

Cotton in the Mexicali Valley and the Limits of State Interventionism (1914–1950)

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Abstract

The first cotton boom in the Mexicali Valley in northwestern Mexico took place during the first half of the 20th century and was facilitated by U.S. investors. Cotton production reached its highest levels starting in 1920–1930 and continued into the 1960s. In this area, which does not have a history of colonial haciendas, about 20 U.S. companies initiated and developed this agricultural enterprise, following an export strategy. The central hypothesis of this study is that the presence of U.S. firms, which established the agricultural structure of this area through control of land, water, and labor, could not be immediately substituted by Mexican government institutions that sought to position themselves as central actors in the regional economy.

Keywords: Mexico; United States; agriculture; state intervention; business enterprises, foreign; foreign investment; cotton

* Article received on February 20, 2015; final version approved on September 29, 2015. This paper is part of the project "Espacios económicos, dinámicas empresariales y desarrollo regional. De la política sustitutiva de importaciones a los mercados globalizados (1945–1994)," Conacyt/220138, Mexico. Araceli Almaraz works in the Social Studies Department of El Colegio de la Frontera Norte. She is a specialist in social history and the history of business enterprises, and has published a range of articles on business owners in northern Mexico. She is a member of the National Researchers Network – Level II (Sistema Nacional de Investigadores, Nivel II). Email: almaraz@colef.mx

Acronyms

CEIMSA	Compañía Exportadora e Importadora Mexicana, S. A.
CNI	National Irrigation Commission (Comisión Nacional de Irrigación)
COLEF	El Colegio de la Frontera Norte
DGEA	Office of Agricultural Economics (Dirección General de Economía Agrícola)
ha	Hectare
IBWC	International Boundary and Water Commission
km	Kilometer
NAFINSA	Nacional Financiera, S. A.
RPPC-M	Mexicali Public Registry of Property and Commerce (Registro Público de la Propiedad y del Comercio de Mexicali)
S.A.	Corporation (Sociedad Anónima)
SARH	Ministry of Agriculture and Water Resources (Secretaría de Agricultura y Recursos Hidráulicos)
S.C.P.	Private Partnership (Sociedad Civil Privada)
S. de R. L.	Limited Liability Corporation (Sociedad de Responsabilidad Limitada)
S.N.C.	General Partnership (Sociedad en Nombre Colectivo)
t	Ton

INTRODUCTION

Cotton cropping in the northwestern border area of Mexico was part of a late agricultural system that got its start in the early twentieth century (1914–1915), after foreign investors acquired titles to a significant expanse of land on the right bank of the Colorado River. The first stage of the cotton boom in the Mexicali Valley lasted from 1915 to the end of the 1920s, and relied on the introduction of modern irrigation infrastructure, the first external integrated production chains, and the availability of financial services. These factors converged with United States policy aimed at the development of the great Colorado Desert and the rising international demand for cotton fiber following the outbreak of World War I.¹ In the 1930s, the rapid expansion of cotton growing in the region faltered for two reasons: the policy of expelling foreign agricultural companies and the contraction of international markets following the Wall Street crash of 1929.

What makes the Mexicali Valley special within the broader framework of Mexico's agricultural development and why is it important to understand the Mexican state's limitations in this particular case? Firstly, we should note that historically, the Mexicali Valley did not follow the same agricultural development model that predominated throughout much of the rest of the country, where colonial influence led to the emergence of the large haciendas.² Secondly, Pre-Hispanic activities in the area were minimal and limited to seminomadic groups. As a result, the population in the Mexicali Valley did not start to increase until after 1930. In the meantime, the dynamics of production at the beginning of the twentieth century was consolidated thanks to the participation of groups from cities in California, who, with the help of local Mexicans, obtained legal deeds to ranch lands or uninhabited areas.³ In this way, a concessions policy⁴ encouraged the establishment of

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1. The multiplier effects of Mexicali's cotton-driven regional development were felt almost immediately. During the first boom period, nearly 400 companies were established. Private corporations were the most common, followed by general partnerships. The new cotton companies established in the region during this stage accounted for nearly 30% of all business ventures, i.e., three out of every ten companies incorporated were tied to cotton. There was a brief lull in this trend between 1930 and 1940, but the number of companies engaged in cotton production increased notably starting early in the following decade. It was during this second boom that Mexicali positioned itself as one of Mexico's primary cotton fiber exporting regions.
 2. Galindo notes that "in the sixteenth century, following the Spanish conquest, agricultural property in Mexico was amassed in the hands of a small number of Spanish and creole families. [Meanwhile], the Mexican peasant, the former owner of these lands [...], was gradually stripped of his property." (Galindo 1981: 87; translation by *Apuntes*).
 3. In 1883, during the Manuel González administration (1880–1884) and with the backing of Porfirio Díaz, the new "Land Settlement and Bounds Law" (*Ley de colonización y deslindes de terrenos*) was promulgated. It permitted the granting of contracts to Baja California individuals and companies for the exploitation of natural resources in the region, as well as promoting settlement (Almaraz 2007b).
 4. See Heath (2002).

corporations by foreigners who arrived in the area throughout nearly the entire period of the Mexican Revolution (1910-1917) and over the following years.⁵

These activities clearly demonstrate that the agrarian reform agenda of those participating in the armed struggle in Mexico did not produce similar results in each of the country's regions. While the struggle against the landed gentry was underway in other regions, the system established in the Mexicali Valley starting in the late 19th century was based on control over land and water by foreign groups and a very limited number of Mexican settlers.⁶ This trend coincided with the arrival of immigrant laborers from Asia. It should be noted that the agricultural development of the Mexicali Valley is part of a binational context in which the limitations of the Mexican state can be clearly observed right up to the present day.

Starting in 1934, the Mexican state initiated a strategy of planning and direct intervention in the country's economic development in areas deemed optimal for improving the living conditions of peasants and rural industrialization. As part of the wide-reaching national strategy for land distribution, the federal government created agricultural control agencies. The Mexicali Valley possessed a modern irrigation system and was home to few peasants. Nevertheless, the Colorado River Irrigation District (Distrito de Riego Río Colorado) and a local branch of the National Irrigation Commission (Comisión Nacional de Irrigación, CNI) were established in the valley in 1938. The latter agency was to act as an administrative and mediating body for water resources. Both of these federal agencies would slowly modify the mechanisms of agricultural control and operation, though not completely nor immediately. While the region had remained on the margins of the colonial hacienda system and the peasant revolts, it was still necessary to confront the foreign groups that had established themselves in the Mexicali Valley from 1915 onward, as well as a growing Mexican agricultural bourgeoisie.

Based on an analysis of the archives of the Mexicali Public Registry of Property and Commerce (RPPC-M), the *Official Gazette of the Government of the Territory of Baja*

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5. Almaraz (2007a: 113) notes that "the participation of foreign capital in the Colorado River Delta region began in the late 19th century, [and that], starting in 1901, with the implementation of the first stages of the irrigation system in Los Algodones, to the northeast of the present-day municipality of Mexicali, an opportunity for the development of the valley region was created" (Translation by *Apuntes*).
 6. A region that is very similar in terms of its economic activities and northern location is La Laguna, where cotton production and ginning go as far back as 1846. According to Otero: "In 1928, the distribution of registered haciendas, by size, was as follows: 75 haciendas with an area of 1,000 to 10,000 hectares each; 19 with over 10,000 hectares; and 3 with over 100,000 hectares. [...] The contrasts between the haciendas of La Laguna and the traditional haciendas of central and southern Mexico are truly significant" (Otero 2004: 117; Translation by *Apuntes*).

California (Periódico Oficial Órgano del Gobierno del Territorio de Baja California), the *Journal of the National Irrigation Commission (Revista de la Comisión Nacional de Irrigación)*, and the data of the Ministry of Agriculture and Water Resources (SARH), we argue that the Mexican state displayed contradictory behavior in the Mexicali Valley. This led to failures in the design of regional development strategies, given that the imposition of a protectionist model in a globalized local context would have required exploitation of existing competitive advantages to ensure sustained exportation.

This article is divided into three sections. The first covers the region's characteristics, the take-off process of the Mexicali Valley - remarkable on the national level for having begun in the midst of the peasant conflict - and the emergence of the first cotton boom. The second section focuses on the multiplier effects of cotton production and discusses the relevant local actors from the 1920s onward. The third section outlines the limits of the Mexican state's interventionism in a region marked by a high competitive capacity.⁷ The final reflections highlight the formation of an agricultural bourgeoisie in a binational scenario that differs from what was to be found in other rural areas of Mexico. Starting in the second half of the 1930s, the Mexican state sought to intervene in the regional development of Mexicali. This objective resulted in a process of confrontation and the involvement of multiple interests. The total control of land and water formed part of an arduous local and bilateral negotiating process regarding the distribution of the international waters that feed the Mexicali Valley. The local actors included groups of businessmen, largely foreigners, who operated against the backdrop of the global cotton markets. This monoculture was the basis of economic development and was sustained by the U.S. presence that had been well-established since the beginning of the 20th century. The growing participation of well-off Mexicans quickly became part of the regional project as they too claimed their share of the agricultural bounty of the time.

Unlike in other parts of Mexico, irrigation infrastructure in Mexicali could not be used as a bargaining chip by the Mexican state, which was forced to vary its process of negotiation and regional transformation. The high-export scenario clashed with a statist development model that was not automatic, all encompassing, or easy. The Mexican state did not begin to exert control over the Mexicali Valley until several decades later. This study finds that in regions linked to global production processes, bureaucratic intervention intended to promote and adapt protectionist models becomes impossible. Intervention strategies must

7. The subsequent decline of cotton production in the Mexicali Valley coincided with problems of salinity and land contamination, as well as the positioning of Mexican companies in the production of synthetic fibers at the beginning of the 1970s.

be oriented toward sustainability within the limits imposed by globalization. In the case of the Mexicali Valley, what was needed was a plan for the management of binational natural resources, as well as the development of new projects with a regional scope and global outlook, taking advantage of the market-based logic of the region's inhabitants. In the final analysis, rural industrialization was one of the state's objectives.

1. THE MEXICALI VALLEY FROM 1915 TO 1925: THE FIRST COTTON BOOM AND FOREIGN COMPANIES

The Mexicali Valley belongs to the municipality of the same name, and is located in the northwesternmost part of Mexico, in the Colorado River Delta region, on the right bank of its tributaries.⁸ It is an arid zone marked by a climate of extremes, with temperatures ranging from 2°C in winter to 47°C in summer and very low rainfall - its average annual precipitation is 60 cubic millimeters - making the use of agricultural technology essential. The arable land area totals approximately 350,000 ha and is geophysically continuous with the Imperial Valley in the U.S. state of California. Both valleys share the Colorado River basin (Map 1),⁹ which has been the object of both binational collaboration and disputes over the distribution of international waters since the late 19th century.¹⁰ The natural connection between both valleys did not change in 1848 with the Treaty of Peace, Friendship, Limits, and Settlement, given the need for strategic relations of interdependence between the two countries.

The Mexicali Valley accounts for 80.5% of the total arable surface area of what is now the state of Baja California¹¹ and ranks first in that state's area under irrigation: it has a modern irrigation system that was implemented early on, allowing for the development of a variety of agricultural activities. This agricultural hub of northwestern Mexico was primarily based out of two small towns: Los Algodones, where planting and harvesting activities in the Mexicali Valley were concentrated; and Mexicali, at a distance of 83.9 km from the former, which was the region's industrial and financial hub (Map 2).¹² Investment

8. The Mexicali Valley sits in the lower part of the basin of the Colorado River, which is 2,300 km long. The river's source is located in the Rocky Mountains in the United States and from there it flows through 10 states before reaching Mexico, where just 0.8% of the river's basin is located.

9. Both valleys were formed by sediment from the length of the Colorado River. This sediment was deposited in a very uneven manner in this binational basin, which covers an area of approximately 632,000 km².

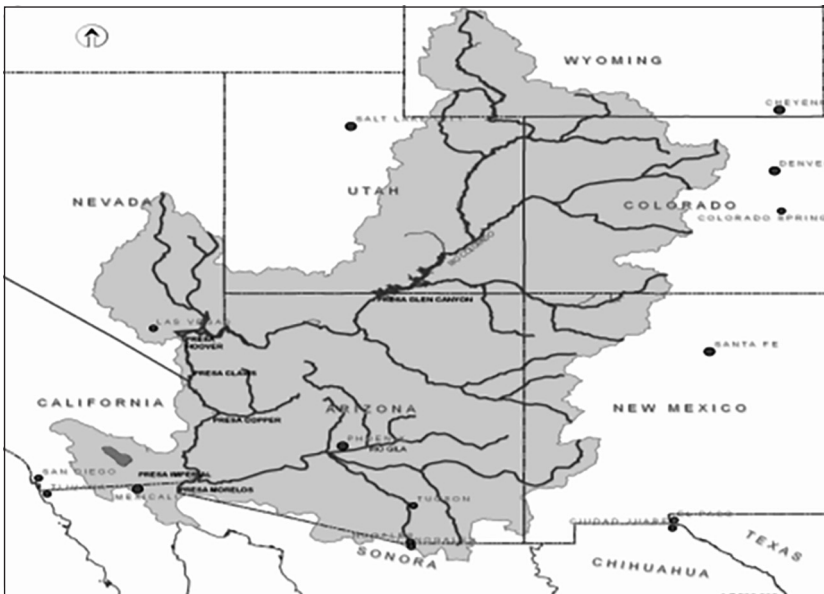
10. The creation of the binational body known as the International Boundary and Water Commission (IBWC) in 1899 was the result of the need for a body to regulate the water in the basins of the Colorado River and the Río Bravo/Río Grande River, the two largest basins shared by Mexico and the United States.

11. In 1952, Baja California was created as a free and sovereign state of the republic of the United Mexican States.

12. Currently, 92% of producers hold 20 ha or less and the remaining 8% have holdings greater than 10 ha. See the "Plan rector del sistema producto-algodón" (AMSDA 2012).

from the United States was decisive in the construction of the first irrigation canals and the railway segment that connected both towns with Arizona and California, respectively. Starting in the late 19th century, investors from California came to recognize the potential of the valley and the Colorado River Delta, due to the slopes that aid in channeling water.

Map 1
Mexico–United States Binational Basin – Colorado River



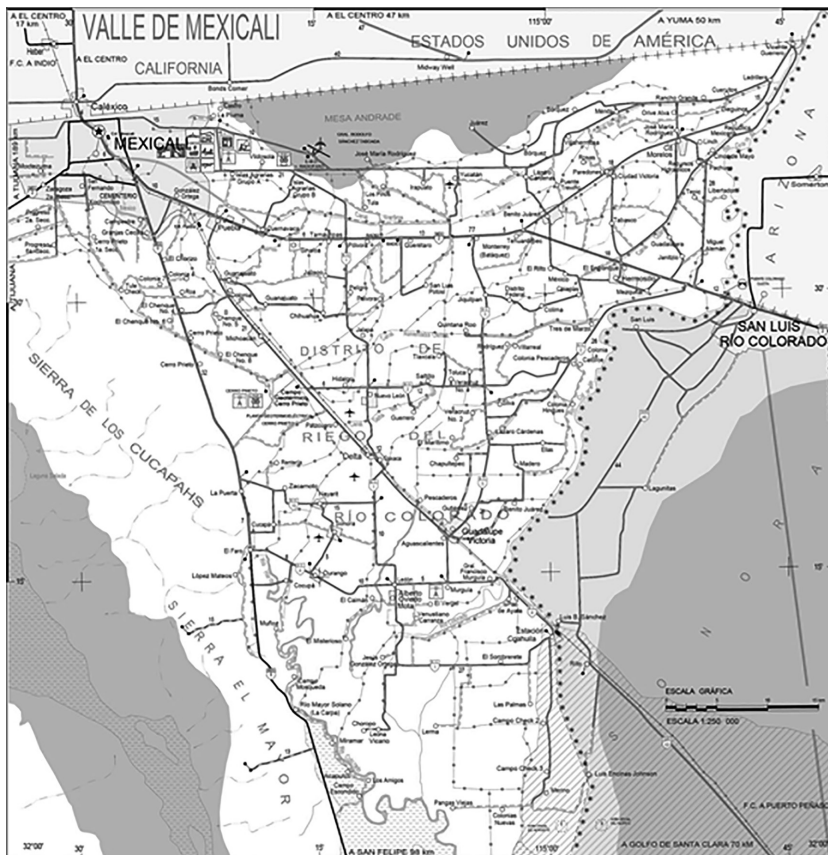
Source: Prepared by the Unidad de Servicios de Estadística y Geomática of El Colegio de la Frontera Norte (COLEF) (2010).

Implementation of the irrigation system began in 1901, with the opening of the Álamo Canal and the official naming of the towns of Mexicali and Calexico, both of which were coined based on different portmanteaus of "Mexico" and "California." The first gravity-fed and pump-driven irrigation facilities in the valley were among the most modern yet in existence, and later permitted the rapid expansion of cotton farming. Construction of the railway section, which made it possible to transport raw materials from Mexico to the United States, was concluded in 1909 thanks to the work of two U.S. companies, one of which would go on to have an important presence in the region over the following four decades (Almaraz 2010: 127–154).

The first U.S. businesses that arrived in the area in 1910 had been registered since 1909 in other towns in the northwest, such as Ensenada or Guaymas. The public registry in Mexicali

was established in 1912 (Almaraz 2007a). The number of these businesses increased once there were guarantees regarding the transfer of land titles and the subdivision of lands for investment and the development of agricultural activities through corporations and/or general partnerships. The largest land consolidation deal was closed in 1907, with an agreement to transfer the titles of nearly 300,000 ha to the Colorado River Land Co. (hereinafter, "La Colorado").¹³ From this moment on, the Mexicali Valley began to be subdivided into small private properties that could take advantage of the modern irrigation infrastructure.

Map 2
Mexicali urban area, 2010



Source: Prepared by the Unidad de Servicios de Estadística y Geomática, COLEF (2010).

13. Between 1904 and 1907, the La Colorado company kept its attorneys stationed in Mexico, until it finally obtained the titles through sale by a first Mexican concessionaire. See Almaraz (2007b).

This local dynamic was far from typical in the rural Mexico of the time. The three production units described by Tortolero (1996) as the basis of agricultural production in Mexico throughout the 20th century – haciendas (large-scale private property), villages (communal property), and ranches (small-scale independent property) – did not coexist in this region. Instead, agricultural development was linked to other events that drove different dynamics of enterprise and appropriation.¹⁴ The most important development was the transfer of the titles of the first ranches, established in the 1850s and 1860s, and the acquisition of new titles for idle or uninhabited lands that needed to be exploited and settled. After the lands were acquired and the railway built, the international conjuncture played a significant role in subsequent developments.

Indeed, the first cotton boom in the Mexicali Valley was the result of the international demand for this fiber, associated with World War I. The irrigation canals were managed by a corporation called the Sociedad de Irrigación y Terrenos de la Baja California, which had both Mexican and foreign shareholders.¹⁵ The corporation remained in business until 1961, despite the Mexican state's presence through the Colorado River Irrigation District (Distrito de Riego Río Colorado) and the CNI. The operation of the Álamo Canal originally depended on the management of the intake constructed in California, until a separate intake was finally built in Mexico in the 1930s.

The years 1914–1915 constituted the first important period in the history of cotton production in the Mexicali Valley.¹⁶ While in 1912 only 12 ha and 15 bales (equivalent to 345 kg) were produced, in 1914 slightly more than 12,000 ha were planted and more than 22,000 cotton bales were produced, equivalent to over 5 tons (t) (Figure 1). This upward trend continued until the following decade, making cotton the focal point of an incipient

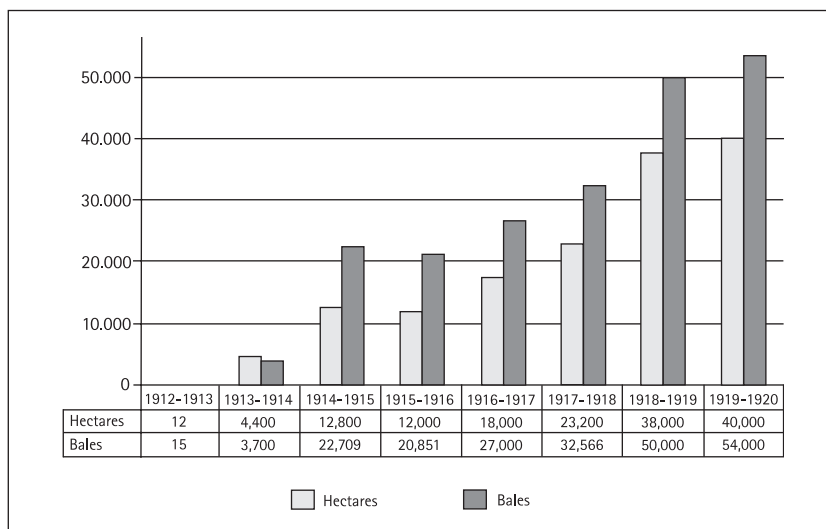
14. Before the cotton explosion in the Mexicali Valley region, wild hemp was discovered there in 1874. This high-quality natural fiber lent itself to the manufacture of ship cordage for export, a project that succeeded in attracting major investors who fostered the development of the community of Lerdo, with a population of approximately eight hundred inhabitants. All of this came to a halt following a natural disaster: the losses inflicted by a large flood, which chased off most of these investors. Nevertheless, some of them would persevere, once again triumphing in their ambition to conquer what would later come to be known as the Mexicali Valley (Hendricks 1996: 62–67; Gómez 2000: 69–71).

15. Established in 1889, this corporation played a strategic role in the development of the Mexicali Valley. Its relationship with one of the main cotton producers, through the Imperial Development Co. S.A., as well as the acquisition of land titles, was fundamental in the valley's development. As mentioned in other articles, the agreement signed between Guillermo Andrade (a partner of the Sociedad de Irrigación) and the California Development Co. in the middle of the 1900s laid the groundwork for the start of construction on the first canals in the Mexicali Valley. On May 14, 1901, the water finally passed through the sluice gates of the Álamo Canal. See Almaraz (2007b; 2010).

16. See Kerig (2001) and Almaraz (2007b).

local economy that was starting to attract attention in northwestern Mexico. As shown in Figure 2, the 1923-1924 and 1926-1927 seasons were the most important in terms of bales produced (around 90,000), while the 1920-1921 and 1926-1927 seasons were those with the highest yields.

Figure 1
Area harvested and cotton production, Mexicali Valley, 1912-1920
 (in hectares and bales)



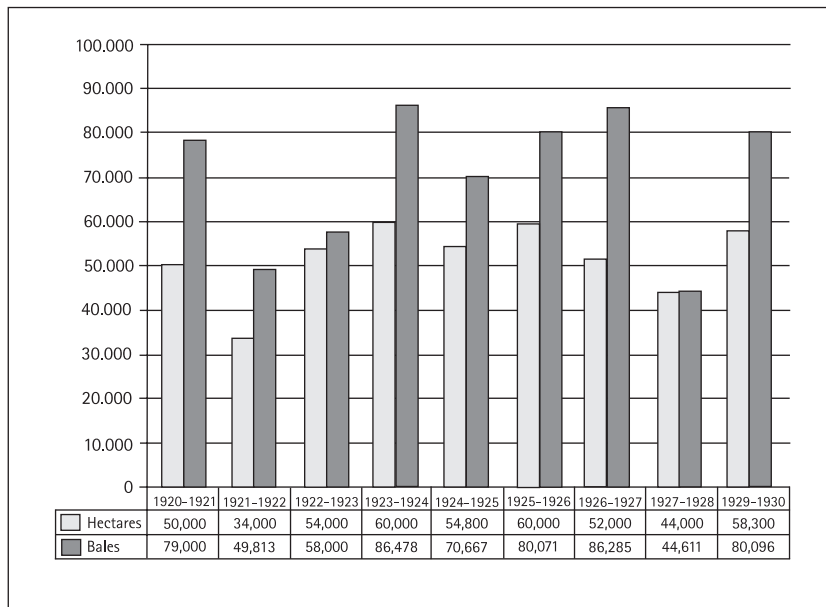
Source: SARH, Departamento de Estudios Agropecuarios, DGEA.

The governor of the Distrito Norte de Baja California and the border customs administrations of the towns of Los Algodones and Mexicali controlled cotton production regulations and issued provisions on its export and the collection of duties, under the supervision of the Ministry of Agriculture and Promotion (Secretaría de Agricultura y Fomento) and the Local Agricultural Commission (Comisión Local Agraria). The Official Gazette of the Territorio Norte de Baja California (Periódico Oficial, Órgano del Territorio Norte de Baja California) was the official channel for the publication of local regulations as well as national laws and decrees. Federal agencies did not intervene directly. Corporations could be established and legally begin operations in the region without any difficulties. This ushered in a period of local autonomy, spearheaded by foreign enterprises which sold cotton produced in Mexicali abroad. However, many of California's business partners did not reside in the area, except for business reasons (as confirmed by most of the articles of incorporation). This

facilitated the emergence of a social and economic class that handled these foreigners' business transactions, which included Mexican lawyers, proxy holders, interpreters, and clerks (Almaraz 2007b, 2011). This means of accumulation proved decisive for entrepreneurial continuity over the following decades (Almaraz 2007a, 2007b).

Figure 2

Area harvested and cotton production, Mexicali Valley, 1920-1930
(in hectares and bales)



Source: SARH, Departamento de Estudios Agropecuarios, DGEA.

2. MULTIPLIER EFFECTS: THE POSITIONING OF FOREIGN COMPANIES IN THE REGION'S DEVELOPMENT

The multiplier effects in the Mexicali region expanded considerably to other sectors following the cotton boom of the 1920s. Various businesses had incorporated after 1912, although some of them were already in operation, as previously noted, as early as 1909. The most important companies that were engaged exclusively in agricultural activities included: the Imperial Valley Land & Irrigation Company of Lower California S.A., the Imperial Development Company S.A., and the Imperial Valley Farms Company S.A., all of which had Edward E. Easton as their majority shareholder; as well as De Nancy y Compañía

S.N.C., Bataques Ranch Company S.A., Sociedad Agrícola y Ganadera de Tierras Mexicanas S.A., and Mount Signal Ranch Company S.A. The capital stock of all of these companies was considerable for the time (between 50,000 and 600,000 Mexican Pesos).

The dynamism of U.S. investments was expressed in the acquisition and subdivision of lands dedicated to agricultural use (especially cotton farming). As an offshoot of this specialization, agribusiness was promoted in the form of the ginning, packaging, and processing of some cotton byproducts. In addition, the availability of increasingly specialized services for trading and processing cotton expanded steadily. The annual registration of new companies engaged in the farming and/or processing of cotton grew markedly starting in 1920. By 1925, four out of every ten new companies were involved, directly or indirectly, in cotton production (Table 1). Particularly noteworthy in this context is the role played by banks and those business enterprises that not only produced or processed cotton, but also offered financing to those farmworkers in the valley who already possessed their own farmlands. Thus, by the time the Mexican state opened its bank branches, they were positioned as just one option, rather than the sole provider of credit. This is crucial to understanding agricultural dynamics in the Mexicali Valley and how they contrasted with other spaces studied by agricultural historians. In this valley, in contrast to the traditional

Table 1
Companies incorporated, Mexicali, 1916–1929

Year	Companies incorporated		
	Total (a)	Associated with cotton (b)	(b) / (a) Ratio
1916	11	2	0.18
1917	7	1	0.14
1918	7	0	0.00
1919	17	3	0.18
1920	13	2	0.15
1921	13	0	0.00
1922	20	3	0.15
1923	29	7	0.24
1924	26	1	0.04
1925	13	5	0.38
1926	12	2	0.17
1927	11	2	0.18
1928	7	2	0.29
1929	4	1	0.25

Source: RPPC-M (1916–1929); compiled by author.

peasant class elsewhere that sought the state's protection, there was a group of Mexicans immersed in export agriculture and fighting for the effective transfer of lands. In addition to sharecroppers of Asian descent, there were farming partners who operated using fixed asset loans and whose productive capacity and efficiency were strongly associated with the behavior of external markets. This led to the emergence of a mercantilist mentality unlike anything else in other parts of the country.

The mercantile corporations incorporated exclusively for the purpose of granting credits were run by U.S. bankers, who typically had capital invested in other activities in Mexicali and the surrounding valley¹⁷ In addition to these first banks, there were also cotton companies that acted as sources of financing, as previously noted. This practice continued until the 1950s, making it possible to infer that there existed relative local autonomy from governmental financing entities, in contrast to the situation that prevailed in other regions of the country.

These changes resulted in the Mexicali Valley becoming the second-largest national producer of cotton, behind only La Laguna, which was then in the midst of its golden age (Table 2). These figures are interesting because this was then a region that had yet to reach its apogee, in that the area of cotton harvested was barely one-fifth of the region's ultimate potential.

Table 2
Distribution of harvested area of cotton, northern region of Mexico, 1925–1930 (in ha)

Region	1925	1926	1927	1928	1929	1930
La Laguna	58,616	132,906	53,442	98,530	88,511	61,717
Mexicali Valley	62,000	70,130	44,533	61,340	58,854	40,000
Matamoros Valley	20,469	18,797	21,500	22,000	19,700	26,400
Juárez Valley	9,050	11,700	5,375	7,000	8,300	7,185
Conchos Valley	1,153	1,152	60	484	447	733
Yaqui Valley	0	0	0	4,015	9,495	4,817
Don Martín	75	300	230	230	210	210
Sonora	2,089	0	1,374	1,374	1,990	2,494
Sinaloa	430	0	50	50	1,400	1,670

Source: Secretaría de Agricultura y Fomento (1939).

17. See Almaraz (2007b).

The multiplier effects were also reflected in the installed capacity of the ginning enterprises in Mexicali, which increased in proportion with the growth of processors of oil byproducts, vegetable shortening, pastas, seeds, cottonseed hulls, soaps, and cotton waste. Several processors had already been established in the 1910s. Of particular note among these was the *Compañía Algodonera de la Baja California* (registered in 1916 in the city of Tijuana), which moved its headquarters to Mexicali a decade later and was, due to its technological advances, the first large cotton-producing company to be established in Baja California. The company had two areas with Murray gins made up of four units and a hydraulic pump with 2,000 pounds of pressure for the preparation of cotton bales. Also important was the Mexican Chinese Ginning Company S.A., registered in 1919. This was a large business that owned four ginning plants, each one with four batteries of five gins each and eighty circular saws (Rodríguez 1928: 200). In early 1920, two major companies were incorporated: *Compañía Despepitadora La Nacional*, which had two batteries of five cotton hullers each and seventy saws for processing Alcalá cotton; and the Lower Colorado River Ginning Company S.A., which, as of 1922, had three buildings housing thirty gins, five units with two cotton cleaners, and a baler each. In 1923, the Baja California Compress and Store Co. S.A. was registered, positioning itself as one of the most important cotton baling and exporting companies throughout the decade.¹⁸

In the midst of this panorama, the governor of the Distrito Norte de Baja California, Abelardo L. Rodríguez, implemented a series of measures aimed at fostering local industry still more.¹⁹ Of particular note at this time was the creation of the *Compañía Algodonera de la Baja California* in 1928, backed by both Mexican and U.S. capital; and the *Compañía Industrial Refinadora de Aceites y Vegetales S.A.* in 1929 (hereafter, "La Refinadora"), whose partners were the U.S. investors from the *La Compañía Industrial Jabonera del Pacifico* (hereinafter, "La Jabonera"). The Refinadora stood out for its installed capacity for the manufacture of

18. This company operated using a steam press "with a capacity of 20,000 tons on a surface of 1,160 square inches" (translation by *Apuntes*). The bales made by the company were compressed using a special press to a size of 24 inches. In 1935, the Baja California Compress and Store Co. S.A. changed its name to *Compañía Compresora de Mexicali* (Rodríguez 1928: 200-201).

19. Two examples of these measures are the founding of the *Escuela de Oficios* (Vocational School) and, the creation of *Colonia Progreso y Anexos*, known as "La Progreso." The purpose of the Vocational School was to educate and train the technicians required by the nascent local industry, while La Progreso was created in 1926 as a limited liability corporation that formed a central part of Rodríguez's industrial development project. The purpose of the corporation was to compete with the U.S. companies already established in Mexicali and take advantage of the international cotton market. La Progreso owned equipment for cotton and wheat processing, and its facilities included two pump plants, a gin, the industrial equipment for a pasta factory, and a flourmill. La Progreso's production matched the pace set by the foreign companies, while, unlike them, becoming a model of an organization of and for Mexicans (Rodríguez 1928: 200-2010).

fiber byproducts, with 10 cotton gins with a 9 t capacity and 24 cotton waste gins with a daily capacity of 9 t (Rodríguez 1928: 194). The company controlled the Delta 1 and Delta 2 irrigation canals, constructed by the Mexican Canal Co., which made a multi-million-peso investment in the Mexicali Valley.

The most notable agribusiness investors in Mexicali during the first two decades of the 20th century were U.S. citizens from California, specifically the cities of Los Angeles, San Francisco, Riverside, and Calexico, followed, to a lesser degree, by Mexicans (Almaraz 2013), who were listed as minority shareholders and later became prosperous agricultural or agribusiness entrepreneurs, thereby marking the origins of an agricultural bourgeoisie (Table 3).

Table 3
Capital invested in cotton production by types of productive activity, Mexicali, 1910–1930 (in Mexican pesos)

Origin of capital	Capital Stock	Activity
United States of America	100,000	Agriculture, mining, manufacturing, trade, livestock, and buying/selling of land
Mexico	100,000	Fiber production
Mixed (Mexico and USA)	50,000	Fiber production
United States of America	50,000	Fiber production
United States of America	100,000	Fiber production
United States of America	1,000,000	Production of edible oils and fats
Mexico	19,200	Cotton and wheat processing and agriculture development

Source: RPPC-M (1910–1930); compiled by the author based on information from public records on articles of incorporation of cotton companies.

One indicator of Mexicali's strong agribusiness dynamic, independent of the Mexican state, is that with just 18,775 inhabitants in 1940, it already had eight banking companies, which constituted a modest but efficient system of private banks. There were also ten mercantile corporations that offered fixed asset loans and credit for financing cotton development, as well as 20 or so companies engaged in customs and commercial services (Almaraz 2007b). The banking companies registered as of the 1920s were Mercantil Banking Co. (1916), Compañía Bancaria Internacional (1919), Compañía Bancaria Oriental (1920), Compañía Bancaria Peninsular (1923), Bancaria del Pacífico (1925), and Banco Agrícola Peninsular (1927), the last to be registered in that decade. In the 1930s, two

more private institutions were registered: Banco del Pacífico (1932) and Banco de Baja California (1939).

Although the Mexican state came into the region in order to promote agricultural development through an investment/direct participation policy that had not existed in Mexicali up until then, we find a contradiction in this activity: while the Mexicali Valley had its own system in place for the production, processing, and placement of cotton products abroad, the Mexican state stepped in to define different systems of organization that were not easily appropriated. The export-driven spirit of both the valley's companies and farming settlers did not lend itself to the imposition of a protectionist model.

3. THE TRANSITION: THE LIMITS OF THE COLORADO RIVER IRRIGATION DISTRICT

The start of the 1930s saw cotton farming in Mexicali continuing to perform strongly, although at a less dynamic pace than in the first boom period (Figure 3). This decline was related to the international economic crisis of 1929 (Almaraz 2013). This period marked the start of a regional transition in which the Mexican state gained entry with its new corporatist model, albeit very slowly. In Mexicali, its priorities included the recovery and reallocation of lands, but above all the control of water and cotton prices. One strategy aimed at applying pressure to control the canals was the hunt for land titles. Thus, the same factor that had been behind the foreign companies' arrival would ultimately be the one that drove them away. In 1937, one of the largest companies in the region, La Colorado, agreed to return part of the lands it had obtained from Guillermo Andrade as a contribution to the state's policy for the distribution of farm properties and the struggle for land, for which certain organized settlers had begun to clamor.²²

During this stage, the Mexican state:

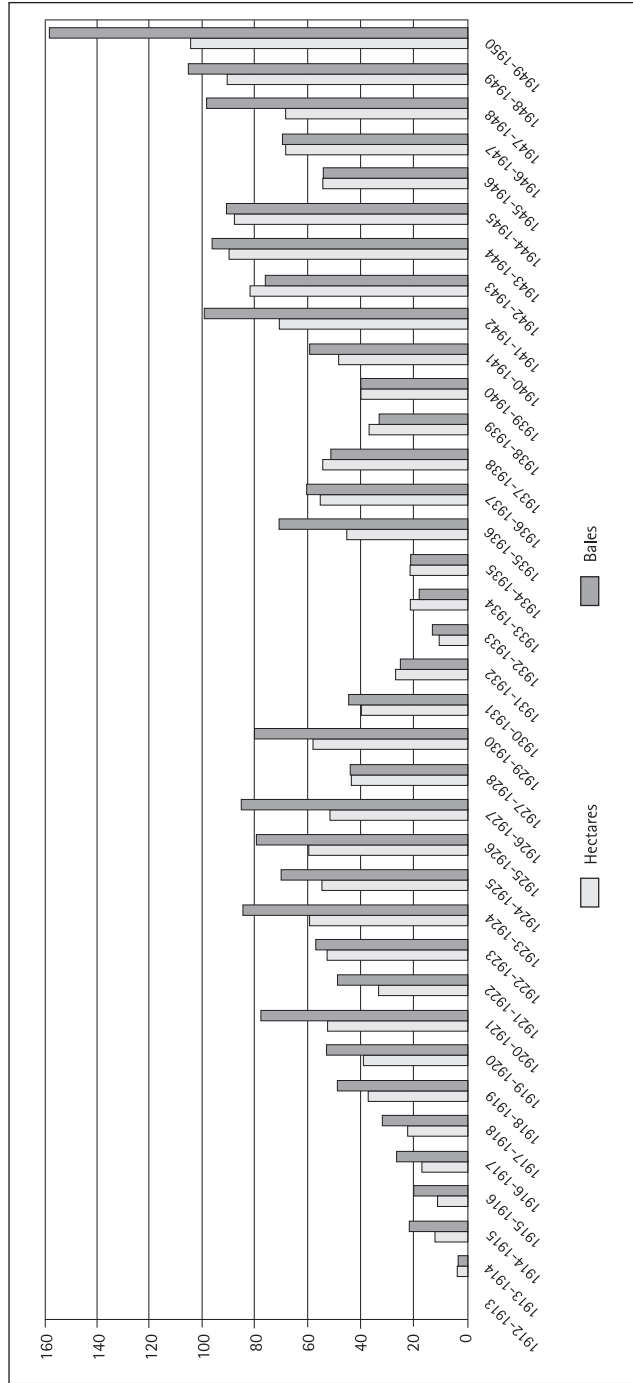
[...] expropriated and redistributed lands in developed farming areas such as La Laguna, Durango and Coahuila, the sugar-producing regions of Los Mochis and El Mante, the wheat- and rice-producing areas of the Yaqui Valley, Sonora; the coffee plantations of El Soconusco, in Chiapas; the cotton area ... of the Mexicali Valley;²¹ in Baja California; the agave-fiber-producing region of Yucatán and the rice and citrus plantations and cattle ranching areas of Lombardía and Nueva Italia, in Michoacán (Romero 2010: 106).²²

20. See Gómez (1998).

21. Wheat did not account for a significant percentage of the harvested area of the Mexicali Valley prior to 1960. The only year in which it reached slightly more than 30% was 1940. In 1941, it dropped off once more due to pests and did not become an important crop until after the second cotton boom of 1959.

22. Translation by Apuntes.

Figure 3
Cultivated land surface and production, cotton, Mexicali Valley, 1912-1950
(in thousands of hectares and bales)



Source: SARH, Department of Agricultural Studies of the DGEA.

The difference between the region discussed here and the areas mentioned above is that the model of local development in Mexicali was not preceded by colonial-style haciendas. The historiography of Mexico points to the large-scale "property inherited from the Colonial period and consolidated during the 19th century" as the objective to be targeted for the promotion of "areas of cooperative agriculture, made up of collective economic units of thousands of hectares of irrigation and cash crops, with facilities for the transformation of products, electric power systems, and railways or roads"²³ (Romero 2010: 107-108). This does not neatly fit the case of the Mexicali Valley. On the contrary, the foreign companies' cotton emporium was the main driver of regional development and cross-border relations, which predated the presence of federal institutions. Resistance to the Mexican state's plans was thus different than elsewhere.

The state, acting through its agencies, confronted the Mixed Regional Economic Council (Consejo Mixto de Economía Regional), the League of Farming Communities (Liga de Comunidades Agrarias), and the local Agricultural Control Committee (Comité de Control Agrícola). The federal representatives consisted of the local office of the CNI and the Colorado River Irrigation District. Credit was supplied locally through the local branch of the Banco Nacional de Crédito Ejidal (only for *ejidatarios*, or members of the *ejido* system for the communal use of farmland) and the local branch of the Banco Nacional de Crédito Agrícola (only for small farmers). Mixed public-private entities active in the region included the Mixed Agricultural Commission (Comisión Agraria Mixta), created in 1937, and the Commission for the Study of the Price of Cotton and Ginning Quota (Comisión para el Estudio del Precio de la Semilla de Algodón y Cuota de Despepite), the latter intended to compete with the Compañía Exportadora e Importadora Mexicana S.A. (CEIMSA), a federal government representative.

Of the federal agencies, the one that had the greatest impact on the region was the Colorado River Irrigation District, created in December 1938 to operate in Mexicali.²⁴ Its presence set new standards for the agricultural activities of the Mexicali Valley, in relative harmony with the existing organization. As a representative of the federal government, it was responsible for projects and studies in the area, as well as budget management, the monitoring of the construction of new public works, and the supervision and conservation of previously existing works. The Irrigation District was also in charge of the administration and operating rights of the irrigation canals, duties it did not succeed in fully assuming until 1961. Another of its tasks consisted of making the adjustments necessary to comply with the objectives of

23. Translation by *Apuntes*.

24. In the Mexicali public records, there are no records related to this entity (whether articles of incorporation or of any other type). There do exist records of two types of companies between 1998 and 2007: the first corresponds to the public limited liability company known as Distrito de Riego 014 Río Colorado; and the second, to the incorporation of the Sociedad Civil Banco de Agua del Distrito de Riego 014 Río Colorado.

national agricultural policy and increase irrigation works as much as possible, while also maintaining and improving the distribution of water resources among users.²⁵ This latter objective was perhaps the broadest in scope of those assumed by the operating entity.

In another paper (Almaraz 2013), it was noted that the objective of the Mexican state's intervention under Lázaro Cárdenas was a type of economic nationalism that – through the construction of infrastructure and a social policy for the distribution of land to the landless – would initiate industrialization in the rural world. The ideology of progress and equity based on an economic apparatus backed by the government was not entirely successful, however. Not all of the regions required the same measures, nor did they respond in identical fashion to the objectives of the First Six-Year Plan, 1934–1940. In the Mexicali Valley, the problems that needed to be addressed by the late 1930s were still rooted in the settlement of the region and the partitioning of lands available for farming (both publically owned and/or in the hands of foreigners), and not in increasing the level of agricultural technology, nor the elimination of the large haciendas. Thus, authors such as Gleason are right in pointing out that the efforts made to industrialize rural areas:

[...] have not been carried out in accordance with a national plan, nor systematically and continuously. Often, they have been motivated by political pressures; in other cases, by acts of exhibitionism on the part of the authorities in power and, on some occasions, out of a sense of altruism of high-ranking officials [...] (Gleason 1973: 22).

Lázaro Cárdenas' 1933 communiqué to the members of his party on the future six-year plan for agriculture and promotion stated:

The grants and restitutions of land and water will be primarily implemented via the following means: a) Increasing the economic and human resources dedicated to resolving the agrarian problem, in its stages of granting and restitution of land and water; b) Simplifying the bureaucratic processes and formalities in agrarian cases, until reducing to a minimum the procedures aimed at putting the core rural population in possession of their lands and water, with the idea that all cases will be resolved decisively by a single entity; c) Declaring the final and binding nature of all rulings on the granting and restitution of land and water that have been issued on a provisional basis, with the passing of the new Law; and d) Eliminating the legal difficulties that render numerous groups of the population ineligible to receive land and water²⁷ (Partido Nacional Revolucionario 1933: 15).

The binational context of Mexicali and its valley was grounded in the need to maintain the competitiveness of cotton. Those parties clamoring for land knew perfectly well that

25. See Sánchez Ramírez and Sánchez (2009).

26. Translation by *Apuntes*.

27. Translation by *Apuntes*.

the production circumstances would force foreign companies and any other producers to act in accordance with international demand, given the region's status as a single-crop agricultural hub.

The Mexicali Valley was not among the main regions affected by the agrarian land reform between 1936 and 1938.²⁸ The land redistributed in this region totaled just over 176,000 ha, but the process took several years. Only a small fraction of the lands subject to the agreement reached on April 14, 1936, between La Colorado and the Ministry of Agriculture and Promotion (5,000 ha) was ultimately transferred to Mexican claimants. The agreement was never honored and only the insignificant quantity of 426 ha was handed over. In response, some of the land owned by La Colorado was taken by force in 1937.²⁹ This event was known as the "Assault on the Land" ("Asalto a las tierras") and was considered a triumph for the farming communities.³⁰ These occurrences resulted in the creation of the first *ejidos* and agricultural colonies in the Mexicali Valley. By 1938, the transfer of lands had reached the pinnacle of its success: not only were 170,880 ha expropriated from La Colorado (half of what had been expropriated in Yucatán between 1936 and 1938), but the grants per capita was over 25 ha in irrigated areas (Escárcega 1990). Despite this, La Colorado maintained possession of a third of the lands in the Mexicali Valley, and until 1945, the region continued to function based on external markets, as new groups of agricultural actors joined forces with the foreign companies, which continued to exert a direct influence over the zone (Kerig 2001). The final withdrawal of foreign companies from the Mexicali Valley did not occur until 1946, with the sale of their lands to Nacional Financiera S.A. (NAFINSA), owned by the Mexican government.

In summary, in the period between 1934 and 1940, which historians point to as a watershed moment in the national agrarian land reform *process*,³¹ in the Mexicali Valley was characterized by:

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28. According to Romero (2010: 108), the distribution of lands, the number of beneficiaries, and the total hectares per capita were as follows for this period: Yucatán: 366,000 ha, 34,000 beneficiaries, and 10.76 ha per capita; La Laguna: 150,000 ha, 35,000 beneficiaries, and 4.28 ha per capita; Lombardía/Nueva Italia (Michoacán): with 61,449 ha, 2,066 beneficiaries, and 29.74 ha per capita; Los Mochis: 55,000 ha, 3,500 beneficiaries, and 15.71 ha per capita; and the Yaqui Valley: 47,000 ha, 2,160 beneficiaries, and 21.75 ha per capita.
 29. With the participation of Felipa Velázquez viuda de Arellano and a group of peasants led by Hipólito Rentería and the Guillén brothers, among others, the lands of La Colorado were invaded, and later granted that same year by the governor of the Territorio de Baja California, Lt. Col. Rodolfo Sánchez Taboada, for the founding of the town of Islas Agrarias (Copladem 1983: 102).
 30. This event was preceded by the constant claims to lands controlled by some groups of Mexicans who viewed their exploitation by foreign companies with suspicion. One result of the land disputes was the creation of the first committees for the recuperation of the Mexicali Valley in 1920. For more information on this period and the land conflicts between 1920 and 1923, see Samaniego (1998: 187-196).
 31. See Escárcega (1990).

- A. The relatively quick resolution of conflicts over land and settlement by families who arrived from other parts of the Territorio Norte de Baja California and other regions of Mexico to take advantage of grants of more than 25 ha.
- B. Few changes in the distribution of the best lands (which continued to be held by agricultural companies).
- C. Consolidation of the region's position in the international cotton markets.
- D. A balance between land reform and the Mexicali Valley's competitive program.
- E. Establishment of new limits on the Mexican state in its management of the control of water resources.

To oversee the granting of irrigation permits and control of canals, the local office of the CNI organized the operations of the Colorado River Irrigation District in 1938. These operations commenced a year later, with the modification of the water supply agreements that had been entered into by private individuals with U.S. companies. The services provided to the new settlers to help them improve their lands and gain access to a water supply were managed under a financing program headed by the Banco Nacional de Crédito Ejidal. The transfer of the "Delta 1 and Delta 2 Canals by La Jabonera, as well as the corresponding plans" (Sánchez Ramírez and Sánchez 2009: 112) was accomplished that same year. The problem for the Mexican state was the intricate network of relations between its own agencies and local businesses, as well as the existing network between foreign and Mexican companies. For example, La Jabonera, acting through its general manager, Mr. Stone, granted a broad power of attorney to the Anderson & Clayton Co. on July 15, 1938.³² It can be inferred from this that the water supply controlled by La Jabonera was managed by interests outside the region. Another limitation faced by government agencies were payments for the electricity needed to pump water in those areas that lacked gravity-fed irrigation. The supply at that time was controlled by the Compañía de Luz y Fuerza Sierras Power Co. of Mexico S. A., with offices in Calexico.³³ It should be noted that the problem for the Mexican state was not whether the settlers could pay, but the control of the service itself. The operators' actions were dictated by those agricultural settlers who covered the cost of pumped water through private loans. There were limited possibilities for intervention by the Mexican state in these processes, since an efficient system of loans, cultivation, and harvesting already existed in the region.

In addition to the abovementioned problems, federal agencies had to deal with the agreements for the distribution of international waters and the construction of new irrigation projects and storage facilities in the United States. The goal was a system

32. RPPC-M (Companies and Powers section, Registration 869).

33. See Almaraz (2007a, 2007b).

of cooperation and interdependence between both countries. In response to these circumstances, between 1935 and 1942 the Colorado River Irrigation District promoted the expansion of the land under cultivation that was in the hands of families who had not received land grants, as well as irrigation canals. In 1943, a Canal Construction Plan for the Mexicali Valley was implemented. Its principal undertaking was the Independencia canal, with a length of 25 km.³⁴ That year, gravity-fed canals supplied the bulk of the land area (240,519 ha), while pump-driven canals totaled just 54,430 ha.

In 1942, the Colorado River Irrigation District was divided into six units, each in charge of one of the following canals: the Álamo canal and laterals; the Solfatará-Cerro Prieto canal and Principal Oeste canal; the laterals of the Wardlaw Canal; the Nuevo Delta laterals and Canal del Norte; the Delta 1 lateral; and the Zacatecas gravity-fed canal. With cotton planted in practically the entire Mexicali Valley, this Irrigation District was forced to promote the efficient use of water resources, or else change the crop if an agreement with the United States seemed impossible. In 1944, a new treaty was signed with Mexico's northern neighbor for the distribution of water from the Colorado River, which established a substantial decrease in water for Mexico and the Mexicali Valley and ultimately led to other long-term disruptions. Samaniego (2008: 50) states that the Colorado River, "at the beginning of the 20th century, supplied 22 billion cubic meters to the lower delta and the Gulf of California."³⁵ This volume was later reduced to 10 billion but the International Water Treaty of 1944 stipulated that Mexico was to receive a minuscule quantity of 1.85 billion cubic meters.³⁶ Following the treaty's approval, the Colorado River Irrigation District placed the blame for the high consumption of water on cotton.

The administrator and manager of this Irrigation District in 1946, engineer Eligio Esquivel,³⁷ sought to implement a crop diversification plan aimed at dismantling the existing competitive system. The agency wanted to avoid a cotton monoculture at all costs because it made the region highly vulnerable since the crop accounted for over 85% of all its hectares under cultivation.³⁸ Ultimately, this plan proved contradictory, since the majority of producers grew cotton for export.

34. Esquivel (1946) notes that between 1939 and 1946, the CNI supplied 58,394 ha with irrigation in Mexicali and performed improvement activities that benefited 38,126 ha.

35. Translation by *Apuntes*.

36. There are minor variations in the figures cited. In contrast to Samaniego, Esquivel states that the treaty of 1944 guaranteed 2 billion cubic meters (Esquivel 1946: 73).

37. Director of the Colorado River Irrigation District from 1943 to 1957. In 1959, he was appointed governor of the State of Baja California.

38. The average use for the 1943-1944 period was low, slightly over 50% of capacity, which resulted in the implementation of measures to increase use and the number of users, although the idea of diversifying crops also began to take root (Esquivel 1946: 69).

The Mexican state's difficulties in this regard were related to the fact that this was a globalized agricultural space that was sparsely populated, and where salaries were the highest in the country, by a ratio of three to one, as noted by Esquivel (1946: 71). In addition to high salaries, other problems that hindered the diversification of crops included the lack of telephone lines and paved roads – the level of these services were nowhere near those of the Imperial Valley. A logical question is why the Colorado River Irrigation District never sought to improve roads and promote the expansion of the cultivated area, nor did it negotiate for a better distribution of international water to maintain the profit levels of cotton for export. The limiting factors can be found in the government apparatus itself. The Irrigation District's plan was based on a protectionist, rather than expansionist, vision. The Colorado River Irrigation District justified its actions in the following communiqué, which was published nationwide:

In light of the foregoing [problems in the valley], it is concluded that the only means of reducing the operating costs is to eliminate the *Compañía de Terrenos y Aguas*, allowing for the establishment of a standardized [water] quota throughout the entire district; eliminate the use of Andrade's works, which cost the District \$735,000 annually, by building the diversion dam on the Colorado River; construct roads along the canals that are stable year round; construct telephone lines; provide rock fills for all of the structures; exchange the wooden structures for concrete structures; install all of the sluice gate mechanisms; construct the appropriate flood routing; and use brush burning machines (Esquivel 1946: 71).

It was even claimed that the abovementioned treaty would be a decisive step toward the development of the Mexicali Valley, but the fact of the matter is that in 1944, the Mexican government had agreed to receive just 20% of the water that was supplied immediately prior to the treaty, and only 10% of the water it had originally obtained. The agricultural history of this northern region differs from that of other areas of northern, central, and southern Mexico due to its geographic location and the unprecedented success of the region's agricultural activities. This was what led U.S. entrepreneurs, along with a lesser number of Mexicans already incorporated into the export network, to continue banking on cotton and the functionality offered by the regional system's two hubs: the Mexicali Valley and the city of Mexicali, where the total number of ginning operations continued to increase well into the 1930s.

The Mexican cotton-processing companies that had been established by the end of the 1930s were: *Algodones de Palacio S. A.* (1935); *Algodoneros del Mayor* (1935); *Algodonera de Mexicali* (1936); *Algodones Delta S.A.* (1939); *Algodones Nacionales S. de R.L.* (1939); *Molinera del Valle* (1939); *Aceitera del Valle S.A.* (1940); *Algodonera del Valle* (1940); and *Comercial Algodonera S.A.* (1940). Also of note was the *Compañía Compresora de Mexicali*,

originally owned by U.S. investors, but which was "Mexicanized" in order to evade the requirements of the Foreign Investments Law (Ley de Inversiones Extranjeras) of 1935. This group of companies was joined by the Banco de Baja California S.A. (1939) in order to bolster the cotton emporium that experienced a second boom starting in the late 1940s and reached its peak in the 1950s. For their part, La Jabonera and the Compañía Industrial Refinadora de Aceites Vegetales, backed by the Anderson & Clayton Co., continued to lead the cotton agribusiness in the Mexicali Valley and northern Mexico. In his reports, Esquivel acknowledged the importance of both companies, as well as that of La Colorado and others, which were collectively as strong as or even stronger than the Mexican state (1946: 69).

Esquivel noted that "La Jabonera continued to be a decisive source of financing"³⁹ for local producers. The company was better positioned than the branches of national banks (ejidal and agrícola), and even the Algodonera del Valle, which operated through the Banco del Pacífico (Almaraz 2013). La Colorado continued to operate in the Mexicali Valley until 1946 (Kerig 2001), subdividing farmlands and acting as a promoter for the bulk of the agricultural labor force. The great contradiction was that local regulations hungely favored foreign companies, primarily the Anderson & Clayton Co., which operated through La Jabonera, while the CNI and the Colorado River Irrigation District insisted on applying methods that were unsuitable for sustaining the region's cotton-driven development.⁴⁰

In our view, this statist project faced limited possibilities for implementating a protectionist policy given that the region had already established its own competitive system, and because the state itself accepted this, even if only implicitly. Processors, banks, financing companies, farm workers, cotton ginning companies, cotton classifiers, warehouses, packing companies, etc., all enjoyed the benefits of the international demand for cotton and were not willing to trade that production environment for a closed model based on less profitable domestic crops and prices. The ambiguity of the Mexican state's actions in the Mexicali Valley reveals an inability to manage the context beyond national borders. The result of this failing was a short-term vision, lacking any basis in knowhow, research, and development in the region. For example, no records were found of any plan to avoid the accelerated process of soil salinization, not to mention the allocation of resources for research, development, and the continuous improvement of species, or pest control, which would ultimately prove to be the Mexicali Valley's Achilles' heel. The CNI and the Colorado River Irrigation District both failed to take into consideration that, in 1922, a Federal Office for Agricultural Defense (Oficina Federal para la Defensa Agrícola) had already been established in Mexicali and entrusted with:

39. Translation by *Apuntes*.

40. See Walsh (2008).

- I. Scientific research on pest agents and agriculture-associated diseases, with regard to their classification, biology, physiology, anatomy, and geographic distribution in Mexico [...].
- II. Consultation services on diseases and pests in Mexico.
- III. Regulation and establishment of agricultural health measures [...]" (Poder Ejecutivo 1930: 57).

A document dated January 27, 1944, indicates that the Office of Agricultural Control continued operating, issuing authorizations for the cotton ginning process in the Territorio Norte de Baja California, an activity completely unrelated to the state's primary objective. For their part, the Colorado River Irrigation District and the CNI made shaky progress in their plans, including agricultural reconversion, neglecting any sort of scientific research. One consequence of this was that, by the end of the 1960s, the pink bollworm and boll weevil pests had plunged the region into the worst of its crises, diminishing the area under cotton from 82,279 ha in the 1968–1969 cycle to 4,561 ha just under a decade later (in the 1974–1975 cycle).

Another of the challenges faced by the Colorado River Irrigation District was confrontations with CEIMSA, likewise a federal entity. CEIMSA sought to position itself as the only cotton-buying entity in the region, noting that "the concerns raised by Mexicali's producers were centered on three points: the intermediation of CEIMSA, the price of cotton for export, and grading."⁴¹ This federal body's appearance on the scene did not go smoothly. The payment regulations and the supply of subsidies to producers with surpluses remained in force, and CEIMSA had no choice but to adapt to the local buying and selling process and demand other forms of compensation. The ginneries were winning, along with those producers who reported surpluses.

In the second half of the 1940s, with the water treaty in full force and new storage projects underway in the United States, the most important foreign companies left the area. The limitations of the interventionist model can be seen in the legacy left behind by these corporations. La Colorado, La Jabonera, and the Anderson & Clayton Co. played no part in agricultural research activities in Mexicali. In the United States, the activities of the latter company were tied to research at Johns Hopkins University. Meanwhile the Universidad Autónoma de Baja California was not founded until 1957, followed by the Escuela Superior de Ciencias Agrícolas in 1960.

41. Information from the letter sent on May 15, 1944, to the governor of the Territorio Norte de Baja California, signed on behalf of CEIMSA, Mexicali branch (Archivo Histórico de Mexicali, expediente Algodón). Translation by Apuntes.

The land titles still held by La Colorado were returned/sold to the government of the Territorio Norte de Baja California in 1946, after which NAFINSA⁴² was put in charge of these lands' subsequent subdivision and sale. Another local company that emerged during those years as a major player in the transfer of resources was the *Compañía de Terrenos del Río Colorado S.A.* (incorporated in Mexicali in 1942), which was put in charge of handling land transactions starting in 1910, when it was ceded a significant portion of lands by the *Sociedad de Irrigación y Terrenos de la Baja California S.A.* (incorporated in Tucson, Arizona) during litigation with the Southern Pacific Co. in 1909.⁴³ Since, along with the lands granted, the *Compañía de Terrenos del Río Colorado S. A.* acquired water concession rights under the "Law on the Use of Waters under Federal Jurisdiction" (*Ley sobre Aprovechamiento de Aguas de Jurisdicción Federal*) then in force, the Colorado River Irrigation District depended on this company to recover these rights; this occurred in 1961.⁴⁴

FINAL CONSIDERATIONS

The historiography of agrarian Mexico makes constant mention of the scope of the interventionist model in agriculture promoted during the 1930s by the Lázaro Cárdenas administration. Starting in 1934, formal backing was given to a series of projects for the development of irrigation infrastructure and a land reform scheme. In the Mexicali Valley, this policy underwent a different process from that of other regions of the country, with its own specific limitations. The main reason for this was the local context of Mexicali, where land disputes and the confrontations between indigenous peoples and the colonial hacienda system had never taken place. However, little attention has been paid to the different types of expropriations, such as those that occurred in this area of the country. The historical differences and the regularities of certain processes were corroborated by Ángel Palerm using the methodology of multilineal evolution (1997). The border belt of northwestern Mexico represented an atypical case that broke with the systematic regularities found in other agricultural hubs, although it did exhibit certain similarities. The area's late settlement and the limited presence of Mexicans combined with the region's connections to the southern United States, which promoted the availability of technology and territorial organization into a binational valley with a pool of Asian, and later Mexican, laborers from which to draw.

42. La Colorado's properties were apparently sold to a middleman by the name of William O. Jenkins, who used NAFINSA to put the lands back in Mexican hands (Sánchez Ramírez and Sánchez 2009).

43. RPPC-M (sección Sociedades y Poderes, t. I, inscripción 63).

44. According to Sánchez Ramírez and Sánchez, the transfer of rights from the *Compañía de Terrenos* to the federal government in 1961 was performed at an official ceremony (2009: 197). It should be noted that this company registered several major transactions, one of which took place in 1935 with the *Compañía Agrícola Civil del Valle Imperial S.C.P.* See RPPC-M (sección primera, t. 6, inscripción 719).

The functionality of the towns of Mexicali and Los Algodones was shaped by the presence of U.S. companies that positioned the region in international cotton markets starting in 1915. Prior to the cotton boom (1915–1925), foreign companies had achieved three significant results: they had legally acquired land titles; built a railway segment that connected the two Mexican towns with Arizona and California; and implemented modern irrigation infrastructure. Following the two-decade-long cotton boom, the Cárdenas administration imposed a series of actions – set down in the country's First Six-Year Plan (1934–1940) – as it saw fit, completely ignoring the region's characteristics.

The state acknowledged that U.S. investments had defined the way of doing business and achieving prosperity in the region. The valley's agricultural specialization had not appeared out of the blue. Indeed, the measures adopted by the Mexican state in the 1940s were partially reworked and promoted gradual expropriation of foreign companies. The main duty of the Colorado River Irrigation District was centered on expanding the irrigation infrastructure,⁴⁵ while simultaneously overseeing the buying/selling of cotton, as well as supervising guarantees for subsidies on cotton for export. However, in our opinion, the greatest problem faced by the federal agencies was not the land issue, but the control of water. By 1938, 44 *ejidos* had been created and over 150,000 ha of land had been distributed, leading to the coexistence of corporations, *ejidatarios*, and farming settlers, all with a broad capacity for agricultural work. The Colorado River Irrigation District ultimately managed an area of approximately 100,000 ha, although it did not control the water or the distribution of cotton.

While the control of water resources was formally intended to be ceded to the Colorado River Irrigation District in 1938, this proved impossible until 1961, which constituted one of the Mexican state's greatest limitations in the region. Some progress was made with the implementation and expansion of irrigation works. The expropriations started to take place from 1937, but the foreign companies continued to control the irrigation canals. Simultaneously, two new dam projects began in the 1930s and 1940s in California – the Hoover Dam and the All-American Canal – that would have long-term repercussions for the Mexicali Valley.

45. Between 1939 and 1945, the CNI invested 22 million pesos, basically in the construction of the "Nuevo Delta Canal in its entirety, as well as its pumping plant, the construction of the Canal del Norte, the expansion of the Delta 1 Canal; the construction of the Independencia Canal, the construction of the gravity-fed pump-driven Sur [sic], the canal network of the Colonia Azteca and its pumping plant, the construction of the Canal del Norte, the expansion of the Delta 1 Canal, the reconditioning of the Bajo Álamo zone, the construction and support of riverbank defense structures, and the construction of an enormous number of structures on all of the old canals, replacing the previous structures" (Esquivel 1946: 73). Translation by *Apuntes*.

The Colorado River Irrigation District, the CNI, the branches of the Banco Nacional de Crédito Ejidal and the Banco Nacional de Crédito Agrícola, and CEIMSA represented a phase of statist development in the Mexicali Valley that led to an agricultural trajectory that could have ultimately done more good for the region. This was because the cotton monoculture remained strong during the following decades despite the absence of binational projects.

This case study corroborates the hypothesis presented regarding the difficulties of a model based on the protection of markets when implemented in a globalized region. The state's intervention not only proved difficult due to the sparse population and the incipient local market, but also due to the success of the cotton industry starting in 1915 and the binational enclave that had developed in the Colorado River basin. The limits to interventionism in the Mexicali Valley demonstrate the incompatibility between closed models and regions with a high dependence on exports. The agreements and coordinated actions should have gone through the official channels between the operating bodies in the Imperial and Mexicali Valleys. The decade of the 1930s represented a transition period under the supervision of the Mexican state, which sought to make adjustments to the regional planning and development policy through direct intervention and the ineffective management of international markets and the distribution of water (Almaraz 2013). Under these circumstances, the groundwork was laid for accumulation and the formation of a nascent Mexican agricultural bourgeoisie.

Cotton is currently the second most important farm crop in the Mexicali Valley, and continues to be a highly profitable product. Over 80% of the ginned and baled cotton is destined for international markets. Mexican entrepreneurs have played a dominant role since the 1960s, with an almost exclusive presence, although the problem of the distribution of international water remains latent due to the recent lining of the All-American Canal in the United States.

REFERENCES

Archives

Historical Archive of Baja California (Archivo Histórico de Baja California)

Historical Archive of Mexicali (Archivo Histórico de Mexicali)

Library of the Colegio de México

Official Gazette of the Government of the Territorio de Baja California (Periódico Oficial Órgano del Gobierno del Territorio de Baja California)

RPPC-M, Mexicali Public Registry of Property and Commerce (Registro Público de la Propiedad y del Comercio de Mexicali)

Bibliography

ALMARAZ, Araceli

2013 "El proyecto algodnero en Mexicali. La nueva tutela del Estado y los actores locales, 1938-1968." In: CERUTTI, Mario and Araceli ALMARAZ (coords.). *Algodón en el norte de México (1920-1970). Impactos regionales de un cultivo estratégico*. Tijuana: El Colegio de la Frontera Norte, pp. 285-332.

2011 "De intérprete y apoderado a empresario. Arturo Guajardo y las redes mercantiles en Mexicali, Baja California, 1916-1929." In: *Revista Meyibó. Nueva Época*, no. 3, pp. 97-122.

2010 "Los primeros pasos para instalar un sistema de irrigación en el valle de Mexicali y sus efectos productivos." In: SHERIDAN, Cecilia and Mario CERUTTI (coords.). *Usos y desusos del agua en las cuencas del norte de México*. Mexico: Ciesas, pp. 127-153.

2007a "El boom de las empresas extranjeras en el valle de Mexicali y sus efectos en las relaciones empresariales locales (1912-1930)." In: *Frontera Norte*, vol. XIX, no. 37, pp. 113-142.

2007b "Origen y continuidad de los empresarios de Mexicali, Baja California (1912-1939)." PhD thesis, Centro de Investigaciones y Estudios Superiores en Antropología Social-Unidad Occidente, Guadalajara.

AMSDA, ASOCIACIÓN MEXICANA DE SECRETARIOS DE DESARROLLO AGROPECUARIO

2012 "Plan rector del sistema producto algodón. Mexicali." AMSDA. <<http://www.amsda.com.mx/PREEstatales/Estatales/BC/PREAlgodon.pdf>>.

CERUTTI, Mario

2010 "Los servicios y la economía del algodón en el norte de México. La Laguna y su dinámica regional entre 1925 y 1955." In: *Legajos. Boletín del Archivo General de la Nación*, No. 4, pp. 101-112.

COPLADEMM, COMITÉ DE PLANEACIÓN PARA EL DESARROLLO MUNICIPAL DE MEXICALI

1983 "Monografía del Municipio de Mexicali." Mexico: Ayuntamiento de Mexicali.

ESCÁRCEGA LÓPEZ, Everardo

1990 *Historia de la cuestión agraria mexicana. El cardenismo: un parteaguas histórico en el proceso agrario*, 1ª parte. Mexico: Siglo XXI/Ceham.

ESQUIVEL, Eligio

1946 "Proposiciones para reducir el monocultivo del algodón en Mexicali, Baja California." In: *Irrigación en México*, no. 3, vol. 27, pp. 58-92.

GALINDO GARFIAS, Ignacio

1981 "Evolución de la Reforma Agraria mexicana." In: *Estudios de Derecho Civil. Serie G, Estudios Doctrinales*, no. 51, pp. 87-90.

GLEASON ÁLVAREZ, Miguel

1973 "El gran reto a los mexicanos: la industrialización del medio rural en México." In: *Revista del México Agrario*, year 3, vol. 4, pp. 21-36.

GÓMEZ ESTRADA, José Alfredo

2000 *La gente del delta del río Colorado. Indígenas colonizadores y ejidatarios*. Mexico: Universidad Autónoma de Baja California.

1998 "Guillermo Andrade: los afanes de un empresario pionero en el norte de Baja California, 1874-1888." In: *Meyibó. Revista del Instituto de Investigaciones Históricas. Nueva Época*, vol. 1, no. 1, pp. 65-82.

HEATH, Hilarie J.

2002 "La época de las grandes concesiones 1683-1910." In: VELÁZQUEZ, Catalina (coord.). *Baja California. Un presente con historia*, vol. I. México: Universidad Autónoma de Baja California, pp. 247-300.

HENDRICKS, William O.

1996 *Guillermo Andrade y el desarrollo del delta mexicano del río Colorado. 1874-1905*. Mexico: Secretaría de Educación Pública/Universidad Autónoma de Baja California.

KERIG, Dorothy P.

2001 *El valle de Mexicali y la Colorado River Land Company 1902-1946*. Translation by Tomás Segovia. Mexico: Universidad Autónoma de Baja California.

OTERO, Gerardo

2004 *¿Adiós al campesinado? Democracia y formación política de las clases en el México rural*. Mexico: Miguel Ángel Porrúa/UAZ/Simon Fraser University.

PALERM, Ángel

1997 *Introducción a la teoría etnológica*, 3rd ed. Mexico: Universidad Iberoamericana.

PARTIDO NACIONAL REVOLUCIONARIO

- 1933 "Plan sexenal," December. Document in the Library of El Colegio de México: 320.972/P2735p/ej. 3.

PODER EJECUTIVO

- 1930 "Finalidades y funciones de la Oficina Federal para la Defensa Agrícola. Campaña contra la Langosta." In: *Irrigación en México*, vol. I, no. 2.

RODRÍGUEZ, Abelardo

- 1928 *Memoria administrativa del gobierno del Distrito Norte de la Baja California* (1924–1927). Mexico: Gobierno del Distrito Norte de la Baja California.

ROMERO, María Eugenia

- 2010 "La Reforma Agraria de Cárdenas y la agroindustria azucarera de México, 1930–1960." In: *Historia Agraria*, December, no. 52, pp. 103–127.

SAMANIEGO LÓPEZ, Marco Antonio

- 2008 "El control del río Colorado como factor histórico. La necesidad de estudiar la relación tierra/agua." In: *Frontera Norte*, vol. 20, no. 40, pp. 49–78.
- 1998 *Los gobiernos civiles en Baja California 1920–1923*. Mexico: Instituto de Investigaciones Históricas de la Universidad Autónoma de Baja California/Instituto de Cultura de Baja California.

SÁNCHEZ RAMÍREZ, Óscar and Eduardo SÁNCHEZ

- 2009 *Valle de Mexicali. El agua y sus hombres*. Mexico: Universidad Autónoma de Baja California.

SECRETARÍA DE AGRICULTURA Y FOMENTO

- 1939 *El cultivo y comercio del algodón en México*. Mexico City: Secretaría de Agricultura y Fomento.

TORTOLERO, Alejandro

- 1996 "Historia agraria y medio ambiente en México: estado de la cuestión." In: *Noticiero de Historia Agraria*, no. 11, pp. 151–178.

WALSH, Casey

- 2008 *Building the Borderlands: A Transnational History of Irrigated Cotton along the Mexico-Texas Border*. Texas: Texas A&M University Press.