C.: Government Printing Office, 1917.

----- *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1918. From the Report of the Governor of Porto Rico, 1918, pages 621-649 inclusive.* Washington, D.C.: Government Printing Office, 1918.

----- *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1919. From the Report of the Governor of Porto Rico, 1919, pages 685-713 inclusive.* Washington, D.C.: Government Printing Office, 1919.

----- *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1921. From the Report of the Governor of Porto Rico, 1921, pages 448-503 inclusive.* Washington, D.C.: Government Printing Office, 1921.

Carroll, Henry K. *Report on the Industrial and Commercial Condition of Porto Rico.* Washington, D.C.: Government Printing Office, 1899.

Chardón, Carlos. Commissioner of Agriculture and Labor. *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1923. From the Report of the Governor of Porto Rico, 1923, pages 211-264 inclusive.* Washington, D.C.: Government Printing Office, 1923.

----- *Informe del Comisionado de Agricultura y Trabajo al Honorable Gobernador de Puerto Rico, 1923-1924.* San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1924.

----- *Annual Report of the Commissioner of Agriculture and Labor Submitted to the Governor of Porto Rico, 1924-25.* San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1926).

----- *Informe del Comisionado de Agricultura y Trabajo al Honorable Gobernador de Puerto Rico, 1925-1926.* San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1927.

----- *Informe del Comisionado de Agricultura y Trabajo al Honorable Gobernador de Puerto Rico, 1926-1927.* San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1928.

- *Informe del Comisionado de Agricultura y Trabajo al Honorable Gobernador de Puerto Rico, 1928*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1929.
- *Annual Report of the Commissioner of Agriculture and Labor submitted to the Governor of Porto Rico, 1928-29*. San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1930.
- *Informe del Comisionado de Agricultura y Trabajo al Honorable Gobernador de Puerto Rico, 1929-30*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1930.
- Colón, Edmundo. Comisionado de Agricultura y Comercio. *Informe Anual del Comisionado de Agricultura y Comercio correspondiente al año fiscal 1930-31*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1931.
- *Informe Anual del Comisionado de Agricultura y Comercio correspondiente al año fiscal 1931-1932*. San Juan, P.R.: Departamento de Agricultura y Comercio, 1932.
- Colón, Isidoro A. Comisionado de Agricultura y Comercio. *Informe Anual del Departamento de Agricultura y Comercio, 1939-1940*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1940.
- Comisión Para Proteger el Tabaco de Puerto Rico. *Informe Anual de la Comisión para Proteger el Tabaco de Puerto Rico (1929-1930)*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1930.
- Departamento de Agricultura y Comercio. "Cosecha de tabaco, 1930. Informe oficial." *Revista de agricultura de Puerto Rico* 24 (1930): 60.
- *Informe Anual del Departamento de Agricultura y Comercio, 1936-1937*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1937.
- Division of Agricultural Economics, Agricultural Extension Service, *Annual Report of the Division of Agricultural Economics of the Agricultural Extension Service, 1934-1935*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1935).
- Esteva, Carlos Jr. *Third Annual Report of the Tobacco Institute of Puerto Rico (1938-1939)*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1940.
- *Annual Reports of the Tobacco Institute of Puerto Rico. Fiscal years 1939-1940 and 1940-1941*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1942.
- Feliu, Leopoldo. Commissioner of Agriculture and Labor. *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1922. From the Report of the Governor of Porto Rico, 1922, pages 438-504 inclusive*. Washington, D.C.: Government Printing Office, 1923.
- Gage, E. Charles. *The Tobacco Industry in Puerto Rico. United States Department of Agriculture, Circular No. 519*. Washington, D.C.: Government Printing Office, 1939.
- Gandía Córdova, Ramón, Acting Commissioner of Agriculture and Labor. *Report of the Commissioner of Agriculture and Labor of Porto Rico, 1920. From the Report of the*

*Governor of Porto Rico, 1920, pages 503-566 inclusive.* Washington, D.C.: Government Printing Office, 1920.

Insular Experiment Station of Puerto Rico. *Annual Report of the Insular Experiment Station of Puerto Rico for the Period from July 1, 1916 to July 1, 1917* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1917.

Insular Experiment Station of Puerto Rico, Department of Agriculture and Labor of Puerto Rico. *Eighth Annual Report of the Insular Experiment Station of the Department of Agriculture and Labor of Puerto Rico for the Period from July 1, 1917 to June 30, 1918* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1919.

----- *Tenth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1919-20* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1920.

----- *Eleventh Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1920-21* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1921.

----- *Twelfth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1921-22* (San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1922.

----- *Thirteenth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1922-23* (San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1924.

----- *Fourteenth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1923-24.* San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1924.

----- *Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1929-30.* San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1931.

Junta de Salario Mínimo, División de Investigaciones y Estadísticas, Gobierno de Puerto Rico. *La industria del tabaco en rama.* San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1942.

Koenig, Nathan. *A Comprehensive Agricultural Program for Puerto Rico.* Washington, D.C.: Government Printing Office, 1953.

*La Marketing: un logro del tabacal. Organización y vida de la Puerto Rico Tobacco Marketing Association.* Santurce, P.R.: Publicaciones Yocauna, 1956.

López Domínguez, Francisco A. *Fifteenth Annual Report of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1924-25.* San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1926.

----- *Seventeenth Annual Report of Director of the Insular Experimental Station of the Department of Agriculture and Labor of Puerto Rico. Fiscal Year 1926-27.* San Juan, P.R.: Bureau of Supplies, Printing, and Transportation, 1929.

- *Informe Anual del Departamento de Agricultura y Comercio, 1937-1938*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1938.
- Menéndez Ramos, Rafael. Comisionado de Agricultura y Comercio. *Informe Anual del Comisionado de Agricultura y Comercio correspondiente al año fiscal 1932-1933*. San Juan, P.R.: Departamento de Agricultura y Comercio, 1933.
- *Informe Anual del Comisionado de Agricultura y Comercio correspondiente al fiscal 1933-1934*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1934.
- *Informe Anual del Departamento de Agricultura y Comercio, 1934-1935*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1935.
- *Informe Anual del Departamento de Agricultura y Comercio, 1935-1936*. San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1936.
- Nolla, J.A.B. *First Report of the Tobacco Institute of Puerto Rico. Fiscal Year 1936-37*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1937.
- *Second Annual Report of the Tobacco Institute of Puerto Rico*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1939.
- Pérez, Manuel A. *Living Conditions among Small Farmers in Puerto Rico, Research Bulletin on Agriculture and Livestock, Bulletin No. 2*. San Juan, PR: Bureau of Supplies, Printing and Transportation, 1942.
- Perkins, Maurice Perkins, Pierre Courbois, Antonio A. Llorens, Carlos M. Matos, Luis A. Nazario and Jorge J. Serrallés, Jr. *Credit and Related Problems in the Agriculture of Puerto Rico*. Report prepared for the Department of Agriculture, Economic Development Administration, the Government Development Bank for Puerto Rico, the Land Authority for Puerto Rico, the Puerto Rico Industrial Development Co., and the Autoridad de Energía Eléctrica. December 1956, 37.
- Rodríguez Geigel, A. Servicio de Extensión Agrícola. Colegio de Agricultura y Artes Mecánicas de la Universidad de Puerto Rico. *Informe Anual del Servicio de Extensión Agrícola. Diciembre 1, 1938 a noviembre 30, 1939*. Río Piedras, P.R.: Universidad de Puerto Rico, 1939.
- *Informe Anual del Servicio de Extensión Agrícola. Diciembre 1, 1939 a noviembre 30, 1940*. Río Piedras, P.R.: Universidad de Puerto Rico, 1940.
- *Informe Anual del Servicio de Extensión Agrícola. Diciembre 1, 1940 a noviembre 30, 1941*. Río Piedras, P.R.: Universidad de Puerto Rico, 1941.
- Rojas, Antonio. Tobacco Institute of Puerto Rico. *Preliminary Plan to Stabilize the Tobacco Industry Submitted for Consideration to the Planning, Urbanizing and Zoning Board of Puerto Rico*. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1944.

Servicio de Extensión Agrícola. Colegio de Agricultura y Artes Mecánicas de la Universidad de Puerto Rico. *Sirviendo al Agro. Informe de las actividades del Servicio de Extensión Agrícola de la Universidad de Puerto Rico December 1, 1937 to November 30, 1938.* Universidad de Puerto Rico, 1938.

Tobacco Institute of Puerto Rico. *The Tobacco Industry in Puerto Rico and the Fair Labor Standards Act.* Report of the subcommittee appointed by the Governor's committee to study general aspects of the Fair Labor Standards Act. San Juan, P.R.: Bureau of Supplies, Printing and Transportation, 1937.

----- *Tobacco Institute Report. Fiscal Years 1941-42, 1942-43.* San Juan, P.R.: Real Hermanos, Inc. S.J., 1945.

United States Department of Labor. Wage and Hour Division. Research and Statistics Branch. *Puerto Rico: The Leaf Tobacco Industry.* Washington, D.C.: Government Printing Office, 1941.

War Department. Office of the Director of the Census of Porto Rico. *Report on the Census of Porto Rico, 1899.* Washington, D.C.: Government Printing Office, 1900.

Weyl, Walter E. *Labor Conditions in Porto Rico. Bulletin of the Bureau of Labor 61.* Washington, D.C.: Government Printing Office, 1905.

Zeno, F.M. *Informe sobre la investigación y el estudio practicados por el Jefe Ejecutivo de la Comisión para Proteger el Tabaco de Puerto Rico.* San Juan, P.R.: Negociado de Materiales, Imprenta y Transporte, 1931.

## Secondary Sources

“300 ranchos de tabaco destruidos.” *El agricultor puertorriqueño* 2, no. 4 (July 31, 1926): 5.

“10,000 miembros en la AAPR.” *El agricultor puertorriqueño* 9, no. 4 (February 28, 1930): 8.

Abad, José Ramón. *La exposición agrícola e industrial de tabaco realizada en Puerto Rico, diciembre 1883. Memoria de la Junta Directiva.* Ponce, P.R.: Establecimiento Tipográfico EL VAPOR, 1884.

“Acuerdos de la Junta Directiva de la AA, en relación con la carta de los Sres. Directores del Banco Federal de Baltimore.” *El agricultor puertorriqueño* 11, no. 16 (August 31, 1931): 3.

“Al país.” *El agricultor puertorriqueño* 12, no. 7 (April 15, 1932): 5, 12.

Álvarez Curbelo, Silvia. “La patria agrícola: la ideología de los agricultores de Puerto Rico, 1924-1928.” Master's thesis, University of Puerto Rico, 1986.

- “Amicus Plato, Sed Magis Amica Veritas.” *El agricultor puertorriqueño* 9, no. 11 (June 15, 1930): cover page.
- “Ante el desastre.” *El agricultor puertorriqueño* 12, no. 18 (October 15, 1932): cover page.
- Arce Rollet, Rafael. “Los contratos de refacción,” parts 1 and 2. *El agricultor puertorriqueño* 1, no. 3 (December 26, 1925): 7; and no. 6 (January 16, 1926): 9-10.
- Augelli, John P. “Sugar Cane and Tobacco: A Comparison of Agricultural Types in the Highlands of Eastern Puerto Rico.” *Economic Geography* 29, no. 1 (January 1953): 63-73.
- “Aumenta el consumo mundial de cigarrillos americanos.” *El agricultor puertorriqueño* 2, no. 11 (September 13, 1926): 16.
- Austin, R.C. “Government Programs in Tobacco.” *Journal of Farm Economics* 32, no. 4 (November 1950): 894-906.
- Avilés, Marciano. “Some Effects of Federal and Commonwealth Tobacco Programs on the Tobacco Industry of Puerto Rico.” *Boletín de la Estación Experimental Agrícola* 162 (1962).
- Ayala, César J. *American Sugar Kingdom: The Plantation Economy of the Spanish Caribbean, 1898-1934*. Chapel Hill, N.C.: University of North Carolina Press, 1999.
- Ayala, César J. and Laird W. Bergad. “Rural Puerto Rico in the Early 20<sup>th</sup> Century Reconsidered: Land and Society, 1899-1915.” *Latin American Research Review* 37, no. 2 (2001): 65-97.
- Baer, Werner. “Puerto Rico: An Evaluation of a Successful Development Program. *The Quarterly Journal of Economics* 73, no. 4 (November 1959): 654-671.
- Baird, Frieda. “Reorganizing our Agricultural Credit Facilities.” *Journal of Farm Economics* 15, no. 2 (April 1933): 319-330
- Baldrich, Juan José. *Sembraron la no siembra. Los cosecheros de tabaco puertorriqueños frente a las corporaciones tabacaleras, 1920-1934*. Río Piedras, P.R.: Ediciones Huracán, 1988.
- Baud, Michiel. “The origins of capitalist agriculture in the Dominican Republic.” *Latin American Research Review* 22, no. 2 (1987): 135-153.
- *Peasants and Tobacco in the Dominican Republic, 1870-1930*. Knoxville, TN: University of Tennessee Press, 1995.

- Baud Michiel and Kees Kooning. "A *lovoura dos pobres*: Tobacco farming and the development of commercial agriculture in Bahia, 1870-1930." *Journal of Latin American Studies* 31 (1999): 287-329
- Baver, Sherrie. "Puerto Rico: Colonialism Revisited." *Latin American Research Review* 22, no. 2 (1987): 227-234.
- Becerra de Weierich, Isabel. "Las primeras estaciones agronómicas en Puerto Rico." Master's thesis, University of Puerto Rico, 1969.
- Bergad, Laird W. *Coffee and the Growth of Agrarian Capitalism in Nineteenth-Century Puerto Rico*. Princeton, NJ: Princeton University Press, 1983.
- "Agrarian History of Puerto Rico, 1870-1930." *Latin American Research Review* 13, no. 3 (1978): 63-94.
- Bernabe, Rafael. *Respuestas al colonialismo en la política puertorriqueña, 1899-1929*. Río Piedras, PR: Ediciones Huracán, 1996.
- Bird-Carmona, Arturo. "Between the Insular Road and San Juan Bay: The Cigar World of Puerta de Tierra." Ph.D. diss., University of Iowa, 1998.
- "La Huelga Agrícola de 1915 y la Fundación del Partido Socialista." Master's thesis, University of Puerto Rico, 1986.
- Black, John D. "The Role of Public Agencies in the Internal Readjustments of the Farm." *Journal of Farm Economics* 7, no. 2 (April, 1925): 153-175
- Buckley Robert J. "The Federal Farm Loan Act." *The Journal of Political Economy* 25, no 2 (February 1917): 129-147.
- Bunker, F.H. "Many Economic and Field Problems Facing Puerto Rican Leaf Planters." *Tobacco* 107, no. 26 (1938): 8-11.
- "El tabaco: semilleros, preparación del terreno, abonos y cultivos." *Revista de agricultura de Puerto Rico* 1 (1918): 33.
- Cadilla de Martinez, María. "El tabaco." *Revista de agricultura de Puerto Rico* 29 (July 1937): 110-113.
- Carr, Raymond. *Puerto Rico: A Colonial Experiment*. New York, NY: Vintage Books, 1984.
- Carrasquillo, Rosa. *Our Landless Patria: Marginal Citizenship and Race in Caguas, Puerto Rico, 1880-1910*. Lincoln, NE: University of Nebraska Press, 2006.
- "Carta de los Directores del Banco Federal al Presidente de la AA." *El agricultor puertorriqueño* 11, no. 16 (August 31, 1931): 2, 31.

- Clark, Truman R. *Puerto Rico and the United States, 1917-1933*. Pittsburgh, PA: University of Pittsburgh Press, 1975.
- Clark, Victor. *Porto Rico and its Problems*. Washington, D.C.: The Brookings Institution, 1930.
- Coates, Glenn. "Agricultural Profit-Sharing in Puerto Rico." *Land Economics* 24, no. 3 (August 1948): 309-311.
- Cohen, Felix S. "Science and Politics in Plans for Puerto Rico." *Journal of Social Issues* 3, no. 4 (November 1947): 6-17.
- Collo, Martin Joseph. "Puerto Rico and the United States: The Effect of the Relationship on Puerto Rican Agrarian Development." Ph.D. diss., University of Pennsylvania, 1986.
- Colón, Edmundo. *Datos sobre la agricultura de Puerto Rico antes del 1898*. San Juan, P.R.: Tip. Cantero, Fernández & Co., Inc., 1930
- Colón Torres, Ramón. "Estudio económico de 270 fincas de tabaco en Puerto Rico, 1936-37." *Boletín de la Estación Experimental Agrícola* 50 (1939).
- "Financing Low Income Farmers in Puerto Rico." *Journal of Farm Economics* 34, no. 5 (December 1952): 944-948.
- "Comentarios a la Ley de Compraventa Agrícola. Reglas de interpretación acordadas por la Junta Agrícola Federal." *El agricultor puertorriqueño* 10, no. 9 (November 15, 1930): 23-26.
- "Cómo andan los servicios públicos en Puerto Rico." *El agricultor puertorriqueño* 11, no. 5 (March 15, 1931): page number unknown.
- Cook, Melville T. and José I. Otero, "History of the First Quarter of a Century of the Agricultural Experiment Station at Río Piedras, Puerto Rico." *Boletín de la Estación Experimental Agrícola* 44 (1937).
- Corrales Corrales, José R. "La Cámara de Comercio de Puerto Rico como factor de desarrollo económico nacional, 1913-1933." Ph.D. diss., University of Puerto Rico, 1997.
- Cuevas Cruz, René. "De agregado a parcelero: transformación y vida cotidiana en la zona rural puertorriqueña, 1940-60." Ph.D. diss., University of Puerto Rico, 2002.
- Curet, Eliécer. *Puerto Rico: Development by Integration to the U.S.* Río Piedras, PR: Editorial Cultural, 1986.
- "Demanda contra la Comisión Protectora del Tabaco declarada sin lugar." *El agricultor puertorriqueño* 14, no. 6 (June 1934): 15.

- Descartes, Sol L. "Land Reform in Puerto Rico." *The Journal of Land and Public Utilities* 19, no. 4 (November 1943): 397-417.
- *La empresa tabacalera*. Río Piedras, P.R.: Universidad de Puerto Rico, Escuela de Administración Pública, 1965.
- *Puerto Rico: trasfondo de su economía, fondo físico, histórico e institucional*. Hato Rey, P.R.: Inter-American University Press, 1973.
- Díaz de Acín, Nilsa. "La participación de la Estación Experimental de Agricultura de la Universidad de Puerto Rico en el desarrollo agrícola de Puerto Rico." Master's thesis, University of Puerto Rico, 1967.
- Dietz, James L. "Puerto Rico's new history." *Latin American Research Review* 19, no. 1 (1984): 210-222.
- *Economic History of Puerto Rico: Institutional Change and Capitalist Development*. Princeton, NJ: Princeton University Press, 1986.
- "The Puerto Rican Political Economy." *Latin American Perspectives* 3, no. 3 (Summer 1976): 3-16.
- Diffie, Bailey W. and Justine Whitfield Diffie. *Porto Rico: A Broken Pledge*. New York, NY: The Vanguard Press, 1931.
- "Editorial." *El agricultor puertorriqueño* 1, no. 3 (December 26, 1925): 1.
- "Editorial." *El agricultor puertorriqueño* 2, no. 24 (December 25, 1926): 2.
- "El ausentismo." *El agricultor puertorriqueño* 2, no. 16 (October 23, 1926): 1.
- "El Banco Federal y los agricultores." *El agricultor puertorriqueño* 11, no. 16 (August 31, 1931): cover page.
- "El Gobernador veda el proyecto del tabaco. Un nuevo aspecto de la acción destructora del Gobernador." *El agricultor puertorriqueño* 7, no. 9 (May 15, 1929): 26.
- "El obrero y la huelga contra la siembra de tabaco." *El agricultor puertorriqueño* 11, no. 18 (September 30, 1931): 1-2.
- "El programa legislativo de la Asociación de Agricultores." *El agricultor puertorriqueño* 6, no. 12 (December 31, 1928): 12-15.
- "El Representante de la Junta Federal Agrícola de Estados Unidos, estará en Puerto Rico el día 17 de noviembre." *El agricultor puertorriqueño* 10, no. 9 (November 15, 1930): 9.
- "El tabaco en Santo Domingo." *El agricultor puertorriqueño* 2, no. 12 (September 25, 1926): 16.

- Emerson, Rupert. "Puerto Rico and American Policy Toward Dependent Areas." *Annals of the American Academy of Political and Social Science* 285, (January 1953): 9-15
- Enamorado Cuesta, José. *Porto Rico, Past and Present. The Island after Thirty Years of American Rule*. 1929. Reprint, New York, NY: Arno Press. Inc., 1975.
- "Estimados preliminares de las pérdidas sufridas por motivo del temporal." *El agricultor puertorriqueño* 6, no. 6 (September 30, 1928): 13-15.
- "Farm Security Administration. La Administración de Protección Agrícola hace los primeros préstamos en Puerto Rico: arrendatarios y medianeros serán dueños de fincas." *El heraldo de extensión* 1, no. 1 (January 1939): 1.
- Fernández, Agustín. "El cultivo de tabaco en Puerto Rico." *El agricultor puertorriqueño* 11, no. 15 (August 15, 1931): 12, 21-22.
- Fernández Méndez, Eugenio. *El tabaco en nuestra historia y costumbres*. San Juan, P.R.: First Book Publishing of Puerto Rico, 1997.
- *Portrait of a Society: Readings on Puerto Rican Sociology*. Río Piedras, P.R.: University of Puerto Rico Press, 1972.
- Fernández, Ronald. *The Disenchanted Island: Puerto Rico and the United States in the 20<sup>th</sup> Century*. 2<sup>nd</sup> ed. Westport, CT: Praeger Publishers, 1996.
- Fernós-Isern, Antonio. "From Colony to Commonwealth." *Annals of the American Academy of Political and Social Science* 285, (January 1953): 16-22
- Ferrao, Luis Ángel. *Pedro Albizu Campos y el nacionalismo puertorriqueño, 1930-1939*. Río Piedras, P.R.: Editorial Cultural, 1990.
- Fleagle, Fred K. *Social Problems in Porto Rico*. New York, NY: D.C. Heath and Co., Publishers, 1917.
- "Fomentemos las Cooperativas." *El agricultor puertorriqueño* 4, no. 5 (September 15, 1927): 1.
- Freytes Mont, Federico. *Breve historia de la Autoridad de Tierras*. San Juan, P.R.: Museo Agrícola del Colegio de Agrónomos de Puerto Rico, 1993.
- Gandía Córdova, Ramón. "Comentarios a la Ley Federal de Préstamos Agrícolas," parts 1-5. *El agricultor puertorriqueño* 5, no. 9 (May 15, 1928): 19-20; no. 10 (May 31, 1928): 24-25; no. 11 (June 15, 1928): 23-24; 6, no. 4 (August 31, 1928): 15-17; no. 10 (November 30, 1928): 20-21.
- Garrison Villard, Oswald. "Reconstruction in Puerto Rico." *The Nation* 144, no. 15 (April 10, 1937): 408-409.

“Gestiones que a solicitud de la AA llevará a cabo en Washington el Gobernador Roosevelt y el Comisionado Residente.” *El agricultor puertorriqueño* 10, no. 10 (November 30, 1930): 9, 11.

Gil-Bermejo García, Juana. *Panorama histórico de la agricultura en Puerto Rico*. Sevilla, Spain: Escuela de Estudios Hispanoamericanos, 1970.

Gile, B.M. “Functioning of the Federal Intermediate Credit Banks.” *Journal of Farm Economics* 13, no. 1 (January 1931): 123-132.

Gleason, Henry Allan and Mel T. Cook. *Plant Ecology of Porto Rico*. New York, NY: New York Academy of Sciences, 1927.

González Cruz, Michael. “The U.S. Invasion of Puerto Rico: Occupation and Resistance to the Colonial State, 1898 to the Present.” *Latin American Perspectives* 25, no. 5 (September 1998): 7-26.

González Iglesias, Pedro. “Una de las causas de nuestra pobreza.” *El agricultor puertorriqueño* 10, no. 4 (August 31, 1930): 20.

González Quiñones, M. “Las ventajas del Banco Federal de Crédito Intermedio,” parts 1 and 2. *El agricultor puertorriqueño* 1, no. 15 (March 20, 1926): 10; and no. 18 (April 10, 1926): 10.

----- “Pasando balance, parte II.” *El agricultor puertorriqueño* 11, no. 24 (December 31, 1931): 1-2.

Gordon, Lewis K. *Puerto Rico: Freedom and Power in the Caribbean*. New York, NY: MR Press, 1963.

Guerra, Lillian. *Popular Expression and National Identity in Puerto Rico: The Struggle for Self-Community and Nation*. Gainesville, FL: University Press of Florida, 1998.

Hanson, Earl Parker. *Transformation: The Story of Modern Puerto Rico*. New York, NY: Simon and Schuster, 1955.

Hart, John Fraser and Eugene Cotton Mather. “The Character of Tobacco Farms and Their Role in the Tobacco Economy of the United States.” *Annals of the Association of American Geographers* 51, no. 3 (September 1961): 274-293.

Henderson, G.C. “The Agricultural Credits Act of 1923.” *The Quarterly Journal of Economics* 37, no. 3 (May 1923): 518-522.

Hernández, Juan David. “El tabaco de Caguas.” Archivo Histórico de Caguas, photocopy.

- Hill, E.B. and Sol L. Descartes. "An Economic Background for Agricultural Research in Puerto Rico." *Bulletin of the Agricultural Experiment Station* 51 (1939).
- Huyke, Roberto and R. Colón Torres. "Costo de producción de tabaco en Puerto Rico, 1937-38." *Boletín de la Estación Experimental Agrícola* 56 (1940).
- "Importante asamblea de tabacaleros. Se ha acordado restringir las siembras para la próxima cosecha." *El agricultor puertorriqueño* 4, no. 3 (August 15, 1927): 4-5.
- "Importante mensaje de D. Modesto Cobián Rivera, Presidente de 'Tabacaleros de Comercio Inc.', a la reunión de Cooperativas Tabacaleras." *El agricultor puertorriqueño* 1, no. 11 (February 20, 1926): page number unknown.
- "Importante reunión de cooperativas tabacaleras. Existe absoluta unión entre todas." *El agricultor puertorriqueño* 1, no. 11 (February 20, 1926): 9
- "Importante reunión de Tabacaleros de Manatí." *El agricultor puertorriqueño* 3, no. 11 (June 15, 1927): 30.
- Johnson, Dale. "Class Formation and Struggle in Latin America." *Latin American Perspectives* 10, nos. 2 and 3 (Spring-Summer 1983): 2-18.
- "La Asamblea." *El agricultor puertorriqueño* 1, no. 2 (December 19, 1925): 3.
- "La Asamblea de Ponce." *El agricultor puertorriqueño* 1, no. 4 (January 2, 1926): 11-12.
- "La Asociación de Agricultores aconseja a los cosecheros no forzar las ventas hasta que hayan precio remuneradores." *El agricultor puertorriqueño* 3, no. 8 (April 30, 1927): 24.
- "La atención de préstamos de la Junta Federal Agrícola de Estados Unidos se considera posible por los frutereros de Puerto Rico." *El agricultor puertorriqueño* 9, no. 1 (January 15, 1930): 20.
- "La comisión de la Asociación de Agricultores." *El agricultor puertorriqueño* 2, no. 3 (July 24, 1926): 6-7.
- "La cooperativa Insular Tabacalera celebró una importante reunión en Cayey." *El agricultor puertorriqueño* 5, no. 3 (February 15, 1928): 19.
- "La corporación de crédito agrícola." *El agricultor puertorriqueño* 12, no. 19 (October 30, 1932): cover page.
- "La cosecha de tabaco será grandemente reducida. La caída de los ranchos." *El agricultor puertorriqueño* 2, no. 7 (August 21, 1926): 6.

- “La crisis del tabaco y el gobernador de Puerto Rico.” *El agricultor puertorriqueño* 4, no. 6 (September 30, 1927): 12.
- “La dirección de la Agencia de Garantía del Tabaco de Puerto Rico en Nueva York.” *El agricultor puertorriqueño* 3, no. 3 (February 15, 1927): 18-9.
- “La Magna Asamblea de Tabacaleros celebrada en San Juan.” *El agricultor puertorriqueño* 8, no. 3 (August 15, 1929): 18-20.
- “La perspectiva tabacalera.” *El agricultor puertorriqueño* 7, no. 4 (February 28, 1929): 8.
- “La unión hace la fuerza.” *El agricultor puertorriqueño* 1, no. 30 (July 3, 1926): 6.
- “Las ventajas del Banco Federal de Crédito Intermedio.” *El agricultor puertorriqueño* 1, no. 15 (March 20, 1926):10.
- Lee, V.P. “The Intermediate Credit Banks.” *Journal of Farm Economics* 7, no. 4 (October 1925): 425-434.
- Lizardi Flores, Ignacio. “Problemas rurales,” parts 1-4. *El agricultor puertorriqueño* 11, no. 19 (October 15, 1931): 16-7; no. 21 (November 15, 1931): 8, 22; no. 22 (November 30, 1931): 3, 19; and no. 24 (December 31, 1931): 14.
- “Lo que significa el crédito intermedio para Puerto Rico.” *El agricultor puertorriqueño* 1, no. 13 (March 6, 1926): 9.
- López, Adalberto, ed. *The Puerto Ricans: Their History, Culture and Society*. Rochester, VT: Schenkman Books, Inc., 1980.
- “Los Bancos Tabacaleros siguen prosperando.” *El agricultor puertorriqueño* 2, no. 3 (July 24, 1926): 18.
- “Los cosecheros de tabaco.” *El agricultor puertorriqueño* 1, no. 7 (January 23, 1926): 7, 18.
- “Los engaños en el abono para tabaco.” *El agricultor puertorriqueño* 10, no. 8 (October 31, 1930): 16.
- “Los préstamos agrícolas hechos en Puerto Rico.” *El agricultor puertorriqueño* 7, no. 8 (April 30, 1929): 16.
- “Los primeros cálculos de las pérdidas.” *El agricultor puertorriqueño* 6, no. 5 (September 15, 1928): 4, 19.
- Lounsbury, John F. “Farmsteads in Puerto Rico and Their Interpretative Value.” *Geographical Review* 45, no. 3 (July 1955): 347-358.

Maldonado-Denis, Manuel. *Puerto Rico: Mito y realidad*. Madrid, Spain: Ediciones Península, 1969.

----- "The Puerto Ricans: Protest or Submission." *Annals of the American Academy of Political and Social Science* 382 (March 1969): 26-31.

Manzano, M.A. "Apuntes sobre la química de los tabacos claros para cigarillos." *Revista de agricultura, industria y comercio de Puerto Rico* 31 (1939): 209-211.

Martínez-Vergne, Teresita. *Capitalism in Colonial Puerto Rico: Central San Vicente in the late Nineteenth Century*. Gainesville, FL: University Press of Florida, 1992.

Matos Rodríguez, Félix V. "New Currents in Puerto Rican History: Legacy, Continuity and Challenges of the 'Nueva Historia'." *Latin American Research Review* 32, no. 3 (1997): 193-208.

Matos Rodríguez, Félix V. and Linda C. Delgado, eds. *Puerto Rican Women's History: New Perspectives*. Armonk, NY: M.E. Sharpe, 1998.

McCook, Stuart. "Promoting the 'Practical': Science and Agricultural Modernization in Puerto Rico and Colombia, 1920-1940." *Agricultural History* 75, no. 1 (2001): 52-82.

"Memorial presentado por la directiva de la Asociación de Agricultores a la Legislatura de Puerto Rico, y en su nombre a los presidentes de ambas cámaras Hon. Antonio R. Barceló y Hon. José Tous Soto." *El agricultor puertorriqueño* 3, no. 1 (January 15, 1927): 11.

Meléndez Muñoz, M. "El presente y el porvenir del tabaco en Puerto Rico," parts 1 and 2. *El agricultor puertorriqueño* 1, no. 8 (January 30, 1926): 15-17; and 1, no. 9 (February 6, 1926): 7-9.

----- "La habitación campesina en sus relaciones con la higiene y la moral. Alimentación del campesino." *El agricultor puertorriqueño* 1, no. 11 (February 20, 1926): 7.

----- "La situación tabacalera en la Isla. Opiniones y comentarios." *El agricultor puertorriqueño* 8, no. 8 (October 31, 1929): 7-9.

"Mensaje del Presidente de la AAPR a la Asamblea General Ordinaria del día 11 de julio de 1926." *El agricultor puertorriqueño* 2, no. 2 (July 17, 1926): 4.

"Modo de hacer la tasación de las fincas agrícolas." *El agricultor puertorriqueño* 1, no. 2 (December 19, 1925): 7.

Murray, William G. "Farm Mortgages and the Government." *Journal of Farm Economics* 17, no. 4 (Nov. 1935): 613-624.

"Naranjito organiza su Banco Tabacalero." *El agricultor puertorriqueño* 1, no. 28 (June 19, 1926): 10.

- Nolla, J.A.B. "Problemas de la industria tabacalera en Puerto Rico." *Revista de agricultura de Puerto Rico*, 24 (1930): 61-66.
- "Notas editoriales: La hora de los débiles." *El agricultor puertorriqueño* 11, no. 19 (October 15, 1931): 1.
- "Notas sobre la visita de los Directores del Banco Federal de Baltimore." *El agricultor puertorriqueño* 11, no. 17 (September 15, 1931): 3-4, 29-30.
- "Notas tabacaleras." *El agricultor puertorriqueño* 7, no. 7 (April 15, 1929): 7.
- "Notas varias." *El agricultor puertorriqueño* 11, no. 17 (September 15, 1931): 10, 27.
- "Nuestra asociación en la isla." *El agricultor puertorriqueño* 2, no. 7 (August 21, 1926): 3.
- "Nuestra comisión en Washington." *El agricultor puertorriqueño* 1, no. 22 (May 8, 1926): 5.
- "Nuestros propósitos." *El agricultor puertorriqueño* 1, no. 1 (December 12, 1925): 2.
- "Operaciones de la Asociación de Crédito para la Producción." *El agricultor puertorriqueño* 18, no. 8 (August 1938): 10.
- Oppenheimer, Monroe. "The Development of the Rural Rehabilitation Loan Program." *Law and Contemporary Problems* 4, no. 4 (October 1937): 473-488.
- "Organización de la Administración de Créditos Agrícolas." *El agricultor puertorriqueño* 14, no. 1 (January 1934): 4.
- "Organizaciones agrícolas." *El agricultor puertorriqueño* 1, no. 25 (May 29, 1926): 4.
- Ortiz, Fernando. *Cuban Counterpoint: Tobacco and Sugar*. New York, NY: Alfred A. Knopf, 1947.
- Osborne, Lea E. "Bridging the Divide: The Alliances of the Liga Social Sufragista in the Struggle to Enfranchise Puerto Rican Women." Master's thesis, Sarah Lawrence College, 2004.
- Pedreira, Antonio S. *Insularismo: Ensayos de interpretación puertorriqueña*. San Juan, P.R.: Biblioteca de Autores Puertorriqueños, 1957.
- "Pérdidas." *El agricultor puertorriqueño* 2, no. 5 (August 7, 1926): 3, 7, 17.
- Perloff, Harvey S. *Puerto Rico's Economic Future*. Chicago, IL: The University of Chicago Press, 1950.

- “The United States and the Economic Development of Puerto Rico.” *The Journal of Economic History* 12, no. 1 (Winter 1952): 48-50.
- “Perspectiva agrícola para el 1931.” *El agricultor puertorriqueño* 11, no. 6 (March 31, 1931): 23.
- “Perspectiva del mercado Tabacalero.” *El agricultor puertorriqueño* 3, no. 3 (February 15, 1927): 1.
- Pesquera, José L. “Cumplirán su deber.” *El agricultor puertorriqueño* 11, no. 19 (October 15, 1931): 9, 19.
- “Rectificaciones que honran.” *El agricultor puertorriqueño* 11, no. 20 (October 31, 1931): 4.
- “Pesquera y la política nacional.” *El agricultor puertorriqueño* 12, no. 20 (November 15, 1932): 1.
- Petrullo, Vincenzo. *Puerto Rican Paradox*. Philadelphia, PA: University of Pennsylvania Press, 1947.
- Picó, Fernando. *Los gallos peleados*. Río Piedras, P.R.: Ediciones Huracán, 1988.
- Picó, Rafael. “Land Tenure in the Leading Types of Farming of Puerto Rico.” *Economic Geography* 15, no. 2 (April 1939): 135-145.
- *Nueva geografía de Puerto Rico. Física, económica y social*. Río Piedras, P.R.: Editorial Universitaria, Universidad de Puerto Rico, 1975.
- “Plan completo para hacer la tasación de fincas rústicas.” *El agricultor puertorriqueño* 1, no. 7 (January 23, 1926): 10-14.
- “Por qué no debe cogerse el segundo cosecho del tabaco.” *El agricultor puertorriqueño* 3, no. 2 (January 31, 1927): 38.
- “Pormenores de la primera reunión para constituir la Cooperativa Insular de Tabacaleros.” *El agricultor puertorriqueño* 5, no. 2 (January 31, 1928): 25-31.
- “Préstamos para pequeños agricultores (Nota Oficial).” *El agricultor puertorriqueño* 19, no. 8 (August 1939): 12.
- “Prestigiando al país.” *El agricultor puertorriqueño* 3, no. 7 (April 15, 1927): 21.
- Preston, Howard H. and Victor W. Bennett. “Agricultural Credit Legislation of 1933.” *Journal of Political Economy* 42, no. 1 (February 1934): 6-33.
- “Puerto Rican Production Credit Association.” *El agricultor puertorriqueño* 19, no. 3 (March 1939): cover page.

Putnam, George E. "The Federal Farm Loan System." *The American Economic Review* 9, no 1 (March 1919): 57-78.

Quintero Rivera, A.G. *Conflictos de clase y política en Puerto Rico*. 5ta ed. Río Piedras, P.R.: Ediciones Huracán, 1986.

----- "Clases sociales e identidad nacional; notas sobre el desarrollo nacional puertorriqueño." In *Puerto Rico: Identidad Nacional y clases sociales*. Angel Quintero Rivera, Jose luis Gonzalez, Ricardo Campos, Juan Flores, eds. Río Piedras, P.R.: Ediciones Huracán, 1979.

Ratchford, B.U. "Federal Agricultural Policy in Relation to Tobacco." *The Journal of Politics* 11, no. 4 (November 1949): 655-677.

"Reglas que deben seguir los agricultores que han de gestionar Préstamos Federales autorizados por la Comisión Rehabilitadora." *El agricultor puertorriqueño* 7, no 8 (April 30, 1929): 20-22.

"Resoluciones Aprobadas por la Asamblea." *El agricultor puertorriqueño* 5, no. 7 (April 15, 1928): 26-27.

"Resoluciones aprobadas por la Asamblea de Agricultores." *El agricultor puertorriqueño* 9, no. 1 (January 15, 1930): 31, 36.

"Resoluciones aprobadas por la Asamblea General de Agricultores, celebrada el día 28 de diciembre de 1930 en la ciudad de Ponce, Puerto Rico." *El agricultor puertorriqueño* 11, no. 1 (January 15, 1931): 15-21.

"Resoluciones aprobadas por la Asamblea General de Agricultores de Ponce." *El agricultor puertorriqueño* 6, no. 2 (July 31, 1928): 29.

"Resoluciones de la Asamblea General de la Asociación de Agricultores." *El agricultor puertorriqueño* 4, no. 2 (July 31, 1927): 26-32.

"¿Resuelve la limitación de la cosecha el problema tabacalero?" *El agricultor puertorriqueño* 9, no. 10 (May 31, 1930): 1.

"Resumen de los acuerdos tomados por la Asamblea General de la AAPR en el Teatro Broadway de Ponce, el día 20 de diciembre de 1925." *El agricultor puertorriqueño* 1, no. 4 (January 2, 1926): 11.

Rivera-Giusti, Ivette M. "Gender, Labor and Working-Class Activities in the Puerto Rican Tobacco Industry, 1898-1924." Ph.D. diss., State University of New York at Binghamton, 2004.

- Rodríguez González, Flor Selenita. "Las imágenes de la mujer en las litografías de tabaco en Puerto Rico de finales del siglo XIX a principios del siglo XX." Master's thesis, University of Puerto Rico, 1999.
- Rodríguez, Manuel. "La reforma liberal en el contexto colonial: El Nuevo Trato y el Fair Labor Standards Act en Puerto Rico, 1938-1940." Master's thesis, University of Puerto Rico, 1996.
- Roosevelt, Theodore. "Land Problems in Puerto Rico and the Philippine Islands." *Geographical Review* 20, no. 2 (April 1934): 182-204.
- Ross, David F. *The Long Uphill Path: A Historical Study of Puerto Rico's Program of Economic Development*. San Juan, P.R.: Editorial Edil, 1969.
- Rosenn, Keith S. "Puerto Rican Land Reform: The History of an Instructive Experiment." *The Yale Law Journal* 73, no. 2 (December 1963): 334-356.
- Rowe, Leo Stanton. *The United States and Porto Rico. With Special Reference to the Problems Arising Out of Our Contact with the Spanish-American Civilization*. New York, NY: Longmans, Green, and Co., 1904.
- San Miguel, Pedro. *Los campesinos del Cibao. Economía del mercado y transformación agraria en la República Dominicana, 1880-1960*. San Juan, P.R.: Editorial de la Universidad de Puerto Rico, 1997.
- San Miguel, Pedro and Phillip Berryman. "Peasant Resistance to State Demands in the Cibao during the U.S. Occupation." *Latin American Perspectives* 22, no. 3 (Summer 1995): 41-62.
- Sanabria, Carlos. "The Puerto Rican Organized Workers' Movement and the American Federation of Labor, 1901 to 1934." Ph.D. diss., City University of New York, 2000.
- Sánchez Tarniella, Andrés. *La economía de Puerto Rico: Etapas en su desarrollo*. Madrid, Spain: Afrodisio Aguado, S.A., 1971.
- "Se organiza el Banco Tabacalero de Utuado." *El agricultor puertorriqueño* 3, no. 5 (March 15, 1927): 17.
- "Se reducen las siembras de tabaco." *El agricultor puertorriqueño* 4, no. 7 (October 15, 1927): cover page.
- "Se solicita ayuda para los Tabacaleros." *El agricultor puertorriqueño* 7, no. 2 (January 31, 1929): 6.
- "Sección agrícola." *El agricultor puertorriqueño* 2, no. 17 (October 30, 1926): 12.

- “Sección del Secretario.” *El agricultor puertorriqueño* 11, no. 17 (September 15, 1931): 2.
- “Sección editorial: El crédito.” *El agricultor puertorriqueño* 2, no. 8 (August 28, 1926): 1.
- “Sección editorial: La valoración de nuestra propiedad.” *El agricultor puertorriqueño* 1, no. 21 (May 1, 1926): 1.
- Seda Prado, Jorge. *El campesinado en Puerto Rico a fines del siglo 19 y principios del 20. El caso de Toa Alta, 1894-1910*. Río Piedras, P.R.: Ediciones Huracán, 1996.
- Serrallés, Jr., Jorge., Ramón Colón Torres, and Frank J. Juliá. “Analysis of the Organization and Factors Influencing the Returns on 194 Small Tobacco Farms in Puerto Rico, 1935-1936.” *Bulletin of the Agricultural Experiment Station* 46 (March 1938).
- Serrallés, Jorge, Jr. and Martín Vélez Jr. “Precios del Tabaco en Rama al Agricultor en Puerto Rico del 1907 al 1940.” *Boletín de la Estación Experimental Agrícola* 60 (Junio 1941).
- Silén, Juan Ángel. *We, the Puerto Rican People. A Story of Oppression and Resistance*. Translated by Cedric Belfrage. New York, NY: Monthly Review Press, 1971.
- “Speech of Charles Curtis accepting the Nomination for the Vice Presidency” given in Topeka, Kansas on August 18, 1928. <<http://www.vpcharlescurtis.net/ksstudies/speech.htm>>.
- Steward, Julian H., Robert A. Manners, Eric R. Wolf, Elena Padilla Seda, Sidney W. Mintz, and Raymond L. Scheele. *The People of Puerto Rico: A Study in Social Anthropology*. Urbana, IL: University of Illinois Press, 1956.
- Stubbs, Jean. *Tobacco on the Periphery: A Case Study in Cuban Labor History, 1860-1958*. New York, NY: Cambridge University Press, 1985.
- Stubbes, J.D. “La selección de la semilla del tabaco en Puerto Rico.” *El agricultor puertorriqueño* 1, no. 6 (January 16, 1926): 13.
- “Tabacaleros de Aibonito, Inc.” *El agricultor puertorriqueño* 1, no.30 (July 3, 1926): 6.
- “Tabacaleros de Aibonito, Inc. construyen su almacén.” *El agricultor puertorriqueño* 2, no. 6 (August 14, 1926): 9.
- “Tabacaleros de Cayey, Inc.” *El agricultor puertorriqueño* 2, no. 1 (July 10, 1926): 9.
- “Tabacaleros de Cayey, Inc. progresa.” *El agricultor puertorriqueño* 2, no. 6 (August 14, 1926): 9.
- “Tabaco.” *El agricultor puertorriqueño* 1, no. 7 (January 23, 1926): 16.
- “Tabaco.” *El agricultor puertorriqueño* 2, no. 22 (December 11, 1926): 13.

- “Tabaco. Se discute la necesidad de reducir las siembras.” *El agricultor puertorriqueño* 3, no. 13 (July 15, 1927): 10.
- Taylor, Milton C. “Puerto Rico: Recovery or Relapse?” *American Journal of Economics and Sociology* 14, no.3 (April 1955): 225-239.
- “Texto del discurso leído por el Sr. E. Landrón ante la Asamblea de Agricultores que se llevó a efectos en la Estación Experimental de Río Piedras.” *El agricultor puertorriqueño* 11, no. 3 (February 15, 1931): 4-7, 35.
- “Texto íntegro del Proyecto de Ley aprobado por la Legislatura sobre el tabaco.” *El agricultor puertorriqueño* 5, no. 8 (April 30, 1928): 30-34.
- “Texto íntegro de la ley que crea la Junta Federal y Agrícola y cuyos beneficios se han extendido a Puerto Rico,” parts 1 and 2. *El agricultor puertorriqueño* 10, no. 7 (October 15, 1930): 26; no. 8 (October 31, 1930): 25-27.
- Torgerson, Harold W. “Agricultural Finance in the United States.” *The Journal of Land and Public Utility Economics* 16, no. 2 (May 1940): 196-206.
- Torres Grillo, Herminio. *Historia de la Ciudad de Caguas*. Barcelona, Spain: Ediciones Rumbos, 1965.
- Torres Monge, Sandalio. “Las corporaciones y las tierras.” *El agricultor puertorriqueño* 8, no. 9 (November 15, 1929): 29-30.
- Trías Monge, José. *Puerto Rico: The Trials of the Oldest Colony in the World*. New Haven, CT: Yale University Press, 1997.
- Tulchin, Joseph S. “El crédito agrario en Argentina, 1910-1926.” Translated by Sibila Seibert. *Desarrollo Económico* 18, no. 71 (October 1978): 381-408.
- “Visita con Mr. E.B. Thomas, Director del Federal Land Bank.” *El agricultor puertorriqueño* 1, no. 6 (January 16, 1926): 10.
- Wall, Norman J. “Developments with Respect to Short-Term and Emergency Agricultural Credit.” *Journal of Farm Economics* 15, no. 2 (April 1933): 310-318.
- Zeppenfeldt, Rafael Arroyo. “Su Majestad el ‘Esmayao’.” *El agricultor puertorriqueño* 11, no. 14 (July 31, 1931): 1-2.