JORNALEROS EN LA AGRICULTURA DE EXPORTACIÓN

REGIONAL NOTEBOOK 3

Industrial Agriculture and Working and Living Conditions in San Quintín, Baja California, Mexico

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Project “Farmworkers in Mexico’s Export Agriculture”

Jornaleros en la Agricultura Mexicana de Exportación

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Regional Notebook Series 3
Industrial Agriculture and Working and Living Conditions in San Quintín, Baja California, Mexico

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Our regional studies series analyzes interactions between agricultural development and social dynamics in specific Mexican regions.

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Abbreviations

A.C.: Asociación Civil. Non-profit organization.
AHIFORES: Alianza Hortifrutícola Internacional para el Fomento de la Responsabilidad Social. International Alliance of Fruit and Vegetable Growers to Promote Social Responsibility.
B.C.: Baja California.
B.C.S.: Baja California Sur.
BDAN: Banco de Desarrollo del América del Norte. North American Development Bank.
CABC: Consejo Agrícola de Baja California. Agricultural Council of Baja California.
CADER: Centro de Apoyo al Desarrollo Rural. Center for the Promotion of Rural Development.
CDMX: Ciudad de México.
CESPE: Comisión Estatal de Servicios Públicos de Ensenada. State Commission for Public Services in Ensenada.
CFE: Comisión Federal de Electricidad. Federal Electricity Commission.
CIESAS: Centro de Investigaciones y Estudios Superiores en Antropología Social. Center for Research and Higher Studies in Social Anthropology.
CIOAC: Central Independiente de Obreros Agrícolas y Campesinos. Independent Central Organization of Agricultural Workers and Peasants.
COLEF: El Colegio de la Frontera Norte. College for Higher Research and Learning of the Northern Border.
COVID-19: Coronavirus.
CRIT: Centros de Rehabilitación e Inclusión Infantil de la Fundación Teletón. Centers for Children's Physical Rehabilitation and Inclusion of the Teletón Foundation.
CURP: Clave Única de Registro de Población. Unique Population Registration Code.
DEALTI: Distintivo Empresa Agrícola Libre de Trabajo Infantil. Seal marking an enterprise is free from child labor.
DIF: Sistema Nacional para el Desarrollo Integral de las Familias. System for the Comprehensive Development of Families.
DOF: Diario Oficial de la Federación. Official Government Gazette.
E.U.: Estados Unidos de América. United States of America.
ENJOREX: Encuesta de Jornaleros en la Agricultura de Exportación. National Survey of Workers in Export Agriculture.
ENOE: Encuesta Nacional de Ocupación y Empleo. National Occupational and Employment Survey.
IMSS: Instituto Mexicano del Seguro Social. Mexican Social Security Institute.
INEA: Instituto Nacional para la Educación de los Adultos. National Institute for Adult Education.
INEGI: Instituto Nacional de Estadística y Geografía. National Institute of Statistics and Geography.
Infonavit: Instituto del Fondo Nacional de la Vivienda para los Trabajadores. Institute of Workers' National Housing Fund.
INPC: Índice Nacional de Precios al Consumidor. National Consumer Price Index.
INPI: Instituto Nacional de los Pueblos Indígenas. National Institute of Indigenous Peoples.
INSABI: Instituto de Salud para el Bienestar. Institute of Health for Well-Being.
INTAGRI: Instituto para la Innovación Tecnológica en Agricultura. Institute for Technological Innovation in Agriculture.
ISSSTE: Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado. Institute for Security and Social Services for Government Workers.
ISSSTECALI: Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado de Baja California. Institute for Security and Social Services of Government Workers in the State Government of Baja California.
LFT: Ley Federal del Trabajo. Federal Labor Law.
NAWS: National Agricultural Workers Survey.
NSS: Número de Seguro Social. Social Security Number.
OSHA: Occupational Safety and Health Administration, U.S. government.
PAJA: Programa de Apoyo a Jornaleros Agrícolas. Program for the Support of Field Laborers.
PEA: Población Económicamente Activa. Economically Active Population.

PEMEX: Petróleos Mexicanos. Mexican Petroleum.
Sedesol: Secretaría de Desarrollo Social, renombrada como Secretaría de Bienestar en 2019. Secretariat of Social Development, renamed as Secretariat of Well-Being in 2019.
SIACON: Sistema de Información Agroalimentaria de Consulta. System for the Retrieval of Farm Information.
SIAP: Servicio de Información Agroalimentaria y Pesquera. Farm and Fisheries Information System.
SINCO: Sistema Nacional de Clasificación de Ocupaciones. National Occupational Classification Service.
SSA: Secretaría de Salud. Health Secretariat.
STPS: Secretaría del Trabajo y Previsión Social. Secretariat of Labor and Social Prevision.
T-MEC: Tratado de libre comercio entre México, Estados Unidos y Canadá. United States – Mexico – Canada Agreement.
UABC: Universidad Autónoma de Baja California. Autonomous University of Baja California.
UMF: Unidad Médica Familiar. Family Medical Unit.
UNAM: Universidad Nacional Autónoma de México. National Autonomous University of Mexico.
USITC: United States International Trade Commission.

Presentation

Over the past century, Mexico has become an agricultural powerhouse providing a wide range of fresh fruits and vegetables to consumers in Mexico, North America and beyond. As the sector has grown, so too have concerns regarding the treatment of the workers who plant and harvest these products. Some Mexicans of working age, with little formal education and limited employment prospects, migrate from southern Mexico to communities in the central and northern parts of Mexico where the agricultural boom has led to labor shortages and thus opportunities for low-skilled workers. While many earn a respectable living, others are subject to exploitation. The working conditions of Mexico's agricultural sector have long been a concern of activists and policy analysts in Mexico and the United States. In fact, the increased focus on labor conditions was an important driver for the inclusion of labor in the formal text of the United States-Mexico-Canada Agreement (USMCA) that entered into force on July 1, 2020. Further, Mexico undertook major reforms of its labor laws, regulations and practices, which are strongly supported by the López Obrador administration. Trade agreements and domestic reforms are critical aspects of efforts to improve labor conditions but are truly only effective if they are implemented on the ground. This requires an assessment of wages and benefits including access to livable accommodations. Such analyses are often conducted at a national or state level and may miss pockets of abuse or mistreatment and overlook distinctions between, for example, conditions on farms producing for export and farms whose products are consumed in Mexico.

To provide a more granular picture of the history of Mexican agriculture and assess the current labor conditions among those working on farms for export and domestic production, CIESAS conducted a study of workers in the Mexicali and San Quintín valleys in Baja California. We are pleased to publish Industrial Agriculture and Working and Living Conditions in San Quintín, Baja California, Mexico – a study that describes the development of one of Mexico's most productive agricultural regions and assesses the conditions of the current agricultural workforce. Through demographic and economic analysis, a clear understanding of the relevant provisions of Mexican law, interviews and visits to the homes and workplaces of current workers, the authors provide a comprehensive analysis of the labor conditions for agricultural workers in this part of Baja California. In doing so, they hope to have contributed to enhanced understanding of the nuances and complexities of Mexico's agricultural sector, including significant differences between formal and "pay as you go" workers.

CIESAS and the Mexico Institute are grateful for the financial support of the Howard G. Buffett Foundation and the WalMart Foundation, without which this report could not have been completed, and to everyone, in the research team and in Baja California society, who contributed with their work or their life experiences.

Andrew Rudman
Director, Mexico Institute
The Wilson Center
November 2021

Industrial Agriculture and Working and Living Conditions in San Quintín, Baja California, Mexico

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Diana Haidé López López[1]

Introduction

Agricultural labor in Mexico has been characterized by the extremely precarious conditions of its workers. Prominent among these are the absence of formal hiring and social security, the long hours and low wages, and violations of human rights and worker exploitation, including child labor. In recent years, changes in these conditions have come from various sources, including consumer demand for products made under decent conditions, an emphasis on social responsibility in the agricultural sector, inspection and persuasion by state and federal governments, and workers' organization to demand their rights. These changes have taken place mainly in export agriculture, which in recent decades has invested in the production of fruits and vegetables with high value added.

In this report we provide a rigorous analysis of the working conditions of the agricultural laborers of Baja California, focusing on those who produce the export crops in the coastal region that includes San Quintín. We describe these conditions in the context of the development of this part of the state, and in the broader regional context that includes the places of origin of migrant workers as well as the places their products are sent, which includes a large part of western Mexico and the west coast of the United States. This is thus a regional study, because it understands these working conditions in the context of regional changes, and also in their interactions with other places both in and outside of Mexico.

We base this analysis of working conditions in the coastal region of Baja California on various types of sources. First, we draw on studies by academic researchers at the Colegio de la Frontera Norte, the Universidad Autónoma de Baja California, and the Universidad Nacional Autónoma de México. Second, we employ data from official sources regarding population, affiliation with the Mexican Social Security Institute (Instituto Mexicano del Seguro Social, IMSS), agricultural production, and other topics. Third, we use a survey we designed and administered with the support of the Agricultural Council of Baja California (Consejo Agrícola de Baja California, CABC). Finally, we conducted field work in the Mexicali Valley and particularly in San Quintín and its environs, during two visits, in June and July 2021. This field work was particularly productive with the assistance of the CABC and the many agencies and organizations that opened their doors to us and introduced us to the crucial actors in the region: formal and informal workers, businesspeople, local and federal government officials, community leaders, teachers, doctors and nurses, small farmers, and others. We thank all of these people.

1 Director and Researchers, respectively, with the project "Workers in Mexican Export Agriculture," CIESAS.

Export agriculture has a long history in Mexico. Some regions of the country have exported their produce since the late nineteenth and early twentieth centuries: the Culiacán Valley, the cotton region of Mexicali, the sugar plantations in the central region and the Gulf, and the plantations in the south. However, new regions have developed more recently, acquiring great importance in their production for international markets. In Baja California there are two major regions for export agriculture. The Mexicali Valley is still the state's leading agricultural producer. The coastal region, which includes the San Quintín Valley, has more recently developed advanced agricultural technologies that have greatly affected social and working conditions. Although we include Mexicali in our survey, San Quintín is our primary area of focus.

Agricultural development in the San Quintín Valley began in the 1970s, in large part because of its proximity to the U.S. border, which facilitated the export of its produce. The construction in 1973 of the Transpeninsular Highway allowed the valley to take advantage of its geography (Velasco et al., 2014). It was not until the 1980s and 1990s, however, that liberalized policies allowed for negotiation in California produce markets to meet demand in the U.S. (Garduño et. al., 2011). Since that time, the San Quintín Valley has become a highly modernized agricultural region, with the participation of large multinational corporations.

The region was previously part of the municipality of Ensenada. On February 27, 2020,[2] it became the state's sixth municipality, and includes the *delegaciones* of Camalú, Vicente Guerrero, San Quintín, El Rosario, Cataviña, Punta Prieta, Bahía de los Ángeles, and Villa Jesús María.[3] It is now the country's second largest producer of strawberries and the third largest of tomatoes,[4] accounting for 55.19% of the state's total value of production in 2019, figures that underline the valley's importance in the country's agricultural production.

2 The Órgano del Gobierno Constitucional del Estado de Baja California (2020) announced that effective February 27, 2020, San Quintín was a municipality of the state, according to an act of the XXIII Legislatura del Estado de Baja California. Previously it had been part of the municipality of Ensenada.

3 The delegaciones Vicente Guerrero and San Quintín are now administrative areas. Ing. Torres, Centro de Gobierno de San Quintín, personal communication.

4 According to the Secretaría de Agricultura y Desarrollo Rural, 2021: https://www.gob.mx/cms/uploads/attachment/file/578358/Boleti_n_informativo_municipio_San_Quinti_n__BC_.pdf

Table 1. Value of Agricultural Production in Millions of Pesos* and Percent Participation of the Major Agricultural Zones[1] in the State of Baja California, 2015-19

Indicator	2015	2016	2017	2018	2019
Value of Production in Baja California	**17,475.10**	**17,974.98**	**19,177.18**	**19,010.35**	**20,764.60**
Value of Production in the Mexicali Agricultural Region	7,494.91	8,735.05	9,372.80	9,210.05	7,793.42
% Participation of the Mexicali Agricultural Region in Baja California	42.88%	48.59%	48.87%	48.44%	37.53%
Value of Production in the Agricultural Region of Ensenada	2,484.51	2,327.17	2,280.55	2,295.46	1,464.46
% Participation of the Ensenada Agricultural Region in Baja California	14.22%	12.95%	11.89%	12.07%	7.05%
Value of Production in the Agricultural Region of San Quintín (CADER)	7,428.87	6,836.43	7,435.67	7,434.44	11,460.69
% Participation of the Agricultural Region of San Quintín in Baja California	42.51%	38.03%	38.77%	39.11%	55.19%

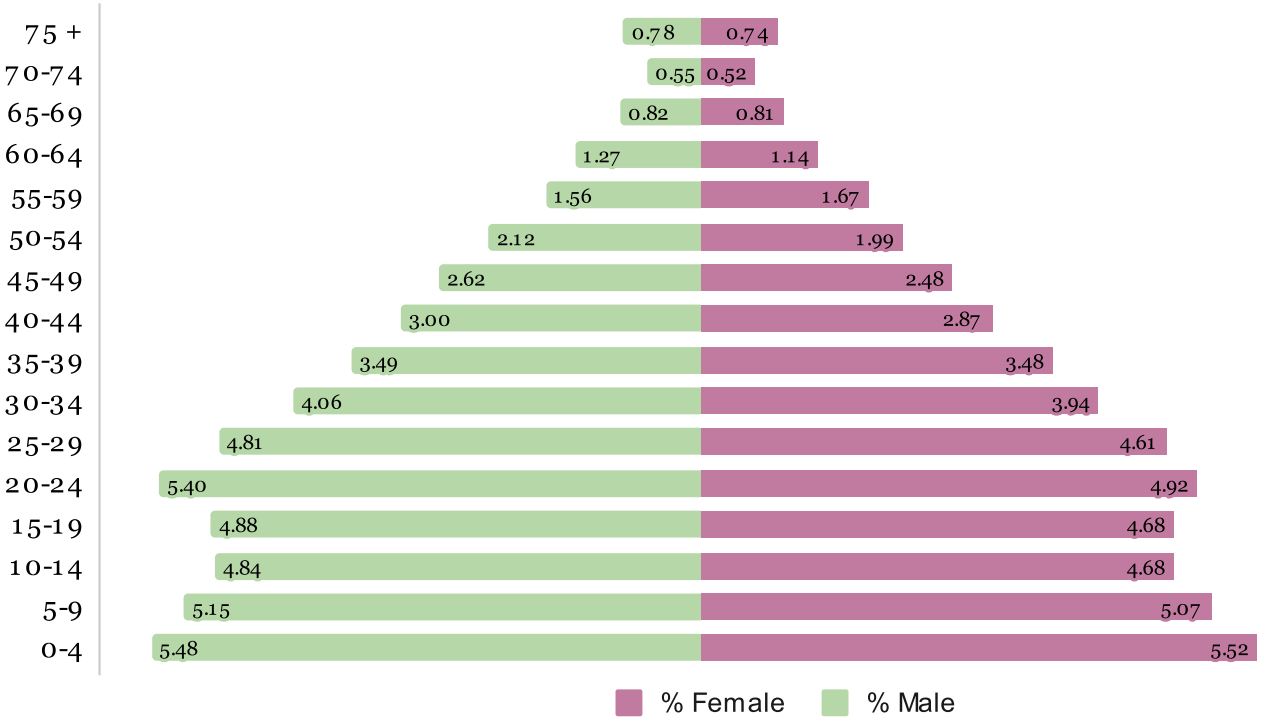
*Value of production expressed in real pesos based on the National Consumer Price Index (Índice Nacional de Precios al Consumidor), base year 2018.

[1] Value of production of the agricultural valleys taken from data from the Center for Rural Development (Centro de Apoyo al Desarrollo Rural, CADER). The Mexicali Valley is made up of the following CADERs: Benito Juárez, Cerro Prieto, Colonias Nuevas, Delta, Hechicera, G. Victoria, and Valle Chico. The Ensenada Valley corresponds to the Ensenada CADER and the San Quintín Valley to the San Quintín CADER.

Source: Authors' elaboration with data from the Agriculture and Fishery Information Service (Servicio de Información Agroalimentaria y Pesquera, SIAP) via SIACON.

The growth of export agriculture in the region has not only affected the volume and value of production, but has also helped to establish it as one of the country's most important labor markets. A semi-arid region that for decades had little population or connection to the rest of the country has now seen an important increase in the number of residents. According to the 2020 Census of Population and Housing (INEGI, 2020), it now has 117,578 inhabitants, most of them in Camalú and El Rosario, the largest of five *delegaciones* that make up the San Quintín Valley microregion (Espinosa, 2013).

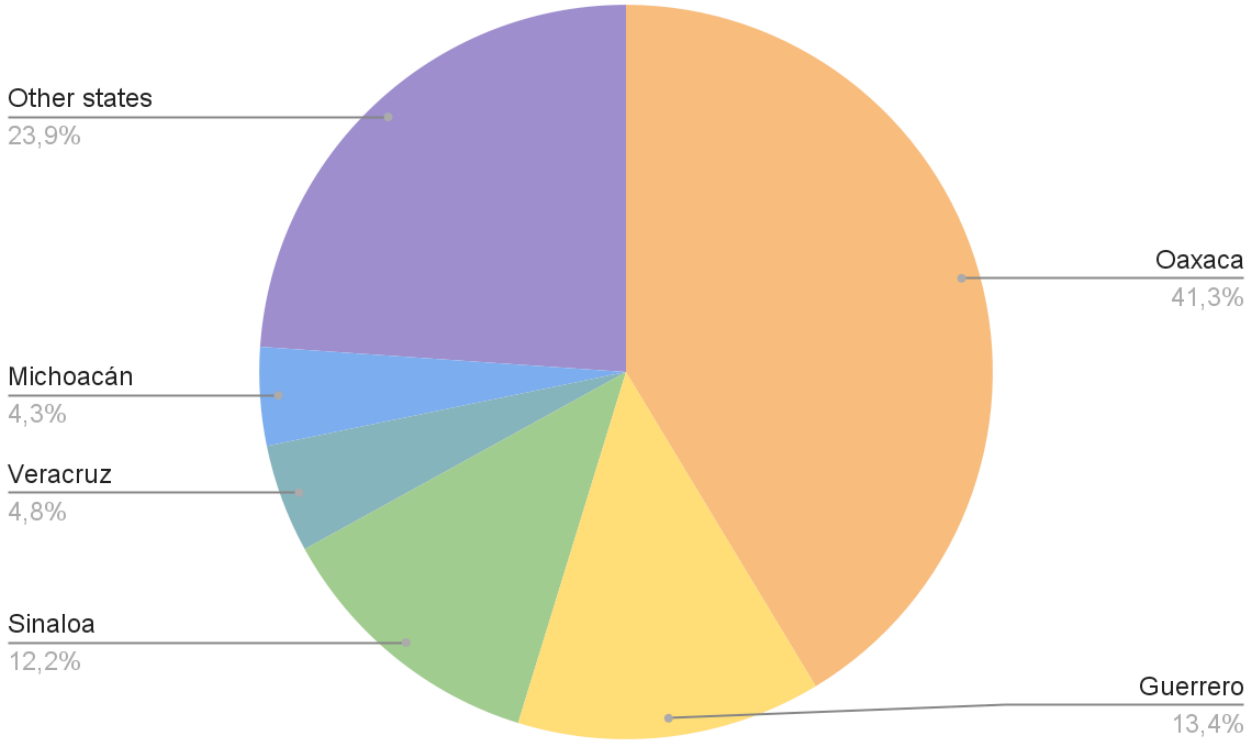
Figure 1. Population Pyramid (percentages) for the Municipality of San Quintín, Baja California, 2020



Source: Authors' elaboration with data from the 2020 Census of Population and Housing, INEGI.

Migrant farm workers began to arrive in the 1970s, brought by tomato producers from Sinaloa and Mexicali that sought to export their product to the U.S. (Velasco et al., 2014). The producers recruited workers mostly from southern Mexico, including indigenous Zapotecos, Triquis, Nahuas, Tarahumaras, and Tarascos (Garduño, 1991; Coubès, 2007). San Quintín thus became one more destination in the migratory route of northwestern Mexico. In the 1970s and 1980s, migration was mainly of men traveling without their families, who worked in San Quintín only during the labor-intensive harvest (Garduño et al., 2011). Many alternated work in the San Quintín harvest, from June through September, with agricultural work in Sinaloa, which ran from October through April (Barrón, 1993). In the 1980s, producers began to plant spring and winter crops such as strawberries and chives, which allowed them to extend production year-round (Garduño et al., 2011). This diversification, on top of technological innovation and the intensification of production, meant an increase in the demand for labor. The migratory pattern was thus transformed from an individual, temporary one that was circular or back-and-forth to a permanent pattern of family migration (Garduño et al., 2011) that gave rise to the settlement of migrant farm workers. This process is clearly seen in the present. Data from the 2020 Census of Population and Housing (Censo de Población y Vivienda, 2020) show that 43.9% of the population of San Quintín was born in another state, and that 41.3% come from the state of Oaxaca (INEGI, 2020).

Figure 2. Five Most Common Birthplaces of Current Residents of the Municipality of San Quintín,* 2020



* Percentage relative to total population born in other states.
Source: Authors' elaboration with data from the Censo de Población y Vivienda, INEGI, 2020.

The varied origins of the residents of San Quintín are also seen in the numbers who speak indigenous languages. The Kiliwa, Pa'ipai, Kumiai, and Cucapá are from Baja California (Navarro y Cruz, 2015), and they now live mainly in the municipalities of Ensenada and Mexicali (Secretaría de Cultura, 2021). In a 1991 study by Everardo Garduño (1991, p. 88), the largest group of indigenous people in the San Quintín Valley were the Oaxacan Mixtecos, who made up 63% of the indigenous population, followed by Zapotecos (20%), Triquis (13%), and Nahuas, Tarahumaras, and Tarascos (4%). Currently, 15.71% of the population of the municipality of San Quintín aged three and older speaks an indigenous language.

Table 2. Distribution by Age and Sex of the Indigenous-Speaking Population Aged Three Years and Older in the San Quintín Valley, Baja California, 2020

Total		**Male**				**Female**			
Indigenous-Speaking Population	% of Total Population	Total	3-14 years	15-64 years	65 years and older	Total	3-14 years	15-64 years	65 years and older
17,250	15.71	8,974	779	7,642	553	8,276	753	6,925	598

Source: Authors' elaboration with data from the Censo de Población y Vivienda, INEGI, 2020.

The settlement of migrant workers from other states not only increased the population, but it also translated into a series of needs in housing, basic services, education, health, and family care. A lack of social services was added to the region's precarious working conditions. Since the 1980s this situation has given rise to mobilizations demanding improvements in living and working conditions, most notably the strike of March 17, 2015, in which workers in the San Quintín Valley presented a list of demands. The stoppage attracted national and international attention. Although some companies already complied with the requirements of federal labor law, not all did: irregularities in workers' conditions and labor rights continued to surface. The 2015 movement was a watershed moment, not only for the valley, but for the entire agricultural sector. Improvements were noticeable.

Although working conditions have changed significantly in the past two decades, the transformation has not been uniform. While there are workers who have formal contracts and all the benefits required by law, others are day laborers for different bosses with no recognized employment status. Not only the improvement in working conditions, but also the differences that persist among farm workers are a consequence of the same development of industrial export agriculture in the region. Three questions thus emerge concerning this differentiation: How has the development of export agriculture affected the living and working conditions of farm workers in the San Quintín Valley? Are there particular characteristics that contribute to differences in these conditions? Does brand recognition allow large wholesalers and consumers to exercise more effective pressure on certain companies?

Methodology

Our study attempts to answer these questions with the aim of describing the current living conditions of agricultural workers: those who migrate every season to work in the fields, as well as those who live permanently in the region. The ultimate aim is to identify the elements that interact and affect change and stability in these conditions, whether it be an improvement or an extension of the difficulties that have characterized agricultural labor for decades. To this end a methodological strategy was developed based on three sources: an analysis of broad trends based on official sources, our representative survey of workers, and ethnography. We started with a review of the literature that allowed us to outline the sociohistorical context of the region. This was complemented with a sociodemographic analysis of the databases of the 2020 Census of Population and Housing of the National Institute of Statistics and Geography (INEGI), the Agriculture and Fishery Information Service (SIAP), and public data from the Mexican Institute of Social Security (IMSS).

Next, a random stratified survey was administered from March to May 2021 to workers from 12 companies of various sizes that export a variety of crops from the Mexicali Valley and the coastal region. This survey, the ENJOREX Baja California 2021, allows us to make a rigorous and representative description of the living and working conditions of workers in export agriculture. The sample was selected from an anonymized list of members of the Agricultural Council of Baja California (Consejo Agrícola de Baja California, CABC). Members were first chosen at random; the list was then adjusted to reflect a diversity of company sizes and crops. Companies were asked for permission, and our interview team (selected from the Universidad Autónoma de Baja California) then selected workers to be interviewed in each company. Throughout the process we were assisted by the management team of the Council. The survey included nearly one thousand workers, and the sample is representative of workers in the major crops and companies, as well as some smaller ones. The companies represented in the survey employ 19,200 workers, 36% of the total number of manual agricultural workers in the state of Baja California, according to the 2020 Census of Population and Housing.[5]

In order to administer the survey in any context, that is, to allow it to be self-administered in case the pandemic made it impossible to conduct interviews with personal distancing, the ENJOREX[6] 2019-20 questionnaire was converted into an Android app by a team of programmers. This change would have made it possible to administer the survey via the workers' cell phones. However, there was

5 The census reported 53,000 farm workers in Baja California in 2020. According to some officials of large companies, the census recorded fewer than normal that year, because the pandemic had begun and a large number of migrant workers had returned to the communities of origin, either from fear of contracting COVID in Baja California or because their communities could close and deny them entry as the pandemic spread.

6 ENJOREX, Survey of Farm Workers in Export Agriculture (Encuesta de Jornaleros en la Agricultura de Exportación), was designed in 2018 and administered in 2019 and 2020 in the states of Michoacán, Guanajuato, Jalisco, Sinaloa, and Baja California to workers in companies affiliated with the large export associations, in the major export crops: four types of berries, avocadoes, cucumbers, tomatoes, and bell peppers.

no need to do so, since Baja California was one of the states with the highest vaccination rates in the first months of the campaign, and the number of infections and cases was under control throughout the period of the survey. During the pandemic, states have been assigned color alerts according to the number of cases, hospitalizations, and other factors; throughout the period, Baja California was on yellow alert, the safest after green, and it was possible to conduct in-person interviews with precautions.

Unlike the ENJOREX samples from 2019 and 2020, the Baja California sample did not include precarious workers selected according to criteria of residence. The survey was administered by a team of interviewers from the state university, and the director of the project and coordinator of the survey, Luz Emilia Lara, decided not to expose interviewers to possible infection in the homes of informal workers. Interviews were carried out only at company locations, outdoors, and with personal distancing. An innovation in 2021 was our inquiry into health issues: chronic illness of household members and the impact of COVID-19 on workers, their co-workers, and families. The chronic illness questions were similar to those in the U.S. National Agricultural Workers Survey (NAWS), and the results can be compared. The COVID-19 section was very brief and was not designed to be comparative. To interpret the results in a national context, the analysis presented here includes comparative tables for the conditions in Baja California and those found during the previous two years.

Anthropological field work was carried out in June and July 2021 in the San Quintín Valley. By this time, the "epidemiological stoplight" had turned to green, meaning all activities were allowed. This work included participant observation and interviews with different individuals in the agricultural sector: public officials, producers, agricultural company staff, community leaders, members of community organizations, and field workers. In order to accurately observe social practices with an emphasis on working conditions, regular visits were made to Lázaro Cárdenas Park, one of the locations for temporary worker hiring in San Quintín, in addition to visiting several companies and farms in the region, and collective and private worker housing. One of those visits resulted in a day's work in a company exporting string beans: Elisa Martínez and Diana López were hired as farm workers, and were thus firsthand witnesses of working conditions. Data were also included from a field visit in November 2018. This regional study thus includes firsthand results from our empirical work on the survey and our time performing field work, in addition to previous academic contributions from El Colegio de la Frontera Norte and other institutions, and analysis of official sources that are indispensable for establishing the direction of the social changes.

The first section of this report presents the circumstances that favored agricultural development in the region, beginning with a description of the predominant productive models in the valley. The second section is a review of the working conditions in the valley and transformations in recent decades. Section 3 focuses on current working conditions, describing the differences between formal workers and those called "pay and go" (*"saliendo y pagando"*) workers, who perform day labor without any kind of formal hiring or benefits. This section also discusses the specific situation of temporary migrant workers. In Section 4 we address topics such as housing, basic services, health, and family care, and we

also note the lack of services in the valley and the ways in which this affects the daily life of the workers. Finally, we include a discussion of the effects of the COVID-19 pandemic and the strategies that have been employed in the agricultural sector for addressing this crisis. The text as a whole describes how export agriculture in the San Quintín Valley has generated changes in living conditions for agricultural workers and their families, improving their working conditions over those in the traditional agricultural labor market. However, these conditions differ for formal and informal workers, and also according to the location and condition of workers' housing. A significant proportion of the Baja California labor force lives in shelters built and managed by the larger companies, while other workers have created their own settlements, which very often have only minimal services. In an isolated environment, these conditions pose challenges to workers' quality and cost of living.

I. From Desert to Agricultural Valley

What was previously a semi-arid,[7] inhospitable area is now one of Mexico's most technologically advanced agricultural regions. The San Quintín Valley is one of the pioneers in protected agriculture, and its entire production is grown with drip irrigation. The valley's development as one of the country's major agricultural regions began in the 1940s, when small growers in western Mexico were displaced there as part of agrarian reform (Velasco et al., 2014). Since that time the valley has oriented itself toward export agriculture. This section explains how this process was generated, as well as the current structure and organization of production.

The families who arrived in the valley began by producing traditional seasonal crops such as corn, beans, and squash (Velasco et al., 2014, p. 69). One of the large producers in the valley describes how his family arrived from Michoacán in the 1940s:

> Around the mid-or late 1940s, when General Lázaro Cárdenas was president of Mexico,[8] he was from Michoacán. So the president promoted . . . the settlement of these regions, which at that time were very inhospitable, there were hardly any transportation routes to the north, or anything. But he organized people from the ejidos of Michoacán and invited them to come to Baja California to give life to this region. (Interview with O.Z.,[9] 24 June 2021).

This producer's family grew corn, beans, and chiles. The leap from this type of traditional small-scale agriculture to the now-dominant industrial export agriculture began with construction of the Transpeninsular Highway in 1973 (Velasco et al., 2014, p. 71). Previously, the lengthy trip on unpaved roads made it impossible to send fresh produce to any well-populated area, but the new highway opened the way to such exports. An engineer for one of the large companies in the region explains: "At that time the chile growers had to dry their product because it could not stay fresh for the one or two days on dirt roads to Ensenada" (Field Notes, 9 June 2021). With this new possibility for marketing fresh produce, companies arrived from Sinaloa, bringing vegetables, mainly tomatoes.[10] Local producers also joined in growing this new crop, including the family of O.Z., who learned from the Sinaloan arrivals and is now the largest producer of tomatoes in the microregion. What began as a family business became one of the largest companies in San Quintín, which even has its own export wholesaler.

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7 The average precipitation in this part of Baja California ranges from 80 to 250 mm per year, somewere between less than a tenth and a fourth of the national average, which is 1069 mm. (Personal communication and climate data.org: https://es.climate-data.org/america-del-norte/estados-unidos-de-america/misuri/mexico-16890/).

8 Lázaro Cárdenas was president from 1934 to 1940, thus our source is slightly off here.

9 In order to protect the confidentiality of participants in this study, they are identified here with pseudonyms.

10 In Mexico, the tomato is known as jitomate, tomate, or tomate rojo, depending on the region.

The arrival of the Sinaloan companies and the growth of local producers expanded the area planted. At this time wells were dug and fresh water was available. With open-field cultivation, when a well began to dry up, planting could simply be moved. Over time, however, water became scarce. The geography of the San Quintín Valley, with its Mediterranean climate and temperatures ranging from 5 to 30 °C. (40 to 85 °F.), makes it an ideal location for year-round agriculture, except for the low level of precipitation. The lack of water has become one of the main problems for the agriculture-based economy.

In the 1980s, when industrial production of tomatoes began to take off, the available water was sufficient to meet the region's needs. However, over time the growth of agriculture and population centers has increased demand. As the region is semi-arid, the lack of rain is a constant, and aquifers have been depleted. According to O.Z., there are periods of drought in San Quintín of 15-20 years. In his 73 years in the region, he says, there have been only two instances of rain that significantly raised the water table: one in 1978-79 and the other in 1992-93. Since then there has been less significant precipitation. "In my whole life those are the only times the water table has been replenished" (Interview with O.Z., 24 June 2021).

Not only has the water level dropped, but also its quality. A hydrologist explains that as the water level drops in the wells, canals lose pressure, sea water flows in, and fresh water becomes salty:

> Water from the wells in the region began at 400 or 500 parts per million, but it has been going up. When it gets to 1500 or 2000 parts per million, it can't be used anymore for irrigation (with a few exceptions, like onions). When it gets to 2000 or 4000 parts per million, the companies start to invest in desalination. Nowadays water in the region can have as much as 36,000, 24,000, or 18,000 parts of salt per million. (Field Notes, 9 June 2021)

The water shortage brought about a change in agricultural production. At the end of the 1990s and beginning of the 2000s, producers and companies began to invest in technologies that would use water more efficiently, among them drip irrigation. According to the hydrologist, San Quintín is the only region in the country using exclusively drip irrigation. One of the large companies in the region, which grew tomatoes and other vegetables at the time, first implemented the desalination operation for agricultural use. At the same time, crops began to show damage from infestation, and another large company decided to convert its operation from traditional to protected agriculture. It did so in 2003, in consultation with an Israeli company specializing in greenhouses and shade netting.

From that moment, agricultural production began a process of transformation from extensive agriculture to a high-technology agriculture with high yields and higher-quality product. According to the hydrologist, with the lack of water and the subsequent change in technology, planting has gone from 28,000 hectares in 1985 to less than 8000 hectares today. Although the area planted has been reduced by 72%, the volume of production is the same, thanks to the technology that makes better use of resources and provides a higher-quality product. A large part of current production is now carried

out with technologies of protected agriculture and desalinators. Hydrologists distinguish three types of water and two different processes of desalination. Fresh water is very scarce and is not used for agricultural purposes. A second type of water, taken from the subsoil, contains more salt than fresh water, but not as much as sea water; it can be desalinized relatively easily. The novelty in the region is the direct use of sea water, the first such use in the country. More than 80 desalination plants have been constructed in San Quintín to purify the salty well water, and one of the large companies in the region recently constructed the first desalination plant in the Americas to convert sea water to agricultural use.[11]

The agricultural transformation can be clearly seen in the production data from the Agriculture and Fisheries Information Service (Servicio de Información Agroalimentaria y Pesquera, SIAP) from 2005 to 2019. In this period there is a clear decrease of 58.77% in the area planted, yet the volume of production is constant and its value more than doubles, from 4.1 billion to 11.5 billion pesos.[12]

Technological innovations since the beginning of the twenty-first century have improved the quality of the crops cultivated. Since that time, San Quintín has become one of the country's major producers of tomatoes for export. More recently, however, the crops have been changing. Berries, especially strawberries, have become the major players. As these are higher-value crops, the value of production has increased substantially in recent years. This trend can be seen in the data for production by crop. According to the SIAP, in 2010 the value of tomatoes produced in San Quintín was $2.7 billion in real pesos, and in 2019 it was $2.0 billion. Although this was a decrease of 26.54%, tomato production was still important. The value of strawberry production in the same period, however, shows a significant increase, from $1.6 billion in real pesos in 2010 to $7.4 billion in 2019, a nearly five-fold increase. The boom in strawberries, as well as in blueberries, blackberries, and raspberries, began with the arrival of large U.S. companies in the 1980s, and it was consolidated with the arrival in the 2000s of one of the largest berry wholesalers in the world (Velasco et al., 2014; Garrapa, 2019).

11 According to notes on a field visit to the desalination plant, "the drilling to extract sea water is carried out in four wells that deliver the water to a reservoir. The water is then sent to an osmosis pump. The desalinated water is sent to a freshwater reservoir, and the salty wastewater is returned to the sea through injection into three wells. The desalinated water irrigates 540 hectares through a 160 km aqueduct" (Field Notes, 29 November 2018).

12 We use 2019 as the last reference year because data from the SIAP for 2020 shows a reduction of 40% in the total value of production, which is not consistent with the producers' own data or the U.S. import data.

Table 3. Agricultural Production in the San Quintín Valley, 2005-2019

Year	Area Planted (hectares)	Area Harvested (hectares)	Production (metric tons) [1]	Percent Increase in Production over Previous Year	Value of Production in 1000s of Pesos*	Percent Increase in Value of Production*	Value in 1000s of Pesos per Hectare Harvested*
2005	28,097.67	27,897.67	376,817.85		4,077,974.27		146.18
2006	18,525.85	7,806.85	278,026.10	-26.22%	3,854,565.19	-5.48%	493.74
2007	16,230.00	7,127.00	290,753.90	4.58%	2,298,200.55	-40.38%	322.46
2008	22,865.45	17,073.45	308,639.41	6.15%	2,982,763.29	29.79%	174.70
2009	22,625.00	11,478.00	361,457.44	17.11%	4,342,175.87	45.58%	378.30
2010	23,078.15	22,835.15	394,014.84	9.01%	5,664,068.71	30.44%	248.04
2011	19,785.05	18,702.05	306,671.59	-22.17%	3,757,605.46	-33.66%	200.92
2012	17,820.29	14,560.54	376,287.33	22.70%	4,559,565.83	21.34%	313.15
2013	17,950.00	13,144.00	358,381.02	-4.76%	5,256,420.43	15.28%	399.91
2014	12,685.99	7,810.30	358,793.70	0.12%	6,405,914.54	21.87%	820.19
2015	16,104.25	10,026.75	400,969.40	11.75%	7,428,874.86	15.97%	740.91
2016	14,143.00	12,005.00	386,523.02	-3.60%	6,836,438.59	-7.97%	569.47
2017	14,790.58	14,303.58	381,316.83	-1.35%	7,435,676.24	8.77%	519.85
2018	7,072.28	6,966.78	312,086.22	-18.16%	7,434,447.19	-0.02%	1,067.13
2019	11,585.40	11,369.40	390,074.37	24.99%	11,460,692.01	54.16%	1,008.03

*Value of production expressed in real pesos based on the National Consumer Price Index (Índice Nacional de Precios al Consumidor), base year 2018.

[1] The production volume in metric tons does not include 5,276.57 gross of flowers in 2016, 2,272.75 gross in 2017, and 8,695.50 gross in 2019. These are included, however, in the categories of hectares planted, hectares harvested, value of production, and value per hectare.

Source: Authors' elaboration with data from the Servicio de Información Agroalimentaria y Pesquera (SIAP).

Table 4. Major Crops in the San Quintín Valley by Area Planted and Value of Production in Millions of Pesos,* 2010, 2015, and 2019

Crop	2010			2015			2019		
	Area Planted (hectares)	Production (metric tons)	Value of Production	Area Planted (hectares)	Production (metric tons)	Value of Production	Area Planted (hectares)	Production (metric tons)	Value of Production
Asparagus	40	160	5.68	120	520	21.2	140	1,120	33.64
Barley (forage, dried[1])	2,373	4,271.40	10.5	.	.	.	.	.	.
Barley (forage, green)	.	.	.	24,02.5	2,510	1.39	.	.	.
Barley (grain)	1,927	2312.4	10.11	.	.	.	2,243.7	4,038.66	12.47
Blackberries	.	.	.	50	530	43.99	55	842	87.96
Blueberries	.	.	.	203	1,764	249.62	225	3,425	650.09
Brussels Sprouts	180	2916	52.57	216	4266.25	51.75	45	846	11.84
Cucumbers	559.9	34,989.20	574.51	472.5	26,984.20	231.51	132.5	7,880	65.54
Green Beans	32	165	2.45	166	1460	19.57	84	1,106.4	12.87
Nopales (cactus)	312.75	18765	69.2	359	15541.11	37.2	170	7,584	19.49
Onions	1,369.50	65,736	107.74	857.5	49,063.50	213.31	555	17,000	85.08
Raspberries	160	4,800	351.55	527	9,135.30	1,239.71	771	11,700.8	949.92
Strawberries	1,464.70	83,428.82	1,559.59	2,531.25	82,607.73	2,116.73	2,704.6	200,570.88	7,403.66
Tomatoes	2,041.80	142,508.60	2,745.15	1,955	177,359.26	2,989.22	1,530.4	121,845.47	2,016.56
Wheat (grain)	8,478	7,206.30	19.68	3,871	168	0.58	1,757	2,635.5	7.49
Zucchini	503	9,892.2	33.26	478.5	10,864.61	82.73	195.5	2,934.56	17.05
TOTAL	**19,441.65**	**377,150.92**	**5,541.99**	**11,806.75**	**382,773.96**	**7,298.51**	**10,608.7**	**383,529.27**	**11,373.66**

* Value of production in millions of pesos, expressed in real pesos based on the National Consumer Price Index (Índice Nacional de Precios al Consumidor), base year 2018.

[1] "Achicalada," in Mexican Spanish, meaning sun-dried. This is the term used by the SIAP.

Source: Authors' elaboration with data on agricultural production for 2010, 2015, and 2019 from the Servicio de Información Agroalimentaria y Pesquera (SIAP).

The major crops in the region by value of production are now strawberries, tomatoes, raspberries, blackberries, and blueberries. The increase in these crops has been a consequence of a decrease in others of lesser value. The most obvious of these is wheat, the production of which has dropped by 79.28%. The production of tomatoes has not varied much; they continue to be one of the more important crops. But others, including zucchini, *nopal* (cactus), cucumbers, Brussels sprouts, and onions, have been significantly reduced. Only asparagus has increased, compared to 2005, to three times the area planted and six times the value. By comparison, the value of strawberries produced increased by 374.72% from 2015 to 2019, and the area planted doubled. These changes speak to the growth in high-yield cultivation using irrigation, greenhouse, and plasticulture technologies. The reduction in area of other crops shows that producers in the microregion are wagering on this new type of specialized produce.

1.1 Structure and Organization of Agriculture in the San Quintín Valley

The current situation in the San Quintín Valley consists in large part of medium and large producers, local and multinational businesses, dedicated to producing fruits and vegetables for export. Medium and large producers operate mostly under the system of contract agriculture, where small producers, also known as growers, sign contracts to produce for large companies. These contracts not only provide for the purchase of what is harvested, but they also include technology and training for the production of crops according to company standards. The technology also includes cultivars, or improved plants, and the companies also provide seedlings as well as the required norms and processes for plant breeding (United States International Trade Commission, 2021). Although this model prevails throughout the valley, it especially defines the cultivation of strawberries, blueberries, raspberries, and blackberries.

The case of Mario, a grower who produces blueberries and a few hectares of raspberries and blackberries for a large multinational company, illustrates this system. Mario is an agricultural engineer originally from Mexico City. After working in Los Angeles, California in the 1990s, he decided to migrate to San Quintín and use his savings to start his own company. In San Quintín he had the help of an engineer with a produce export business who became his mentor. In 2000 Mario began his own business with four hectares of cucumbers, renting the land and machinery. At first he exported his produce under the brand name of the engineer who helped him. With his assistance he managed to earn enough money to buy his own farm in 2003, an abandoned one that needed significant investment. At first he planted cucumbers in the ground; three years later, with a loan, he invested in netting for 15 hectares, and a few years later in another 15 hectares. The farm had good yields, but the economic recession of 2008-2009 severely affected his production for 2011 and 2012. The price of cucumbers fell sharply, so planting them would be an unprofitable investment: “they weren’t worth anything.” His debts began to mount and he had problems with the banks. The 30-hectare farm was a burden. Mario decided to investigate

new strategies. He decided to cut production, rent 20 hectares to other producers, and cultivate the other ten himself. He had heard that strawberries were very profitable, so he decided to take a risk and alternate the cucumbers with strawberries. Instead of the 30 hectares he usually planted, his entire investment was focused on eight hectares of strawberries:

> With the cucumbers . . . we had a lot, and we had a lot of workers. And when the recession came we couldn't make payroll. Yes, we made it, but we were wiped out because . . . the investment we made didn't correspond to the return. So we couldn't make the payments to the bank or anything. The switch to berries was a good solution to get out of the hole. (Interview with Mario, 25 June 2021).

The strawberries Mario grew were for the domestic market, until a large multinational company approached him to buy his crop and ask him to produce varieties for them. Because of the strike in 2015, however, he lost everything he planted that year. The economic problem he faced led him to produce blueberries, which he could plant in the netting he already had. The plants were financed by the company he produced them for, and they deducted about 50 centavos per crate until he paid off the debt. The blueberry season is very short, however, and his earnings could not cover the entire year. In 2019 he thus decided to plant raspberries and blackberries as well. He now has ten hectares of blueberries and 7.5 of raspberries and blackberries. He continues to rent the rest of his land so he can focus entirely on growing berries:

> We rent it, we dropped that part, we didn't want to get into that because we're focused on the berries. It's going well, and we figured we couldn't be risking everything. The berries were a more certain market than cucumbers and tomatoes, which was uncertain. They also cost a lot of money, a lot of labor, and sometimes you don't know what you're going to get back. But with the blueberries we get it back, every year. Even if it was just a little, we were getting ahead. We paid all the debts with the blueberries. (Interview with Mario, 25 June 2021).

Now, Mario feels satisfied with his business: "Fortunately we no longer owe anything, it's a healthy business, and we don't want to go back to that type of venture, of a big farm." He says he prefers to "focus on a little," with earnings that are certain; large farms require a lot of investment, which is always a risk. Mario's case demonstrates the difficulties of a small producer and the advantages of becoming a grower: he has greater security and control over his production, as well as constant access to the export market through the wholesaler.

In addition to the medium and large companies and the growers who produce for them, the valley also includes small producers known as *rancheros*, whose production capacity is less than that of the growers. The *rancheros* raise crops with short growing cycles, like chiles, green beans, and onions,

which involve more limited periods of work in the fields. However, during our field work we also found *rancheros* growing strawberries, raspberries, blackberries, and blueberries. Most of them produce for the domestic market, but some also export their crops. The costs involved in large-scale cultivation, in growing high value added crops, or marketing their crops for export on their own, are insuperable obstacles for many family businesses, leading them to choose other strategies for surviving in a highly competitive market.

Bernardo is a 26-year-old small producer who works in two kinds of agriculture: under contract to a large company that exports flower and vegetable seeds, and also traditionally, planting vegetables. The latter is primarily for the domestic market, although he has sometimes been able to export his produce through a wholesaler. The history behind Bernardo's efforts goes back to the 1960s, when migrant workers began to arrive in Baja California from central and western Mexico. Bernardo's grandfather, who left Zacatecas in 1965 in search of "a future" for his family, was among them. He arrived first in the Mexicali Valley to work on the cotton crop. He soon left that for San Quintín, where he found a job on a farm producing seeds. In time he acquired his own land and became a grower for the large seed wholesaler for which he had worked. Bernardo is now his "generational replacement" and works full-time on the farm. In order to carry on the family business and invest in technologies that would enable the farm to expand, Bernardo studied protected agriculture agronomy[13] at the Universidad Autónoma Chapingo. However, he still has not found the means to acquire the infrastructure to carry out his project.

Bernardo manages the seed business on a contract similar to Mario's contract to produce berries. As grower for a large export company he signs a contract before planting, which stipulates the number of kilos of seeds he has to produce and the amount he will be paid. He explains that this type of contract carries less risk, because the companies cover the costs of production and deduct them from the final payment:

> That's why I'm a little more in favor of producing seeds, because the money doesn't come out of your pocket. I don't invest my own money, and at given times I can ask for a percentage of the final payment, because there's already a final price. "You know what? We're going to pay you so much for this." "Ok, so give me 10% or 15% of the payment and I'll use that to pay for production." It doesn't rely on me as the producer because they give me the money to do it." (Interview with Bernardo, 13 June 2021).

Bernardo's contract is through an intermediary company that also receives the seeds, cleans them, sorts them by quality, and packages them for shipment to the U.S. Another company provides the seedlings

13 Protected agriculture is "a system of production that modifies the natural environment in which the crop develops, with the purpose of reaching optimal growth and with it, a high yield" (Intagri, 2021).

for transplantation into the field. This type of agriculture involves less risk for small producers, not only of seeds, but of all types of crops:

> The advantage [with the company] is that if there's no negligence on my part, there's insurance. So if the crop was managed according to the requirements in the contract, but is lost, they pay me the total. And it has happened, that I didn't produce anything, but they paid me what they were going to. (Interview with Bernardo, 13 June 2021).

In addition to receiving payment for expenses and a secure income, this type of agriculture also allows for a more controlled planting that insures the quality of the harvest. The quality is partly the result of the seedlings provided by the companies, but it is also a product of the agrochemicals used, which must be on a list of chemicals approved for export produce. Growers also receive advice from a technical team that monitors the process of planting. Although this is an advantage, it also involves certain difficulties. Bernardo notes that not all soil is alike, and that requirements of planting and growth can be different. He has had some conflicts on these issues with engineers from the company he produces for. However, he says they have always resolved these conflicts through discussion.

At the same time, Bernardo manages his vegetable business in the traditional way, with a focus primarily on the domestic market. In this model, it is the producer who makes the investment and assumes all the risk:

> In this case, the squash, the onions, the corn, the beans, we plant everything with a 100% risk. Here, yes, there can be a total loss. We have had that some years, and we have also had very good years, so the risk here has always been enormous. I mean, the area I have planted here [in vegetables] is never going to compare with what I have in seeds, because here, yes, it's a . . . everything comes out of your pocket and you might not make anything. (Interview with Bernardo, 13 June 2021).

The risk involved with this type of crop depends in large part on prices in the national market. Bernardo explains, for example, that he had problems the previous year with his onion crop. At the start of the harvest season, the price began a drop from eight to four pesos per kilo, and when it reached 4.50 pesos, a price at which he would make no money but also lose no money, he decided to sell it all. But after he did so, the price rose to 12 pesos:

> You're always taking a very big risk, because there are a lot of farmers who say, "You know what? I'm not going to sell until the price goes up." They wait, and they end up not selling their harvest and plowing it under.[14] I get to four pesos and say, "The price has come down in the

14 The verb he uses for "plowing under" is disquear, which refers to using a tractor to pull a disk harrow. The crop is

past few days; at four pesos I'm not making any money but I'm also not losing any, so I sell." (Interview with Bernardo, 13 June 2021).

Bernardo relies on oral contracts to sell his crops on the domestic market, so he looks for buyers who are trustworthy or who are recommended by other producers. However, he is always watching the market. For this reason, his options are limited to producing a large quantity at low cost or looking for other markets that are more profitable. For example, if prices will not even cover his labor costs, his brother sells the crop to small traders in order to pay his workers. Producing under this arrangement for the domestic market means selling the crop for 30% of what the export market pays. If he wants to export his crop, Bernardo must rely on intermediaries, since he does not have the means to do so on his own. However, export companies only contact him when their own production is not sufficient to cover their customers' demands. Bernardo explains that large companies in the valley are gradually absorbing small producers by means of contract agriculture. As a small producer, he is quite aware of his disadvantages in a valley dominated by large multinational companies:

> We're never going to be able to compete with them. Never. There is a lot of foreign investment that unfortunately we can't compete with. . . They are never going to see us as competition. I mean, the eight or ten hectares that I produce, against the 1500 that they have, it's nothing. (Interview with Bernardo, 13 June 2021).

Bernardo's farm is run on family labor. The permanent workers include him, his brothers, his grandfather, and two friends who help him when there is a lot of work. Bernardo says that he does not have the resources to hire any other permanent workers. However, they cannot do all the work in the planting and harvest seasons, so it is necessary to hire temporary workers. The differences in type of agriculture and the size of the business not only affect the quality of the product and the possible earnings, but also the conditions of the workers.

These two forms of production create two types of workers. On the one hand, there are formal workers who work for large and medium-sized companies, as well as for growers. These companies usually offer all the benefits prescribed by law, and in many cases they participate in socially responsible business programs. On the other hand, there are informal day laborers for small producers who have no formal contract or employment benefits. Although working conditions have changed over time, the existence of the informal worker in this segment of agriculture demonstrates the persistent problem of labor rights and working conditions. And beyond the workplace, these differences affect the quality of life of every kind of worker.

plowed under and completely destroyed. "If there's no [good] price, it's cheaper that way, so you don't have to pay for the labor of removing the crop" (personal communication, E.C., 20 August 2021).

II. The Worker Population in Export Agriculture: Profiles and Processes

This section describes the main characteristics of the general population of workers for the 12 export companies in the Mexicali Valley and the coastal region who participated in the survey. These characteristics are closely circumscribed within two ongoing processes among the working population. The first is a worker shortage in the past few years. Taylor, Charlton, and Yúnez (2012) argue that the United States had enjoyed an abundance of rural workers willing to migrate legally or illegally, but that this supply of workers ended with the demographic transition in rural Mexico, which meant ever fewer children and young people. The second process is a consequence of the first: an aging of the working population and a marked demand for immigrant workers.

Our analysis finds that the recent history of worker supply can be divided into three periods. In the first, from the 1990s to 2006, the levels of emigration from rural Mexico to the U.S. were such that the cohort of young people aged 5-24 in 1995 fell by up to 40% in 2005. This means that international emigration and internal rural-urban migration considerably reduced the cohorts that reproduce the rural population. In the second period, which runs from 2007 to 2012-14, the two events that reduced emigration to urban areas and to the U.S.—the international financial crisis and the hardening of the border—caused the great majority of rural youth to seek employment in rural areas in Mexico, and wages dropped to their lowest level since representative surveys were taken (the ENOE was begun in 2005). [15] Finally, from approximately 2014-15, the shortage produced by the emigration of adolescents and young adults in 1990-2005 produced a drop in the number of workers that drove an improvement in wages and working conditions. Other factors also contributed to this improvement: a reasonable employment dynamic in Mexico; the uninterrupted growth of the H-2A program in the U.S., which attracted increasing numbers of Mexican workers; agreements between exporters and import companies in other countries; and the Mexican government's inspections, fines, and audits. Indeed, Baja California saw some of the lowest rural unemployment rates in all of Mexico (Table 5).

15 It would be worth exploring whether the abundance of Mexican workers in this period is related to the particularly rapid expansion of export agriculture.

Table 5. Rural Unemployment Rates in Baja California, 2020 (%)

Municipality	Unemployment Rate (March 2020)
Ensenada	1.64
Mexicali	3.45
Playas de Rosarito	0.78
San Quintín	0.0
Tecate	1.08
Tijuana	0.0

Source: 2020 Census of Population and Housing; calculations by Omar Stabridis.

It should be noted that the month of March marks the end of the high season in the Mexicali Valley, so the level of unemployment in this municipality (low on a national level but higher than the other municipalities) is a seasonal phenomenon. Also, in March 2020, the beginning of the COVID pandemic disrupted the employment of many Mexicali workers in the U.S. However, taken together, the levels of unemployment in Baja California were extremely low. By contrast, in various municipalities in Oaxaca, Chiapas, and Guerrero, rural unemployment rates exceeded 20%. For all of these reasons, there was indeed a perceptible shortage of rural labor in the state.

The labor shortage was also related to two other major demographic phenomena. The first was the aging of the working population, a phenomenon noted in export agriculture nationwide, and well identified by demographers in urban Mexico, but it is worth analyzing to see whether it is more or less advanced in Baja California. The second phenomenon is that the shortage led to higher levels of migration. As we will see in this section, 80% of the workforce in Baja California export production is from southern or southeastern Mexico. In the ENJOREX Baja California 2021, the percentage of working men is greater than in export agriculture as a whole. While the proportion of women in the ENJOREX 2019-20 was 46%, in Baja California it was only 43%.[16] In any case, export agriculture has much greater gender equality than the rest of the agricultural sector, where only 12% of wage workers are women.

Employment of minors is prohibited in agriculture. In Baja California, our survey found a negligible number of workers under 18 in the companies sampled, although there are locations known for their recruitment of children. Only 0.16% of the sample is younger than 18, and all of these are boys under 16, so this could be considered child labor. Men in the survey are generally a little younger than women, with an average age of 31.8, as compared with 34.1 for women. Of the men, 9.1% are aged 50 or over,

16 The emphasis was on the coastal region, where we interviewed 860 workers; in the Mexicali Valley we interviewed 100. All of these percentages refer to the expanded sample. The sample contains a total of 967 workers; the expanded sample contains 19,167.

and 10.8% of the women, that is, approximately 90% of the total, are aged 18-49. This age profile does not suggest that workers in Baja California are particularly old. However, the average age of workers native to Baja California is 31, of permanent immigrants 37, and of temporary migrants 28. It is clear that the population stays young with the influx of younger temporary migrants.

The youth of agricultural wage workers in Baja California is one factor that explains the presence in San Quintín of companies recruiting workers for the H-2A program: the average age of agricultural workers in the U.S., according to the NAWS, is 43. Agriculture in the U.S. has a much more serious shortage of young workers, and Baja California is a source of workers with the ideal age and qualifications. Numerous companies in Baja California complain of the constant recruitment among the workers for the H-2A program. The significant wage difference makes the opportunity to work in the U.S. very attractive to young workers.

Our survey was administered to workers in two types of crops: those working in tomatoes of different types and in chives, and those working in blueberries, raspberries, blackberries, and strawberries. A greater proportion of men work in tomatoes and chives than in berries: 60.4% versus 55%. Only 20.9% of the workers surveyed were born in Baja California. Of the rest, 43.1% have been working there for several years and have built their homes there, and are thus classified as permanent immigrants, while 35.9% might have previously worked in Baja California, but generally have no homes of their own there and return every year to their communities, so they are classified as temporary migrants. A large number live in housing or shelters belonging to their employer. A majority of the women are permanent immigrants (52.3%), while the largest category of men are temporary migrants (42%): temporary migrants are much more often men than women. When men finally settle in Baja California, their wives come, or they get married, and their wives participate more intensively in the waged workforce.

The educational level of workers in export agriculture is lower in Baja California than in other export states. While those surveyed in the ENJOREX 2019-2020 had an average schooling of 7.2 years, in the ENJOREX Baja California 2021 the average was 6.6 years for women and 7.1 years for men. This low level of education reflects that of most migrants from southern and southeastern Mexico, and stands in contrast to the urban population of Baja California. The lowest level, 5.9 years, is among permanent migrants, who are older and from generations with less exposure to education, than current temporary migrants, who have an average of 7.6 years, equal to that of Baja California natives but lower than the national average. There appears to be a lack of educational services and infrastructure in the coastal region, since the level there is significantly lower than the statewide average.

The household size of agricultural workers in this region is very small. The average size for agricultural workers in the ENJOREX 2019-20 is 3.8, a little larger than the national average. In the ENJOREX Baja California 2021, the average is only 2.7: that is, a partner and less than one child or other household member. Households of male workers are smaller than those of female workers (2.5 versus 2.9), a result of the larger number of male migrant workers who start a household only when they settle

in the region. Households are generally young: they have an average of 1.98 adult members of working age, 0.64 children, and only 0.05 members aged 65 or older.

It appears that in Baja California permanent immigrants tend to leave their families in their communities of origin more than in other agricultural export states. There is thus a large proportion of workers who save their money and send remittances home. Tomato and chive workers have larger households (2.99) than berry workers (2.47), and temporary migrants have smaller households (2.2) than natives and permanent migrants (both around 2.9). The survey also asks respondents if they speak an indigenous language: 38% of the women and 41% of the men responded affirmatively. The proportion is 60% among temporary migrants and only 12.7% among natives of Baja California.

III. Past and Present Working Conditions and Child Labor

In 2021, the workers for companies affiliated with the Agricultural Council of Baja California (Consejo Agrícola de Baja California) and the International Fruit and Vegetable Alliance for the Promotion of Social Responsibility (AHIFORES)[17] have the highest wages in the country, and their benefits are close to the national average for workers in export agriculture.

Table 6. Monthly Wages of Agricultural Workers, ENJOREX Baja California 2021 and ENJOREX 2019-20

Sex	Baja California 2021	2019-20 Berries	2019-20 Vegetables	2020 Avocados	2019-20 Precarious Workers*
Female	10,082	6,601	5,680	7,175	5,093
Male	11,291	7,755	7,011	8565	5,606
Gender Gap (%)	10.7	14.9	19	16	9

Source: ENJOREX Baja California 2021; random sample of ENJOREX 2019-20; sample of avocado workers, 2020; analytical sample of precarious workers, 2019-20.
*The sampling of precarious workers was carried out in San Luis Potosí, Michoacán, Guanajuato, Jalisco, and Sinaloa; unlike the random sample from the ENJOREX, workers were selected for the proximity of their communities to areas of commercial agriculture, in a residential snowball sampling.

In 2021, women in Baja California earn 52.7% more than women working in berries in the rest of the country in 2019-20,[18], and their advantage with respect to women in other crops and working conditions is similar or better (Table 6). The advantage for men in Baja California is a little less (46.8% more than men working in berries in the 2019-20 survey). Data for a sample of precarious workers from the rest of the country are shown as a reference, although as explained in the Introduction, there is no comparable sample for Baja California. The gender gap in Baja California is less than in the rest of the country, with the exception of the precarious workers. In Baja California there is a greater gender gap in the income of indigenous workers, where women earn 12.4% less than men. Indigenous men do not earn less than non-indigenous men.

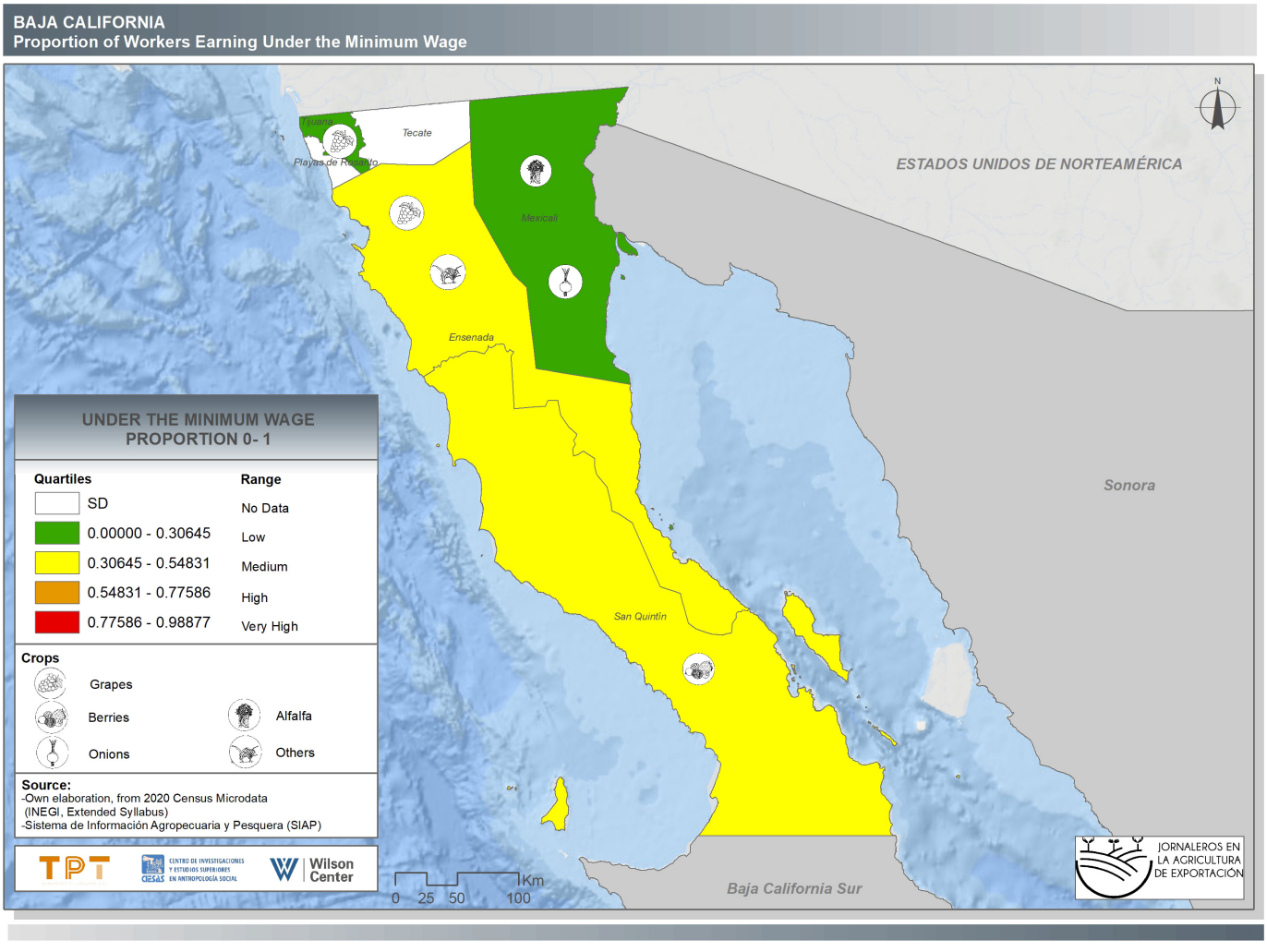
The Labor Violation Information System (SIVIL, by its Spanish Initials) developed by the project on farm workers in Mexican export agriculture identifies the relative incidence of three types of labor violations, according to municipality and to the main crops in each one. The frequency of these three

17 The International Fruit and Vegetable Alliance for the Promotion of Social Responsibility (Alianza Hortifrutícola Internacional para el Fomento de la Responsabilidad Social, AHIFORES) is a national confederation of export associations and companies with a commitment to social responsibility to workers and customers.

18 The wages for Baja California 2021 are those taken directly from the survey. The wages of the other samples are real wages for March 2019. The wages for samples from the rest of the country were not adjusted because there is no evidence that wages increased according to the 2021 rate of inflation. Rather, their dynamic appears to be the combined effect of market forces and the two sharp increases in the minimum wage, which included the wages of agricultural workers. In any case, the gap between Baja California and the rest of the country is so great that we estimate it to be very similar in 2021 to that of 2020.

labor violations was standardized into quartiles. The three kinds of labor violations are: 1) underage workers, 2) workers deprived of access to social security, 3) workers earning below the minimum. The 25% with the least violations is colored green, and red corresponds to the quartile with the largest incidence of violations. Although Baja California has the highest wages in Mexico both in the census and according to ENJOREX, the level of labor violations corresponding to the percentage of workers earning the minimum wage is not the lowest in Mexico because farm workers' minimum wages have been raised above the level of general minimum wages, and because minimum wages along the Northern border are approximately 30% higher than in the rest of the country. Tijuana and Mexicali show the smallest proportion of workers with below-minimum wages, and Ensenada and San Quintín show a higher incidence of this problem, due to the above-mentioned reason.

Map 1. Proportion of Workers Earning Under the Minimum Wage.



It is debatable whether this income gap, where Baja California workers in export agriculture earn approximately 50% more than those in the rest of the country, means they have a standard of living that is 50% better. The answer is probably no, for two reasons. First, prices of basic consumer goods in Baja California are higher than in the rest of the country.[19] Second, as we discuss below, their housing is of lower quality than that of workers in export agriculture in the rest of the country, and the services they receive are more expensive and deficient, including some that should be provided by IMSS, such as health and child care. Both factors lie outside the direct context of employment; they are the responsibility of different levels of government. Workers for companies that are members of the Agricultural Council of Baja California also receive the benefits required by law to a similar or higher extent as their counterparts in the rest of the country, as seen in Table 7.

Table 7. Percentage of Workers with Formal Employment Benefits of Agricultural Workers, ENJOREX Baja California 2021 and ENJOREX 2019-20

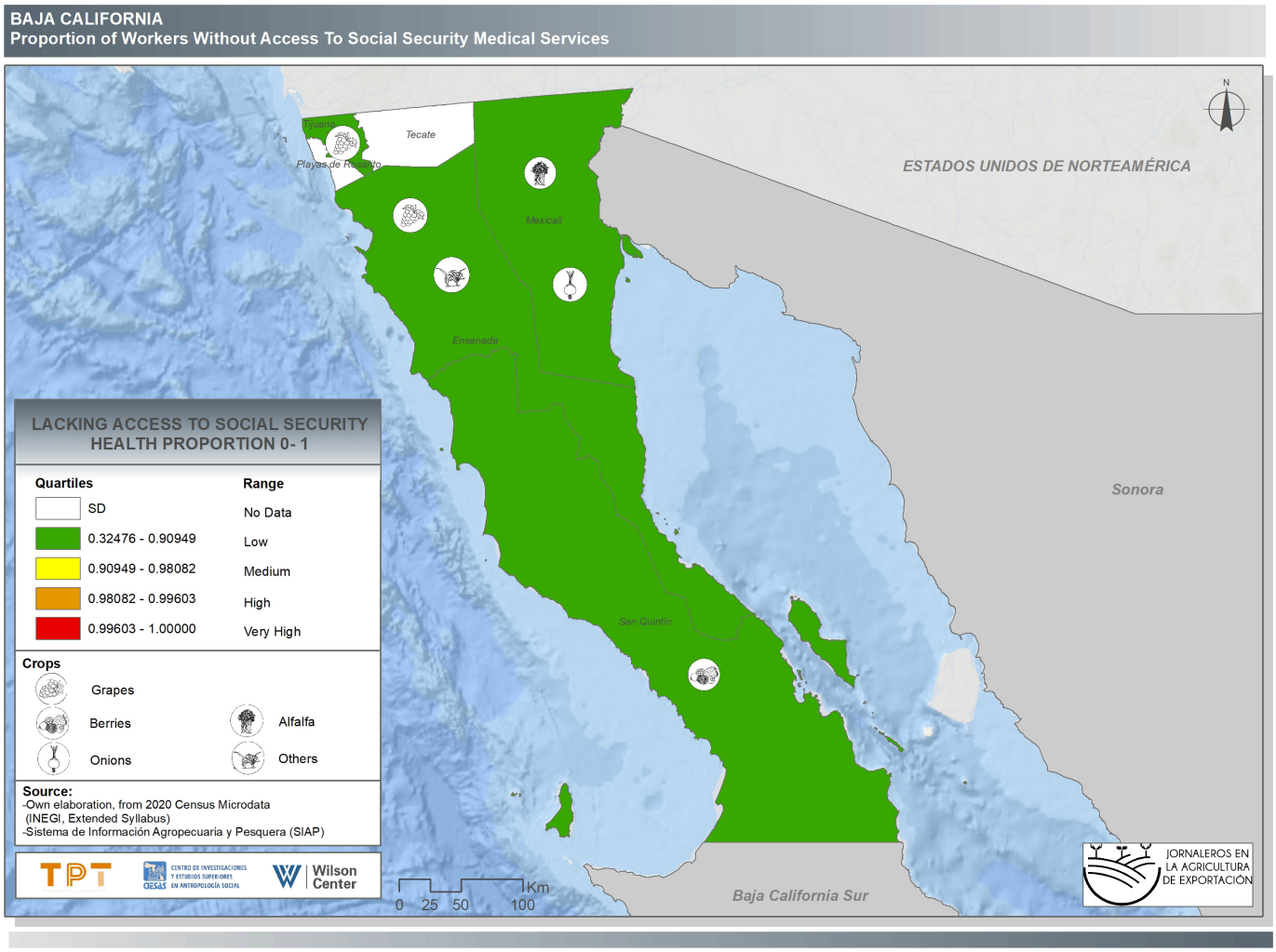
Sex	*Aguinaldo* (end-of-year bonus)	Vacation	IMSS Health Services	Infonavit Mortgage Benefit	Funeral Expenses	IMSS Childcare	Company Childcare
ENJOREX Baja California 2021							
Women	80	36	98	26	12	2	3
Men	81	46	97	30	13	2	2
ENJOREX 2019-20 Random Sample							
Women	82	47	96	32	4	11	30
Men	80	54	94	31	8	9	23

Source: ENJOREX Baja California 2021; ENJOREX 2019-20.

Workers in the ENJOREX Baja California 2021 have levels of IMSS affiliation equal to or greater than the rest of the export agriculture states. This is also the case if we analyze censusa data through SIVIL. In this latter data analysis, the proportion of workers in Baja California agriculture lacking access to social security is the lowest in Mexico.

19 Given that some federal funds that are distributed to states and municipalities depend on poverty levels, several governors and municipal presidents on the northern border of Mexico demanded that official poverty in their jurisdictions be calculated on the basis of a basket of goods and prices configured specifically for them. Their interest was in showing higher levels of poverty in order to receive more social development funds. However, their demand was not met, due to the difficulty in modifying the nationally-defined basket according to regional characteristics.

Map 2. Proportion of Workers Lacking Access to Health Care Through Social Security.



However, fewer report formal access to other benefits, such as IMSS or company childcare, Infonavit mortgage benefits, or vacation time. In any case, their level of formal access to these benefits rivals that of more formal workers elsewhere in the country. The ENJOREX questionnaire asks about formal access to benefits—whether the workers know if they have a formal right to certain benefits—as well as effective access to them. Given that every benefit is different, workers are asked if they have "real" access to the benefit. This question allows for a differentiation between a right and access to its associated goods and services. Table 8 shows the response from the ENJOREX Baja California 2021 and the random sample from the ENJOREX 2019-20 to the question about "real" access.

Table 8. Percentage of Workers with Effective Employment Benefits of Agricultural Workers, ENJOREX Baja California 2021 and ENJOREX 2019-20

Sex	*Aguinaldo* (end-of-year bonus)	Vacation	IMSS Health Services	INFONAVIT Mortgage Benefit	Funeral Expenses	IMSS Childcare	Company Childcare
ENJOREX Baja California 2021							
Women	77	30	96	16	2	0.5	1
Men	75	37	93	20	3	1	1
ENJOREX 2019-20 Random Sample							
Women	75	35	86	14	2	5	23
Men	73	42	83	14	2	4	14

Source: ENJOREX Baja California 2021; ENJOREX 2019-20.

With the exception of IMSS health services, effective access is much lower than formal access. As we shall discuss below, workers have the idea that IMSS is only for certain serious illnesses and for those who need official documentation for sick leave.[20] INFONAVIT Officials we had a chance to discuss the low rates of access to their benefits gave us three reasons for this. First, workers don't understand the benefit provided by the Housing Fund. They believe that the Fund must provide them with housing, and not, as is the case, that it only provides a mortgage. Second, farm workers have little seniority in the firms where they work, and they don't qualify for loans. Finally, loans are meant to be used for the purchase or improvement of housing in formal, registered properties, and most farm workers buy irregular plots of land. Our survey established, however (see below) that average seniority is three years, and therefore workers should qualify, because the minimum seniority to allow them to access loans was recently reduced from 3 years to six months.

The practical non-existence of IMSS childcare is notable: we were told during our field work that one had recently been approved for construction. Also noteworthy is the small percentage of workers who report having access to company childcare centers, given that we visited several in the course of our field work. Various sources reported that eight child care centers had shut recently, because they had operated under the subsidy structure created by previous governments (Programa de Estancias Infantiles), and this program had been canceled. Most of the service in place is provided by employers. IMSS has renewed its offer of paying employers a fee of $4,200 pesos per month to employers offering this service and complying with IMSS standards. It remains to be seen whether or not this offer entices a sufficiently large number of employers to reopen their child care services. It is clear, however, that the standards required for a child care center under the Programa de Estancias Infantiles are lower than those demanded to access the IMSS fee. Therefore, most of the child care centers that were shut would need substantial remodeling to open under the IMSS scheme. Child care is essential for the well-

20 IMSS can perform a medical examination and issue a certificate of medical incapacity for a specific time. The worker then receives the wages reported to the IMSS for the period covered by the certificate.

being of children and their parents. We believe this service must be substantially expanded, and the fees paid towards this component of social security should be used for this purpose.

Several bosses, operations directors, and human resource directors told us it was common for workers to calculate their daily earnings and take off one or two days a week, once they reached the amount they had planned for. The ENJOREX 2019-20 found an average of 6.15 days worked per week, meaning that a substantial number of workers worked seven days a week, in violation of federal labor law, and that few had a day off. The ENJOREX Baja California 2021 found an average of 5.64 days worked per week for tomato and chive workers, and 5.98 for berry workers; both groups, of course, consisted of workers for companies affiliated with the CABC. These figures show that the practice of taking off one or more days a week is not common in these companies. Neither the companies nor the workers decide to have more than one day off per week. Although having only one day off a week is a negative aspect of their working conditions, it does have a positive side: companies in the CABC do not require their workers to take time off, or they do so only occasionally, whereas smaller or informal companies sometimes hire workers only for a few days and then furlough them for the rest of the week, or simply do not call them.

Methods of recruitment are important because they can indicate conditions that verge on human trafficking or result in wrongful deductions from workers' wages. However, the most common means of recruitment is through a friend, relative, or neighbor (47.5%), followed by workers who find the job on their own (40.8%), and then those who are recruited by a contractor, or *enganchador* (8%). Although there are ethical contractors, this type of recruitment is the riskiest for the worker. There are clear differences by crop: 18.5% of tomato and chive workers are recruited by contractors and face this risk, but only 1.8% of berry workers. Individual effort and family recommendations account for 93.6% of all hiring among berry workers.

Contractors are the central figure in the hiring of temporary migrants, who account for 86% of all the workers they recruit. It is thus important to strengthen legal, ethical recruitment mechanisms for these workers, such as the ones overseen by the Support Program for Agricultural Workers (Programa de Apoyo a Jornaleros Agrícolas, PAJA) before it lost most of its funding. Given the overlap between temporary migrants and indigenous people, it is not surprising that most of the workers recruited by contractors are indigenous (78.7%). Fewer than 0.25% of Baja California workers have to pay for transportation from their communities of origin. All of these are temporary migrants, and all of them are indigenous.

Another indicator of a risk of abuse or trafficking is having paid a fee to be hired. Paradoxically, contractors who ask for this payment are those who may later entrap workers. Only 0.76% paid to be hired, mostly male berry workers, and the majority of these, contrary to what might be expected, are natives of Baja California. Workers in debt to the company are also at risk for abuse and trafficking, but the proportion of these is minimal: 0.2%. In sum, the indicators for risk of abuse or trafficking in the

companies sampled are small, so that it is possible to say that in 2021, there is no evidence of such abuse or indicators of trafficking.

As already noted, the households of these workers are much smaller than the average for Mexico, which can be explained by the fact that some family members remain in their communities of origin, even if the workers appear to be "permanently" settled in Baja California. Internal remittances, we found, are a widespread phenomenon in Baja California. A large number of convenience stores advertise their fees for sending money, and a large number of their customers on weekends are there for that reason. In general the fee to send money is 7%; it was not possible to determine how much the recipients are charged in southern Mexico. A total of 30.9% of the men and 17.3% of the women say they send remittances regularly. Although, as might be expected, those who do so are more often temporary migrants (48.3%), 13% of the permanent migrants also send remittances, supporting the notion that part of their immediate families remain in their communities. However, these percentages are lower in the ENJOREX Baja California 2021 than in the sample from the ENJOREX 2019-20. Workers in other states more commonly send money back to their communities.

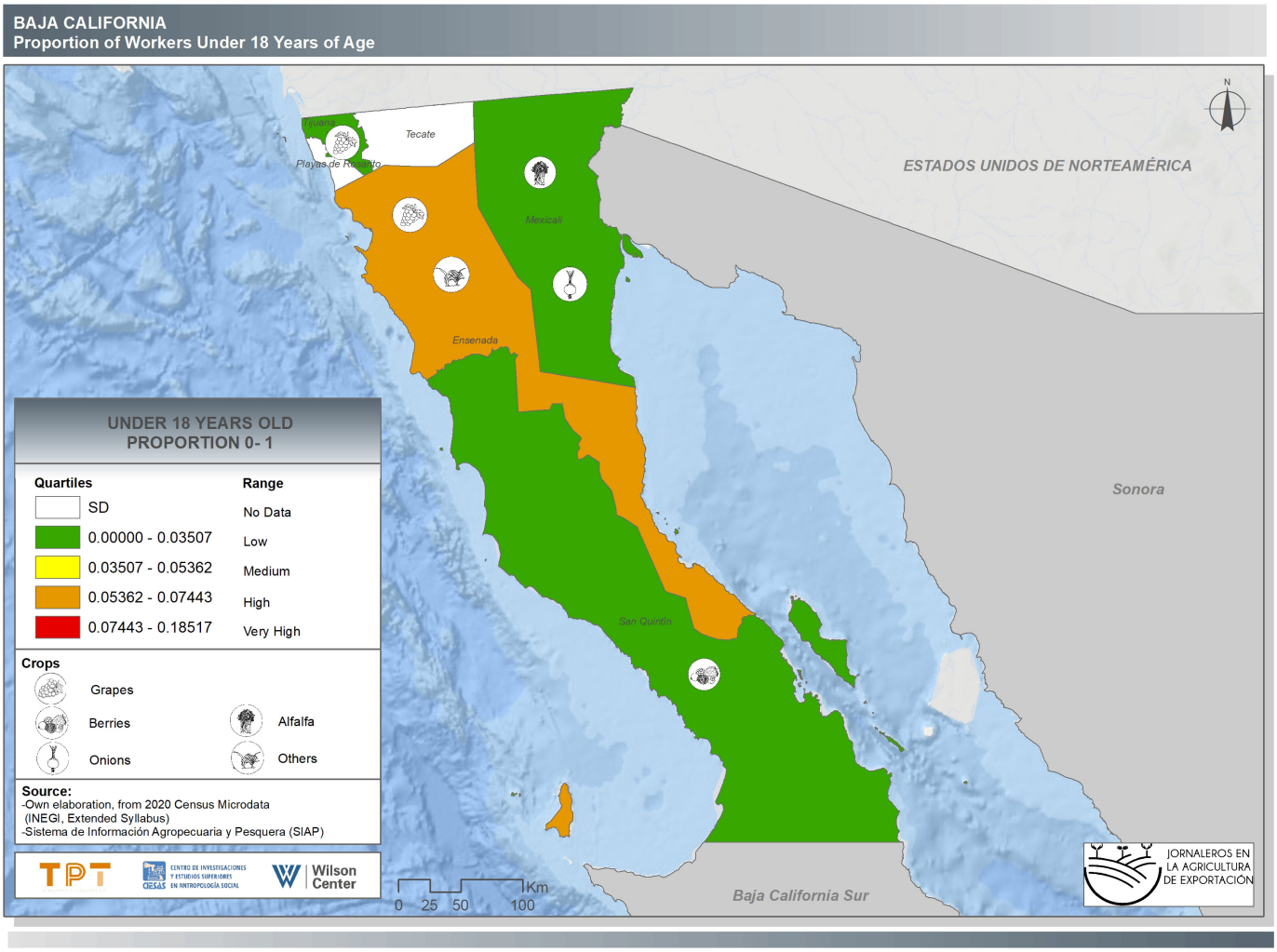
The wages and benefits shown in Tables 6-8 are the product of a substantial improvement. A decade ago, farm workers in the valley were extremely precarious, not only because of the absence of formal hiring and employment benefits, but also because of constant violation of labor rights and human rights. The changes and continuities in these conditions are the subject of this section. The literature and the testimony of the workers describe a situation in which abusive treatment, low wages, grueling hours, child labor, and violation of labor rights were constant. In addition there was discrimination and exclusion for the simple fact of being indigenous. A social activist who came to work in 1985 explains:

> When we arrived here in San Quintín it was very different than now. Now they respect us at least a little, unlike back then in 1985. When I got here we were discriminated against, they made fun of us, that we were *oaxaquitas, indios,* that we didn't know anything, and the abuse was awful. (Interview with N.Z., 19 June 2021).

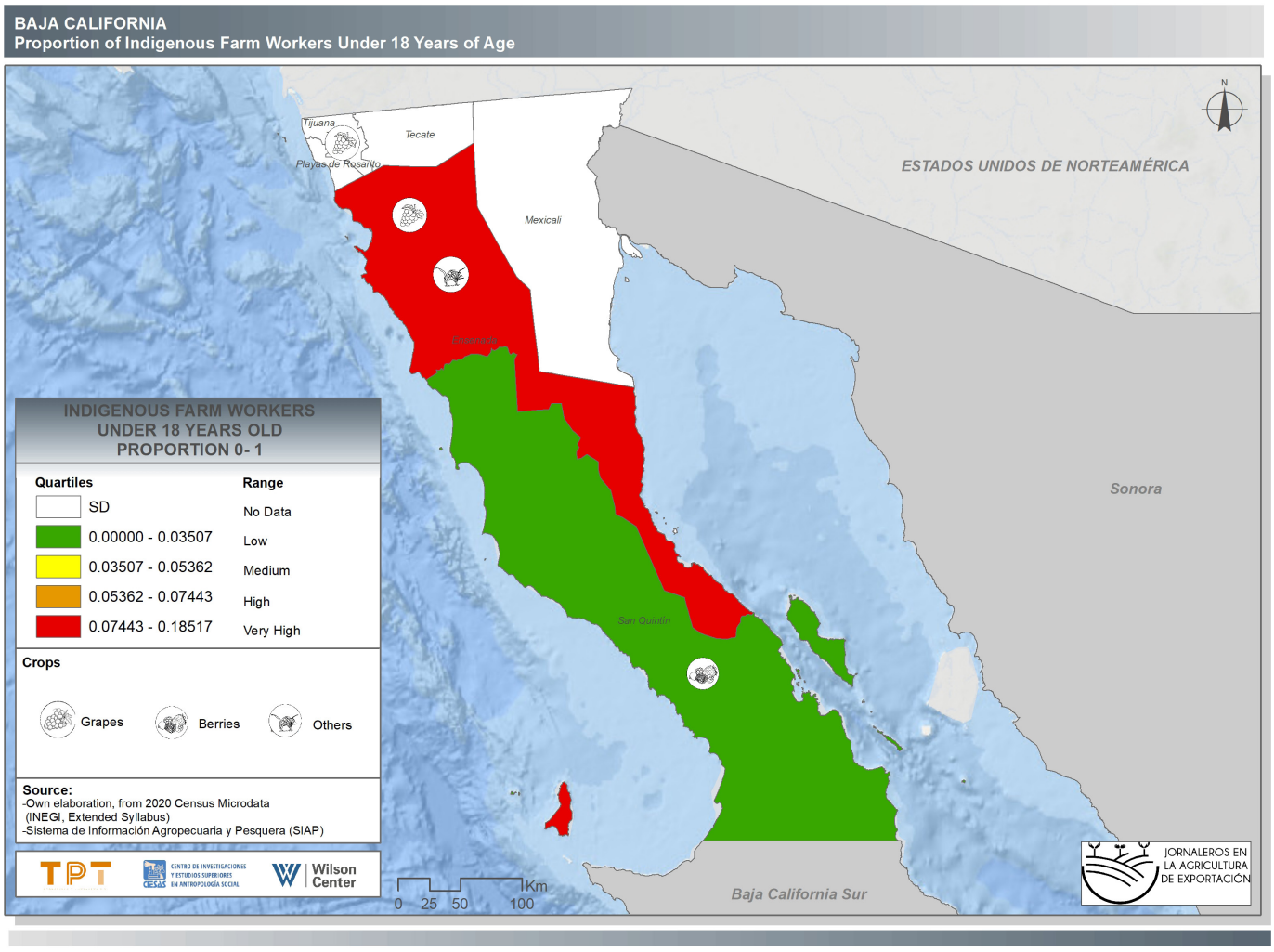
There was constant abuse from the overseers and bosses in the 1980s and 1990s: "The overseers' treatment of the workers was brutal. I mean, the overseers had to be sometimes even from the same town, but [they were] really hard on their people" (Interview with L.I., 29 November 2018). A delay in paying wages was a common form of abuse: payment came as much as two weeks late. At that time child labor was the rule in the fields. The poverty of rural families and the boom in industrial agriculture sent thousands of boys and girls into wage work (Sánchez, 2000; López, 2002; Becerra et al., 2008). Although children's labor has traditionally been part of the rural family economy, the conditions are different in commercial agriculture, where it means long hours of physically grueling labor and contact with agricultural chemicals. For this reason a reform to federal labor law was enacted on June 12, 2015, declaring agricultural labor to be dangerous and prohibiting the employment of minors. Since that time,

companies have striven to eradicate child labor, and most of them have received certification that they are free of its use (Distintivo Empresa Agrícola Libre de Trabajo Infantil, DEALTI). However, until a few years ago, it was common to see boys and girls working in the fields. The diminution of child labor has taken place statewide, with the exception of Ensenada. According to SIVIL, there is a relatively high percentage of underage workers in Ensenada. This is even higher for the percentage of indigenous workers who are underage. In this respect, the percentage is within Mexico's highest quartile. In San Quintín, on the contrary, the proportion of child workers is among the lowest in Mexico.

Map 3. Proportion of Underage Workers per Municipality.



Map 4. Proportion of Underage Indigenous Workers per Municipality.



López (2002) discusses the prevalence of child labor the San Quintín Valley at the end of the 1990s, noting that children began to work at field labor and in the harvest at the age of five. She mentions that some employers even conditioned the employment of families on the requirement that children work. “There are known cases,” she writes, “where single mothers force their children to work, because in order to acquire and maintain the right to live in an encampment, at least one relative of the worker must also work in the fields” (2002, p. 8). Sánchez (2000) writes that “one out of five workers was between eight and 14 years old, meaning that in the high season there were around four thousand minors in those fields” (p. 10). These authors explain that the persistence of child labor was a consequence of the poverty of farm worker families and the lack of educational opportunities in the region. It had clear effects on the health of boys and girls, from gastrointestinal illness to deaths from poisoning and in transportation accidents. The presence of child labor in the valley is corroborated in workers’ accounts, although the differences in their experiences and in the way they are remembered testifies to the complexity of the topic and the importance of context.

Until 20 years ago, one of the large companies in the San Quintín Valley had a work team made up entirely of children. This company had a childcare center and an elementary school in its encampment, but in the afternoons or during vacations the children accompanied their parents to the fields and were paid to do some of the work. A 31-year-old engineer who grew up in the encampment and began working at the age of ten recalls:

> At that time it was like that. During vacations [we worked] all day, from the time we got up. What did we do? I remember once, here in the company, they formed a team, all children, to take us supposedly to work in the field. They had us gathering plastic there . . . but it was a team of children only, maybe 30 or 40, all boys. All boys, no girls, just boys. "Oh, so you want to work, so you're not here all day." "Sure." In addition, at that time they gave us a little money. Yes, it was essentially the vacation, to go work. We expected nothing more of vacation than to go work, we said, for them to take us there. . . . They took us in a truck, like the adults, and they took us like . . . they didn't put us together with the adults to work, but yes it was "Now you're going to put down plastic, you're going to pick up debris, or you're going to rake that area." They took us there for the whole day, they tired us out so we got home and just took a bath and went to sleep. (Interview with engineer Francisco, 24 June 2021).

Francisco recounts the experience of his childhood in the fields as a time of education and fun. As he got older it became a strategy for continuing his high school education. It is important to emphasize that Francisco was not forced to work and that he grew up in an encampment that included a school, which allowed him to continue his studies. His income was not essential to the household: his mother worked in packing and his father with agricultural machinery.

Martín, now 34 years old, is another worker who was also part of the company's children's team. He began work at the age of nine, and remembers that although the children did simple tasks, they ended up working eight-hour days and they were paid less than adults: adults earned 490 pesos a week, but the children earned 100 pesos less. Since he "wanted to earn the same as the adults," at the age of nine he decided he would also work weekends and vacations, not on the children's team, but with the adults: "From there I went to the adult team, but the work was harder. I was encouraged because there were others my age. . . . I earned the same [as the adults], but yes, we didn't produce as much as they did" (Interview with Martín, 23 June 2021).

Francisco's and Martin's childhood work experience was always combined with school. They both have positive memories of working and of waiting for vacations to work. However, this is not the case for everyone: there are stories that describe this experience as difficult, that recognize abuse and exploitation. Lucia, a 43-year-old woman from Juxtlahuaca, Oaxaca, worked in the fields from the age of eight. With the family's few options to obtain income in Oaxaca, her mother decided to migrate with Lucía and her five younger children. "My mother had to take us from Oaxaca to come here," she says,

"more or less to have a good life, you could say. It's that we never went back." Lucia's two older sisters were already in San Quintín, and although they were only a couple of years older, they were already working in the fields with aunts and uncles on their father's side. At that time, Lucía became one of her family's sources of economic support. "I had to work to support my little brothers and sisters," she says. She and her older sisters were responsible for the family expenses: "We had to work in the fields, every day, rain or shine."

Lucía's first job was in the tomato fields, where she learned to use a hoe to weed the furrows. Later she harvested different vegetables. Sometimes she went as far as El Rosario, the furthest part of the San Quintín Valley,[21] to pick Anaheim chiles, bell peppers, and tomatillos, which were the easiest. The workers had to carry two white buckets, generally 19 liters. At that time they had to empty their buckets into a tub. Since she was very small, she could not reach the tub, and she describes how this made her angry, because she wanted to empty her buckets quickly in order to earn more. In addition to these crops, she worked in others that were very heavy, like eggplant, onions, Brussels sprouts, and potatoes. Lucía recognizes that her childhood was very difficult:

> . . . it was very difficult, a very rough childhood, very difficult, that now I would not wish on any child. They practically steal your childhood, they take it away from you, they force you to grow up, because you have to grow up early. Because of that, when I was very small I started to see life just as it is, a very cruel reality, a very difficult reality, to earn my keep, to work hard. My parents always told me: "Work and work hard, if you want something, work to get it honestly, because I don't want to find out tomorrow that you're going around stealing, work so you know how hard it is to work and earn things by the sweat of your brow." But yes, it was a very cruel childhood, you have to work and take care of yourself, learn on your own how to defend yourself, because you're a girl, you're on the territory of people you don't know, it's a terrible danger. (Interview with Lucía, 13 June 2021).

Lucía says that fortunately she experienced no violence in the fields because she was always surrounded by her family. Teresa, another farm worker from Oaxaca, who also began working at the age of eight and is now 43, likewise says that she did not experience any sexual abuse or violence in the fields because she too was with her relatives. However, she recalls several times when she saw a man abusing the girls who worked there:

> There was a person . . . When you come from the south, we didn't eat mayonnaise, or Bimbo bread, or jelly, or Coke, or flour, or any of that. We had never seen it. There was a person who brought a loaf of Bimbo bread, he brought the bread, the jelly, the peanut butter. He spread

21 The trip from Lázaro Cárdenas to El Rosario is currently an hour by car. At that time it must have taken longer, as suggested by the discussion of transportation below.

> it on the slices of bread and gave it to the girls, and I saw that he was touching the girls in exchange for the bread. The girls were experiencing abuse. (Interview with Teresa, 18 June 2021).

Both Teresa and Lucía note that they did not experience violence or abuse, because they were always surrounded by family, but their stories reveal the vulnerability of girls in the fields. Although there are differences in the experience of child labor, the risks and exploitation are clear. For example, Lucía attributes her short stature to the weight of the buckets of vegetables she carried every day to the tubs. There is also the testimony of Lourdes, an engineer who worked in the fields from the age of 12. In spite of having positive memories, she notes that there were accidents involving children. She herself admits that times were different, that school was pushed aside, and that work became the priority. Even with her experience in the field, Lourdes recognizes that child labor is exploitation, especially at early ages like five or six.

Child labor was not the only problem. In addition to the lack of regulation and bad working conditions was the problem of transportation. The large number of accidents resulting from transportation of workers in vans without safety features led to the enactment of a 1998 Baja California law regulating such transportation, which required "the use of licensed, insured buses to adhere to safety regulations" (Zlolniski, 2016, p. 104). However, according to various accounts obtained in field work, the problems with transportation were much more than vans without safety features: workers are sometimes even transported in the same tubs that were used to transport produce after it was picked:

> . . . We're going to load a tub. So it's loaded on the bed of a truck, tied down with metal bands, and people get on there, right? And off they go, with people sitting like that. And one was very disobedient because he was sitting on the edge: "Hey, don't sit on the edge, sit down below!" But how are people going to sit [there]? (Interview with Zacarías, 12 June 2021).

As Zacarías explains, a fiberglass tub for collecting produce was loaded onto a trailer. The workers being transported to the fields had to ride inside the tub. In many cases the trucks were full of workers, and the trip could last as long as an hour or more. Apart from the risk in this type of transportation, the workers were exposed to the elements. They arrived at a meeting point before dawn in order to begin work early in the morning, and along the way they were exposed to the cold, the fog, and the mud. From the age of eight, Lucía was taken to work in one of these tubs:

> I remember that my mother woke us up at three in the morning, seven days a week, to put on our pants, our little skirt, our scarves, and at four or four thirty you had to be waiting at the place where you had to get in the tub. All of us went like animals in the tub, there was no bus, there was nothing. So we traveled on the highway through the rain, the wind, the cold at that

hour. . . (Interview with Lucía, 13 June 2021).

Nowadays, this transportation of workers in tubs is mentioned only as a memory, to compare how things have gotten better. However, implementing the use of buses was not an immediate solution, and there are still arguments today about the transportation of workers in the valley. After this change, in the 1990s, there were still irregularities in the number of people who were transported in buses. Zacarías worked for five years during this time as a driver for a large vegetable company. His job was to transport workers from one neighborhood to the company's fields, a distance of about 35 kilometers. He sometimes drove more than a hundred workers in a bus designed for a maximum of 70 people "to move more people. . . . The more workers there are, the faster the work gets done" (Interview with Zacarías, 12 June 2021).

Zacarías contrasts this situation with the present, especially with the pandemic, because some companies have implemented physical distancing measures to maintain space between passengers. He says that nowadays there is a lot of transportation and that the companies hire buses. The 1988 law regarding transportation of farm workers was a watershed moment, not only because it sought regulation and safety features, but also because it gave rise to a new business for workers' associations and private companies that provide transportation, which led to subcontracting by agricultural companies (Zlolniski, 2016).

Workers also describe problems of low wages and workdays that exceeded eight hours. The wages they received were generally in one of two forms: payment per day or payment by the amount harvested. Payment by day was for performing specified tasks during a set workday. "By day you have to be there the whole day, eight, nine, twelve hours," explains Lucía (Interview with Lucía, 13 June 2021). The work done under this payment system includes weeding, removing leaves, removing the first fruits,[22] and tying and staking plants.[23] These were, and still are, activities carried out before the harvest. Marcos, a 63-year-old worker for a large company that grows strawberries and vegetables, says that in the late 1970s, field workers earned around 22 pesos.[24] At that time he worked as an *apuntador*[25] and had a wage of 35 pesos with hours that ranged from eight to ten hours.

The other labor system is piecework (*destajo*), in which compensation depends on the worker's productivity. This type of hiring takes place during the harvest season and varies according to the fruit or vegetable crop. Many workers prefer this system because it provides them with a better wage. There are even workers who are known as "champions," because they earn up to five to eight thousand pesos

22 The first fruits are removed so that the plant produces more.

23 Plants in the greenhouses are staked so they grow vertically.

24 According to data from the National Commission on the Minimum Wage, the average national daily minimum wage in 1975 was 55.24 pesos and in 1979 was 119.78 pesos. See http://www.conasami.gob.mx/pdf/salario_minimo/sal_min_gral_prom.pdf

25 An *apuntador* keeps a register of workers' production in the fields, maintaining accounts of the amount harvested by bucket, crate, or pound, and calculating the corresponding payment.

a week, substantially above average for the harvest. However, there are also those who for reasons of age or health can no longer work in this way: they themselves recognize that they "don't perform." The disadvantage of this system is that it is temporary work only during the harvest season. For this reason, some workers follow the harvest to different fields or go to the U.S. to do seasonal work, whose implications we consider below.

Another labor system is by task, where the worker has to do a certain kind of work in a specific number of rows. Lucía says that when she worked in the field as a girl she had to do two and a half tasks a day, which meant working fifteen 80- to 100-meter rows. The main activity was weeding with a hoe, which she liked because she could do it quickly and finish her day at noon. Under this system workers are paid a certain amount for each task, or they are given a certain number of tasks they have to complete in order to earn their daily wage. For example, a current temporary worker for a large company explains that at the end of the strawberry harvest, they are put to work removing the irrigation hoses and plastic from the furrows. At first they did this work by the task, and were paid a day's wage, approximately 285[26] pesos, for 18 rows. Although they finished work at noon, he described it as very hard work. When payment for the same work was changed to a piece rate, at 20 pesos a row, this worker did 27 to 30 rows a day, earning 540 pesos and finishing at 11 a.m. The main problem with this system is that workers can finish early, but also their workday sometimes exceeds eight hours. One of the social activists recalls that when he worked in the fields, the tasks assigned were so grueling that instead of finishing early, they worked longer hours, for the same wage as if they had been paid by the day. When they were paid by the task, he says, they started work at 6 a.m. and did not finish until 6 or 7 p.m.:

> At that time we started work at six in the morning and didn't finish until six or seven in the evening. The tomato picking [was] all day and they sometimes gave us tasks. We had to do two or three tasks, but until sundown. And, um, it's good that our pay [was] a little better, great, no? You work hard and you also get paid well, but no, it was pitiful what we earned. (Interview with N.Z., 19 June 2021).

The early 2000s were a watershed in agricultural organization and structure. The water shortage and infestations displaced traditional open-air agriculture in favor of a protected, high-tech agriculture that intensified production, was more independent of the seasons, and required a larger labor force. The changes in this period and the growing importance of agriculture in the valley made it necessary for agricultural producers to create a system of representation. The Baja California Agricultural Council (Consejo Agrícola de Baja California, CABC) was founded in 2001 as an association of some of the region's largest producers, to represent their interests with the government. Since its creation it has worked to meet the requirements of the international market and to address some of the problems in

26 According to the worker, this amount included benefits; this point is discussed below.

the area, such as water management and labor conditions. The companies of the CABC have taken up the issue of working conditions and implemented programs of social responsibility. The changes, however, have not been immediate or evenly distributed. The workers point out that wages are still low, hours are long, and social security and benefits are still lacking. One worker with experience in green beans, tomatoes, and Brussels sprouts describes how in 2001 she worked in the tomato fields along with one of her sons, who was about nine years old. In order to meet the daily production quota she put the tomatoes in the buckets, and to save time, her son ran to take them to the collection point. At that time the pay was 105 pesos for every 115 buckets of tomatoes. A short time later they began to pay one peso per bucket. The buckets used to pick tomatoes are usually about 19 liters (five gallons).

Wages at this time both by day and by piece were low, not enough to cover basic necessities. One of the activists says that from 2000 to 2010, he and his wife worked on a berry farm. He recalls that the farm increased in size and production, but the wages remained the same: "I remember very well that I worked with my wife, we both worked from dawn to dusk, [but] it wasn't enough. We ended up owing the store every week, it's hard, life was very difficult" (Interview with N.Z., 19 June 2021). Another activist explains that every year wages increased only 50 centavos or a peso, "so we went practically 10 years with the same wage" (Interview with O.Z., 19 June 2021). Before 2015, the average daily wage in the valley was 110 pesos and payment for a crate of strawberries was 10 pesos. Some activists we interviewed told us of their personal experience being required to work seven days a week during the harvest or risk having their wages cut.

> Your rights don't exist there; you don't deserve any rest. I think they didn't consider us to be more than animals there. . . . those animals we called work animals. I think they didn't consider us more than those animals. So, the truth is sometimes when we tried to defend our rights, well no: "Alright, you don't want to work, there's the way out, get going, there are plenty of people." (Interview with N.Z., 19 June 2021).

There were no benefits, they say: no year-end bonus, no profit-sharing, no social security. One of them explained that supervisory workers received a 500-peso year-end bonus and those who worked 365 days a year received 300 pesos. Workers were not provided with tools: they had to buy whatever they needed. They had no social security health care if they got sick.

> We got sick, we had to figure out how to get better. None of this "you're sick, let's go to the [social security] clinic," or that you had social security, none of that, there was no social security. When the year ended, when did they talk to you about the bonus? No, we didn't know what the bonus was. (Interview with N.Z., 19 June 2021).

Apart from the situation in the fields, workers were also suffering from a lack of basic housing services, especially water, which became one of the major problems in the region. These conditions and the complete lack of a government response to workers' demands led to the ignition of the agricultural workers' movement, at 3 a.m. on March 27, 2015. One of the organizers recalls:

> As a result of the same violation of rights in 2014, the workers began to seek the intervention of the authorities for a decent wage and benefits. The lack of support led to the eruption of the agricultural workers' movement on March 17 [2015]. (Field Notes, 15 June 2021).

Previous decades had already seen strikes and labor actions that demanded improved conditions, among them a 1988 strike in the San Simón field, supported by the Central Independiente de Obreros Agrícolas y Campesinos (CIOAC),[27] that not only demanded a wage increase and registration of the workers with IMSS, but also access to drinking water in the fields, where the workers had been drinking irrigation water from the furrows.[28] This situation has changed, and nowadays there are thermoses and tanks with drinking water for workers in the fields, and also in the bathrooms.[29] Another protest was in 1999, at the Rancho ABC, in which approximately 300 workers participated, that was prompted by a four-week delay in payment (Cornejo, 1999). However, these protests have not had the impact of the 2015 movement, which blocked the Transpeninsular Highway, cutting the region off, and which stopped production during the harvest, causing heavy losses to the companies.[30] The greatest impact was to the strawberry crop, which did not begin to recover until 2017, as seen in Figure 3.

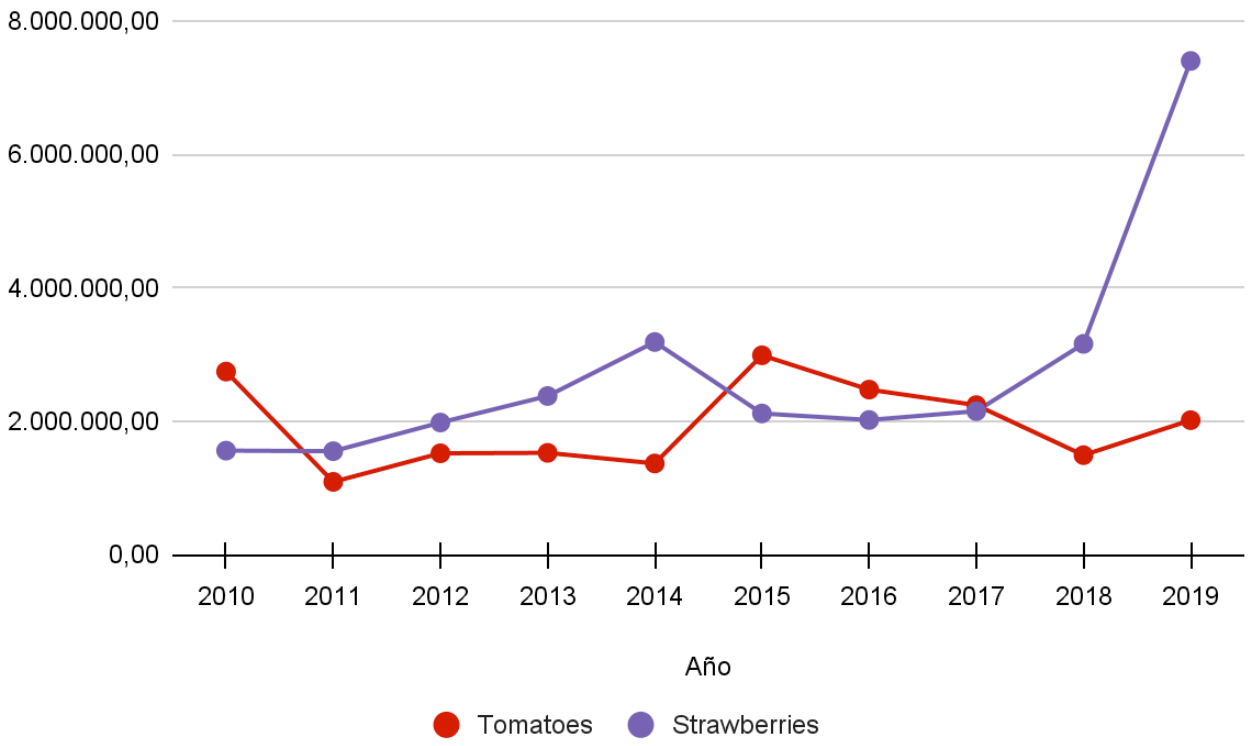
27 Interview with N.A., 15 June 2021.

28 Laura Velasco, "Migración y fronteras culturales: la contienda por la identidad en una región transnacional." Paper presented in the seminar "Regiones transnacionales: fronteras y espacios discontinuos," Cátedra de Estudios Regionales Guillermo de la Peña, 26 November 2018.

29 It should be noted that although there are now portable toilets and drinking water in the fields, the dynamic of piecework is to work as quickly as possible to earn as much as possible. Many workers do not stop until lunchtime or the end of the working day, not even to drink water or go to the bathroom.

30 The nature, goals and consequences of the 2015 labor movement are and will continue to be debated in Baja California. According to other sources, the movement was triggered by outside activists, with external financing, who were not aware of the real working conditions in the area.

Figure 3. Value of the Strawberry and Tomato Crops in the San Quintín Valley, Baja California, 2010-19 (thousands of pesos)



* Value of production expressed in real pesos based on the National Consumer Price Index (Índice Nacional de Precios al Consumidor), base year 2018.
Source: Authors' elaboration with data from the Agriculture and Fishery Information Service (Servicio de Información Agroalimentaria y Pesquera, SIAP) via SIACON.

This impact was very clear in the case of Mario, the small producer who worked as a grower for a large company, whose story we have described. After the recession of 2011-12, Mario invested all his capital in eight hectares of strawberries. He was in his second year of growing strawberries when the strike broke out in San Quintín in 2015:

> They closed the highways and everything; we lost the entire investment there. We lost all the investment; the picking was just beginning. So we were left a little in debt . . . and we decided not to grow strawberries again. . . . In agriculture nothing is written. . . . If there's a social movement like that and you have your whole investment there and they stop you, they close the highways or something, even the berries are subject to that kind of problem. . . . No, not

> just me, but almost the majority of strawberry growers here in the valley, all the strawberries were lost. It's a huge amount of money; it had a big impact. It's people who had a hundred, two hundred hectares. I had eight, but it was my entire investment and no cash. (Interview with Mario, 25 June 2021).

Mario explains that with the 15-day strike it was impossible to save the strawberries, because the plants fill with berries and then wither. The window for marketing them is also limited. He tried to save them, but the fruit was no longer of export quality. Some producers sold their strawberries in the domestic market, but Mario decided it would be better not to, that the domestic market was probably flooded that year with all of the strawberries the San Quintín producers were trying to save. It took a long time for strawberry prices to recover, and the producers were uncertain whether to grow them again, wondering what they would do if something similar happened again. Mario decided to grow blueberries, and all of his earnings went to pay off his debt. He did not recover until 2017.

The San Quintín strike became an emblematic labor struggle, and had a major media impact both nationally and internationally. The main demands of the movement, organized by the Alliance of National, State, and Municipal Organizations for Social Justice, which later became a national labor union, were:

> an increase in daily wages from 155 to 300 pesos, the registration of workers in social security, and end to sexual harassment, respect for seniority rights, payment for vacations, Sundays, maternity leave, holidays, and overtime, cancellation of existing contracts. . . . and the right to freely organize a union (Espinosa et al., 2017, pp. 35-6).

Negotiation committees were formed, including representatives of the workers, the three levels of government, and the companies. A March 27, 2015 article in the newspaper Milenio reported that the companies proposed a 10% wage hike, which they later increased to 15%, still short of the 300 pesos demanded by the workers (Domínguez, 2015a). The workers also demanded increased piece rates: "30 pesos per crate of strawberries, 17 for a container of berries, 8 for a bucket of tomatoes, 15 for a bucket of chiles, 5 for a pound of peas, 12 for a bucket of Brussels sprouts, 10 for a sack of onions, and 6 for a bucket of cucumbers" (Domínguez, 2015b). The companies would not agree, but they established "a base daily wage of 150, 165, or 180 pesos, according to the size of the company, which would be categorized according to their productive activity, their economic capacity, the technology they used, the area they cultivated, and the number of workers they employed." The workers also obtained a commitment from the companies to register all of them with IMSS and to supervise and monitor working conditions (Castillo, 2015).

Although these agreements were an important improvement, one of the major problems was that the wage increase was for total or comprehensive compensation, including the value of benefits,

which should have been considered separately. One of the workers interviewed said that daily wages are now 285 pesos, but that that amount includes benefits—the daily wage is actually 250 pesos. The real base wage is thus less than what is reported. This problem is yet to be resolved: like many in the valley, this worker says that "the comprehensive wage screwed everything up" (Interview with Irasema, 16 June 2021).

It is also important to highlight that a little more than six years after the strike, many of the agreements demanded of the three levels of government have not been fulfilled. According to two workers who generally work for small producers on vegetable farms, after the 2015 strike wages were regularized only for certain crops, such as berries and strawberries, which were produced for "large companies." Vegetables grown in the valley by small producers known as *rancheros* were not included in the increase in piecework wages, even though they were exported: Every pea and green bean goes to the United States; even the squash goes to the United States. So why aren't they recognizing it? . . . Why haven't they recognized it? It's not in their interest (Interview with Gabriel, 25 June 2021).

Although much is still owed the workers, the March 17 strike allowed for negotiation of some of the workers' conditions, and it focused attention on San Quintín and its urgent social needs. For this reason, the strike was a watershed in the history of the valley and the lives of its workers. Among the changes, the large companies that were already working on the issue of social responsibility strengthened their efforts. The vice president of one of these companies says that although they already had some social programs, it was in 2015 that they began to work with standards of worker welfare and the fair trade program. Current conditions are clearly very different from those of decades past—a change that is recognized by the workers themselves. One of the most important changes has been with child labor, which has been practically eradicated, although we did find evidence that *rancheros* continue the occasional hiring of minors. Although this is an important change for the community, there are also fine points with respect to its definition and application. The prohibition in the agricultural sector is currently of minors younger than 18, since it is defined as a risky occupation. There are various arguments that this is problematic. Young people who wanted to finish high school or college used to use agricultural work as a strategy for obtaining the necessary economic resources. This was the case with some of the people we spoke with in the field: they worked for agricultural companies when they were children and continue to do so now in various types of jobs.

One of these former child laborers is Mariela, 27 years old, who began working at 16 in order to be able to go to school. She was the *bañera* in a field, the person who makes sure the workers carry out the protocols of hygiene and safety in the bathroom facilities. "You're in charge of making sure it's clean, you give out toilet paper, you make sure people use sanitizer, that they disinfect themselves, all of that. That's what it means to be a *bañera*, to make sure . . . that there is hygiene, that they wash their hands so they don't contaminate the harvest" (Interview with Mariela, 19 June 2021). Mariela worked for six years as a *bañera*. Her father got her the job so she could pay for school, she says: "I was in school, so there was an opportunity, 'you're going to work because you have to pay for school.' I went

to work, and that's how I finished high school" (Interview with Mariela, 19 June 2021). In addition to working as a *bañera*, in some seasons she picked strawberries and tomatoes. Since she had to go to school, she worked only weekends and on days when there were no classes: "At that time I went only on Saturdays and Sundays. Just those days, or when there were no classes, a Monday or Tuesday. So we went to work to help, for school. . . . But not every day, because we went to school. So that's how we were able to finish high school (Interview with Mariela, 19 June 2021). Mariela still works for the same company; now she is in charge of making and serving coffee to the workers every morning. Her goal now is to continue working to save money and go to college.

Another problem related to the prohibition of child labor affects those minors who already have children. Various social activists commented that because of their lack of employment options and their need for income, minors sometimes get involved in organized crime. One former farm worker who now works in a community organization says: "Many other minors are now parents and need income to support their household. Now that they no longer have that possibility, gangs, drugs, and alcoholism have become a problem" (Field Notes, 16 June 2021).

In addition to these situations, there are continued indications of the violation of labor rights and unmet commitments. Among these are the problem of the calculation of wages that includes the value of benefits, workers being unenrolled from social security, and the lack of independent unions. Although compensation has risen since 2015, workers still say their wages are not enough to pay for their necessities. However, the major problem in the valley are the differences in conditions between types of workers, according to the type of producer they work for. The large companies hire workers with formal contracts and the benefits required by law. As we have described, however, there are also smaller companies and producers known as *rancheros* who hire people by the day. This type of hiring is based on an oral agreement and comes with no benefits. It is these workers who are the most vulnerable. For this reason it is necessary to analyze the differences in working conditions among different types of workers, as we do in the next section.

IV. A Segmented Labor Force

Studies of agricultural labor in Mexico have shown the existence of a labor force segmented by sex, age, and ethnicity. This segmentation has been seen especially in studies conducted in 1995-2013 in Sinaloa (Escobar & Martínez, 2021). Authors including Lara (1995), Becerra et al. (2007), and Revilla and Ortiz (2013) report that children, indigenous workers, and women are tasked with the lowest-paid, most precarious and dangerous occupations, while natives to the valley work indoors in packing or as supervisors. This has also been true in the San Quintín Valley. In this section we analyze whether labor force segmentation persists and in what form. We first examine the division in the labor force, then analyze the conditions of temporary workers, and conclude with an assessment of the differences between the formal and informal labor markets.

In her study of social mobility, Niño (2006) notes that "it is the indigenous population that carries out the most arduous and lowest-paid tasks, while other groups, like the Sinaloans, are hired for more skilled activities, such as packing produce." This division of labor is also present in the memories of people who grew up and worked in the valley in previous decades. The engineer Lourdes, who grew up in an encampment of a large company in the region, says that the camps were previously divided between field workers and packing workers. In her words "there were levels," and she now jokes with her coworkers who grew up in the packing camp, telling them, "There were levels, and you were from the upper one." She explains that the difference between the camps was clearly visible in the materials used in construction of the housing: field workers' housing was made out of sheet metal and packing workers' housing out of bricks and mortar. These differences were based on the idea that certain activities required specialization: packing is considered more skilled than field work.

Barrón (1994) shows that segmentation is also expressed in a division of labor between men and women. Women were assigned to activities considered "ideal" for them because of the care they required, for example, the "selection, packing, picking strawberries and flowers, the pollination of melons" (p. 282). Men, on the other hand, were the only ones with access to more general or better-paid jobs, such as fumigators, drivers, machine operators, overseers, supervisors, and engineers. Lourdes, the engineer, also notes this phenomenon, mentioning a change in recent years in opportunities for women: "previously only men had higher-level jobs" (Interview with Lourdes, 24 June 2020). Based on her personal experience, as someone who grew up in one of the encampments as a field worker but then had an opportunity to go to school, she emphasizes that nowadays there are more women in a wider variety of jobs. This can also be seen in the case of Teresa, an indigenous woman who for many years was overseer in a company producing seeds.

More recently, Espinosa et al. (2017) have shown that segmentation of workers persists according to origin, sex, and age. Their analysis shows that the groups most affected are indigenous people,

women, those under 18, older adults, and recently arrived migrant workers. Information collected in the field confirms the greater vulnerability of these groups as the result of certain social conditions, including the double or triple workday for women, the lack of retirement benefits for older adults who in some cases can no longer work and in others cannot find formal employment because of their age, the prohibition of child labor for young people in need of income, the lack of support networks for recently arrived migrants, and the lack of interpretation and translation in companies and institutions for indigenous people who do not speak Spanish. These conditions combine with the work environment to make some groups more vulnerable than others. However, the major form of segmentation found in our study is in the different arrangements under which workers are hired, and these depend on the nature of the company they work for.

The San Quintín Valley is distinguished by its high-technology agriculture oriented toward fruits and vegetables for export. This type of agriculture has spurred the growth of the sector in recent decades, and with it, the need for labor. Employment data for rural areas show that the labor force participation rates in these areas of Baja California are higher than the 63.34% in Mexicali and 64.10% in Ensenada. These data reflect the strength of the labor market in San Quintín and its employment of a larger number of workers than the other two municipalities. Most of the employed population works in the primary sector (56.40%), followed by the tertiary sector (32.66%), which corroborates the predominance of the agricultural sector in economic activity and its high rate of participation.

Table 9. Employed Population and Distribution by Economic Sector in the San Quintín Valley, Baja California, 2020

Economic Sector	**%**
Employed population aged 12 or older	51,193
Agriculture, livestock, forestry, fishing, hunting	56.40
Mining, industry, manufacturing, electricity, water*	4.81
Construction*	5.08
Commerce	13.91
Transportation, communication, professional, financial, social, government, and other services	18.75
Not specified*	1.04
TOTAL	**99.99**

Source: Authors' elaboration with data from the 2020 Census of Population and Housing, INEGI.
*Estimated data with low to moderate accuracy.

The data by occupational division show that 40.9% of the employed population works in agriculture, livestock, forestry, fishing, and hunting. In the state's other two agricultural municipalities this percentage is much less and those of the other sectors are higher. It is seen clearly in the number of professionals and technical workers, with a difference of 10 percentage points relative to the other two municipalities.

Table 10. Employed Population and Distribution by Occupational Division[1] in Agricultural Valley Municipalities in Baja California, 2020

Occupational Division	Mexicali	Ensenada	San Quintín*
Employed population aged 12 or over	**475,210**	**200,548**	**51,193**
Directors, managers, and public officials	4.17	3.52	1.36
Professionals and technical workers	23.36	20.26	9.69
Auxiliary workers in administration	6.26	5.96	5.36
Merchants, sales personnel, sales agents	12.10	12.72	7.60
Personal services and security workers	9.64	11.17	7.75
Workers in Agriculture, livestock, forestry, hunting, and fishing	5.01	6.53	40.93
Artisanal, construction, and workers in other trades	9.50	11.88	8.27
Industrial machine operators, assemblers, drivers, and transportation drivers	15.48	11.66	3.63
Laborers and support workers	11.44	13.42	15.01
Not specified	3.02	2.88	0.41

Source: Authors' elaboration with data from the 2020 Census of Population and Housing, INEGI.
[1] Corresponding to the first level in the Sistema Nacional de Clasificación de Ocupaciones (SINCO, 2019).
* Estimated data with low to moderate accuracy.

This overview shows the importance of the state's agricultural sector, especially the agricultural labor market in the valley. Although it is a large part of the workforce focused on export agriculture, conditions are not the same for all of its workers. As already noted, there are two models of agricultural production in the valley. The most dominant is the production by the region's large and medium-sized companies, including the growers that produce for them, of fruits and vegetables for export. These companies may represent national or multinational capital, they usually operate on contract, and they tend to belong to the Agricultural Council of Baja California (CABC). In addition, there are small farmers known as *rancheros*, who produce for both national and international markets, but lack the economic and technological capacities of the larger producers.

These modalities of production have structured and organized agricultural labor in the valley. The large and medium-sized companies that belong to the CABC are distinguished by formal hiring with the benefits prescribed by law. The companies hire workers directly, with a contract establishing workers' rights. There is a collective bargaining agreement and union affiliation. However, one of the

problems described by social activists is that there is no freedom of association. Mexico addressed this problem with a broad reform to federal labor law in 2019, which was closely tied to the negotiation of the United States-Mexico-Canada Agreement (USMCA), which included working conditions and freedom of association as criteria for keeping the border open to exports. This was the first time these conditions were included in North America in a way that international trade depended on them. Although they were part of previous trade agreements, their enforcement was not binding.

As of July 2021, only one of the three major companies in the coastal region had completed all of the steps laid out in the labor reform for the workers to vote by secret ballot whether to ratify the current collective bargaining agreement and the union that represents them. The workers for that company voted to ratify the union and the agreement—unlike the workers for General Motors in Silao, who voted to reject their agreement. A second company had begun preparations for the vote to take place in September 2021. According to the public officials interviewed, union leaders understood that with the changes in the law, they would have to put into practice effective mechanisms of representation and resolution of workers' problems, and monitor the enforcement of the contract and all of its provisions, including housing conditions and social programs paid for under the contract. These same public officials indicated that this change was, in reality, favorable to the company, since the union now became the main guarantor of worker satisfaction, which would avoid conflict. One official showed us the text messages in which workers made complaints, the follow-up by their representatives in the field or in the packing facility, and their solution or referral to high-ranking company officials.

The most visible evidence of labor force segmentation is seen in the "pay and go" ("*saliendo y pagando*") workers. The *rancheros* use contractors and oral agreements; their workers lack the protection of written contracts. They not only have no benefits, but they are also paid in cash at the end of the day, and at that moment the boss's obligations to them are over. Although they return home with their day's earnings, they have no assurance of work the next day.

Every morning dozens of workers go to the park in the Colonia Lázaro Cárdenas in search of the best job options and wages. In the oral negotiations they are told only how much they will be paid for the day, the crop on which they will be working, the location of the field, and the possible hours. The workers begin to arrive a few at a time between three and four in the morning, and by 5 a.m. the number reaches a hundred or so. Buses are parked nearby, and the drivers, who are in many cases the contractors, hope to convince enough workers to cover their needs. They start to call out offers for strawberries, onions, green beans, or berries: "Let's go! Let's go!", "250!", "3.50 a pound!", "strawberries!", "Not that hard, 22 a crate!" The workers approach the buses, consider the proposals, and get on whichever bus they think is best. Others wait for a contractor they know, to be taken to a company they have agreed upon. The offering varies; there are days with many choices and others in which "there's no work." In these cases the workers hurriedly run from bus to bus to consider the options and go with the highest bidder. There are men and women in the park, young and old, but we also noted a group of children and adolescents

looking for work. The crops and the specific activities are varied: among them we hear strawberries, blackberries, onions, green beans, and cucumbers. Some of the workers have brought their own tools: hoes, shears, gloves, and buckets.

Some of the buses are from the *ranchos* looking for workers, but others are those of independent labor contractors. The manager of one *rancho* that hires workers in the park explained to us that they contract with a bus company, and that it is the drivers who recruit workers. In this way the *rancho* avoids the task of recruiting workers, and the bus company gets a commission for doing so. A small producer in the valley also explained that when they need workers he gets in touch with a friend of his who is a labor contractor for different *ranchos*. This friend then gets him the workers, because he not only knows them, but also knows which "perform" better in certain activities or crops: "He knows which people work on each thing. 'You know what? Use this one when you're going to plant onions and use that one when you're going to harvest.' When I've needed people I've gone to him" (Interview with Bernardo, 13 June 2021). One of the best-known community leaders in the valley says this system thrives because the government authorities have not worked on regulating transportation. "The municipality or the state transportation authority, where they issue licenses for buses, rentals, for transporting workers, is busy violating the rights of the workers [by letting them] take workers as if they were human traffickers." He says that in the "pay and go" system "you work, they pay you, and in that daily moment that they pay you, you are losing all of your rights, because you don't have the right to anything. The boss is getting out of it" (Interview with N.A., 15 June 2021).

There are various people who recognize that this is a growing problem in the San Quintín Valley. An additional problem with this type of hiring is its effect on wages: according to two workers, part of the profits of the contractors and the owners of the buses comes directly out of their pay:

> The boss pays an amount for whoever is going to be in the field. The contractor and the owner of the bus . . . if it's 300 you take 50 . . . if it pays 250 they take 20 or 30, and if the driver get his hands in it he takes another 10, and they're taking it all. . . . The owner of the bus is the one who has the job, he's the one who makes the deal, he says to the boss at the *rancho*, "You know what? You pay me so much for a kilo, a pound of this, and I'm going to pay so much to the people." But they don't take just a little, they take a lot.... (Interview with Ernestina and Gabriel, 25 June 2021).

The buses used in this system are not in the same condition as those used by the companies with formal hiring practices: they are older models with worn interiors. The larger companies are required to keep their buses clean and well-maintained, with daily inspections. Mariela's father works in Camalú, and has been a driver for a large export company for 20 years. His work is limited to driving, with no responsibilities for recruiting or hiring, but he does have to inspect his bus in the morning and afternoon, and "keep his bus clean, make sure it has oil, brake fluid, everything. He has to check everything, he has

to make sure the bus is ok because there are so many people, so many lives" (Interview with Mariela, 19 June 2021). The companies also have regulations for the passengers. We saw the following regulations on the bulletin board of one large company:

> For safety reasons, passengers must wait at designated stops, arrive on time so as not to delay the established schedule, board in an orderly way without pushing, sit in the first available seat and not save seats, be seated (if there are no seats available workers must wait for the next bus), not stand in the aisle, not lean out the windows or play on top of the buses, not eat or drink on the bus, not leave trash on the bus or throw it out the window, not damage the bus, and not get off the bus before it stops (Field notes, 29 June 2021).

This hiring system represents an important difference in working conditions that has an effect on the daily experience of the workers. Workers with formal contracts say that they have year-end and other bonuses, profit-sharing, overtime, vacation, and social security, none of which are enjoyed by "pay and go" workers. Teresa, who now has a formal contract with a small seed company, says that her boss meets with the workers to insist that they register with social security, and even gives them the day off to do so:

> She calls us to a meeting, she tells us "I want you all to use social security, to register your wives, you have no idea how much I pay for it and then you don't go. Take the day off. Go and register. You have the day off so you and your family can go. Go and register. If you don't make it today, don't come in tomorrow either. I want to know that you registered." (Interview with Teresa, 18 June 2021)

This is why Teresa likes the company where she works. She says "it has principles" and that the workers get the benefits required by law: "they pay severance as they should." She also believes they provide work opportunities to groups of people who could not find work elsewhere, including the elderly: "As long as they don't fall off the machine and they can work, bring them." However, she recognizes that the working conditions in this company are different than in other companies in the valley. "Just now [my boss] said to me, 'tell him and him and him that they have profit-sharing.' I said oh, they're going to be very happy because how is it that they have profit-sharing if on another *rancho* they gave them that much in a whole year?" (Interview with Teresa, 18 June 2021). Teresa's surprise at finding out that the workers were receiving profit-sharing is precisely because many companies do not comply with this obligation, and it represents a change from past practice. This is also seen in the testimony of social activists, who consider this change to be one of the major achievements of the 2015 strike:

> We didn't get a year-end bonus, benefits, but our children do. I'm talking about 2016, one of my children came home very happy one afternoon. "Dad, wow, this morning I was really worried, this week I had to make a final payment, I didn't have money for food, but a little while ago I heard someone talking about a check for ten thousand, for eight thousand, for nine thousand. . . . I said to myself, if they gave me a check for eight thousand, that's a lot of money, what would I do with that money. They called me in later and showed me a check for $10,000." He said "Here, dad, it's the check they gave me!" I said "thank God and thank the movements," I said "I didn't get that, but you did." (Interview with N.Z., 19 June 2021).

Among all of their benefits, the most well-known and talked-about among the workers is social security. The importance of this benefit is that it includes health care and sick pay, and the possibility of receiving a pension. This can be seen in the case of Alma, who works in one of the large local companies affiliated with the CABC. Her case is an example of how companies with formal hiring offer security when the unexpected happens, and the difference it makes to a family with the benefits required by law. Alma is 28 years old and originally from San Vicente Camalú. She began casual work in the fields when she was eight or nine years old. She went to school during the week, but worked weekends and vacations as a "pay and go" worker for *rancheros*. Her parents worked full-time for a large company belonging to the CABC, with benefits. Alma wanted to go to college, but when she finished high school her mother became seriously ill with peritonitis and had to stop working. Alma's wages became an important part of the household income. She decided not to go to college, but left her "pay and go" job for a full-time job where her parents worked, and has now been working there for ten years. Her mother's medical expenses, which included four operations, were covered by social security. After she recovered she returned to her job as an *apuntadora* and is still working for the company. Alma's father retired with a pension from social security after meeting the requirements for years worked. Although Alma had to give up her plans for college because of her mother's illness, it is important to note that working for a large company was a strategy to overcome this difficulty and contribute to the income of the household. Thanks to the company's compliance with the benefits requirements, her mother had access to health care, recovered from her illness, and returned to work, and her father was able to retire with a pension. Their story is an example of how access to the benefits required by law affects the lives of workers beyond the conditions of the workplace.

Although the increase in social security registration is undisputable, many say there are still irregularities. One lawyer in the region who specializes in labor issues says that one of the problems for agricultural workers in the valley is irregularities in the accounting of weeks worked for social security purposes. She told us that there are cases where workers intending to retire have reviewed their records and found that in spite of working their entire lives, they have only 250 weeks credited, out of the 1250 needed to retire with a pension. This problem is mainly for older adults, whose age makes it unlikely that they will be able to complete the weeks required, and who were working many years ago.

In her experience, this problem is very common in both large and small companies. Companies enroll employees in social security, but then they cancel their enrollment. When the workers attempt to use their health care benefit, they find that they are not registered. In her words, "they enroll them in the morning and cancel their enrollment in the afternoon," or "they are enrolled for three days and then unenrolled for three days." (Interview with Irasema, 16 June 2021).

According to this lawyer, another strategy employers use to avoid paying for social security is to enroll only a husband when both husband and wife work, telling the husband to register his wife under his social security number, even though if both are working, they each have the right to be registered individually. This is a serious problem, because it means that the women are not accumulating credit for time worked, and it also affects their ability to receive time off for pregnancy or to use IMSS childcare facilities.

Seniority is also an issue that has generated conflict. Various interviewees say that overseers or supervisors make work difficult for those with seniority, increasing their workload or isolating them from their coworkers in order to pressure them to quit and save money for the company. For example, in our field work we had the opportunity to talk with an older worker who had worked his entire life for a large CABC-affiliated company, and had an accident at work. He went to IMSS and received medical attention, but the company put him on sick leave rather than report it as an accident, for which he would have received greater compensation.

These cases are problematic, but the situation is even worse for "pay and go" workers without social security. We also visited a *rancho* employing these workers to produce green beans for export by a foreign company. The field supervisor told us that some workers are hired by the week, which means that they have formal employment with social security, but that the great majority are "pay and go," paid by the day. This company produces crops with short cycles, such as green beans, squash, and onions, and the work is not constant. This is the main argument used to justify hiring workers by the day. According to this supervisor, it would not benefit anyone to have a formal contract, because there would be days in which there would be no work; the company would have to lay workers off, and it would be a lot of paperwork. However, she assured us that if a worker got sick, they would be given a pass so they could go to IMSS, and they would be paid for the day.

This supervisor did not explain whether these were passes, or if these workers were enrolled in social security for this purpose and then unenrolled. In either case, the worker would not receive the other benefits of social security, such as the accumulation of weeks worked, Infonavit mortgage assistance, or childcare. When we asked additional questions, she was emphatic that workers received support for medical issues. She also gave as an example a woman who said she was sick, but when they took her to the IMSS clinic they told her there was nothing wrong with her. The company gave her $3000 pesos for tests at a private clinic, but when they asked her for the results, she did not provide them. For this reason, although the woman still works for the company, if she says she is sick they no longer take her to the clinic and they do not pay her for the day. This story shows that not only do

workers not have true access to social security, but also that the lack of formality can lead to violations of labor rights and abuse of power.

Companies affiliated with the CABC also have certifications and programs for social responsibility. For example, they work with the National Adult Education Institute (Instituto Nacional para la Educación de los Adultos, INEA) on literacy and basic education programs. There are also programs focused on health that include medical exams and information about nutrition. One company developed an app where workers can manage their paychecks, download their contracts, make doctor's appointments, and file work-related complaints. However, the most well-known of the social responsibility programs is Fair Trade,[31] in which small and medium-sized companies as well as some growers participate. The program operates a fund for the development of proposals or products that seek to improve worker welfare, which comes from the payment of "50 cents extra paid by the consumer buying the product" (Field Notes, 29 November 2018). This payment is returned to the *rancho*, where the workers decide how it should be used.

The person responsible for this program in one of the large wholesalers explained to us that the money is managed by a group of workers. It is not administered by the company, but through a legally-constituted association in charge of carrying out the activity funded. There is a group representing all of the workers that develops proposals for projects, a system of delegates from each producer who vote in a general assembly. Among the projects that have been carried out are the distribution of school supplies and scholarships, health fairs, housing improvements, and supplies for water storage facilities.[32]

In addition to these programs of social responsibility, links have been generated between the CABC and the social activists of the region that have been fundamental to the resolution of problems identified by workers. According to one of the most recognized activists in the valley, when a worker comes to him with a problem, he consults with the CABC to find a way to resolve it. The bridge between the two has generated dialog for the resolution of problems and conflicts. One of the council members, for example, told us of a case where workers were not paid. The activists spoke on behalf of the affected workers with the council. The employer responsible claimed cash-flow problems and came to an agreement with them, which he complied with fully.

Other organizations also work on farm worker labor issues, such as the community organization *Naxihi Na Xinxe Na Xihi*,[33] which provides information and advice about labor rights, provides legal assistance, and offers translation services for speakers of indigenous languages. Members of the organization have discovered rights violations and workplace harassment, and have sought dialog with large companies. One case involved an older woman who was a temporary worker. The overseer sent her to work alone, far from the rest of the team. On one occasion, at the end of the day, the bus left

31 https://www.fairtradecertified.org/es

32 The impact of the latter two projects will be addressed in the following section.

33 The name of the organization is in the Mixteco Bajo language; it means "women in defense of women."

without her. Although the others told the overseer that she was not on the bus, he paid no attention and started off. The woman went to the organization to complain, and it brought the matter to the company's human resources staff. This example shows how even where companies seek to implement favorable working conditions and generate strategies to do so, in practice these measures can fall apart. This can clearly be seen in the hiring of temporary workers. Although many companies hire these workers directly, they continue to resort to intermediaries to disseminate information and recruit people, as we will see in the following section.

4.1 Temporary Migrant Workers: Hiring, Transportation, and Housing

Although San Quintín has become an agricultural valley in which workers from other states have settled, with the growth in export agriculture there is still a great demand for labor. Even with the settlement of thousands of workers, temporary migrants continue to arrive to work in the harvest season from southern Mexico, and also from Puebla, Hidalgo, Guanajuato, and Morelos. The information gathered during field work shows that there are two types of migrants in the region: those who arrive on their own in order to look for work with one of the companies in the region, and those who have been hired directly by the companies. As described here, some decide to remain in Baja California or continue on to the U.S., and others go to other agricultural regions or return to their communities of origin. One of the managers in a large company explains:

> There are workers, for example, who come from Sinaloa and keep going, and they arrive here following some cycle of harvests. . . . So they start below and keep going up and get as far as Sonora or Baja California. Afterwards, since they return, sometimes they go back home and begin again. There are others who come and find good conditions here and decide to spend the whole season and more. That is, do other kinds of work, maybe in agriculture but not in berries: celery, cucumbers, chiles, cabbage, other kinds of produce. These sometimes stay one or two years and then they continue following the process of migration. Sometimes they want to go to the U.S. and they do that. There are others who find the same type of conditions and say "No, why keep migrating if I'm ok here?" (Interview with E.O., 11 June 2021).

The workers who arrive on their own may travel alone or with others, in some cases with families including small children. They sometimes follow a migration circuit, or they come to the valley to see their families or family networks. San Quintín has also become a intermediate stop on the way to the U.S., and an employment opportunity for those who are deported back to Mexico. Fausto, a man from the Chiapas coast who is now working "pay and go" in San Quintín, used to work in construction in the U.S., as a demolition supervisor. After he was deported he had to look for other work. He decided to go

to Sinaloa to work on the mango crop, and then he continued on to Baja California. When we met him it was the first time he had come to San Quintín. The workers who come on their own pay their own transportation costs and also have to find their own housing, which means a greater vulnerability than those who are contracted by the companies. Although some arrive with family connections or support, others are completely isolated, which affects their living conditions.

This type of worker generally works in the "pay and go" labor market as a strategy to address various circumstances. One is that it enables them to get and save money immediately; payment by the day provides them with income as soon as they begin work in the valley. Another is that they can begin work without documentation: people from various institutions told us that when workers arrive from other states, especially from southern Mexico, they often do not have identity documents, or they contain errors. Minors who cannot find formal employment can also get work under this system. People with health problems, who cannot provide the medical certificate that companies require for formal contracts, also work under "pay and go," as do those who consider San Quintín a temporary stop, even if they end up staying for years.

Gracia and Toño fall into the latter two categories. Gracia is a 30-year-old worker from Oaxaca who came to San Quintín with her three children because her sister already worked in the region. However, she has a problem with anemia, which prevents her from getting a certificate of good health. Toño, 26, is from Guerrero. Although he has been in San Quintín for six years, he stays in the "pay and go" labor market because in this way he can save the money needed to get a passport and other documents necessary to work in the U.S. with an H-2A visa. Although he might be considered a settled worker, he considers his situation temporary.

The H-2A program allows agricultural companies and employers in the U.S. to hire temporary foreign workers, and San Quintín has become a recruitment zone for such companies. According to various testimonies, it functions as a kind of school where farm workers learn to work on specialized crops like berries. Traveling legally to the U.S. with an H-2A visa has become a strategy for earning a better wage, saving money, and building a home. One of the U.S. companies that recruits workers for this purpose supplies labor to producers in California and Arizona, and another recruits workers for its own fields in Susanville and Tulelake, California, and in Oregon and Nevada. There are also multinational companies in the region that manage the flow of workers according to the rhythms of production in their fields, and that allow some workers to travel to the U.S. when needed to meet labor demand. Although all of these companies use the H-2A visa system to mobilize their workers, each company has different requirements. Normally it is the worker who covers the cost of applying, and if the application is not accepted, the company does not refund the money. The companies generally also require that workers have certain experience or meet certain requirements such as high productivity and good behavior (Garrapa, 2020). According to two community leaders we interviewed, one of the multinational companies with fields in the region requires its employees to work seven days a week in order to be recommended for work in the U.S. (Z.N. and Z.O., personal communication, 19 June 2021).

Once workers have crossed the border, their residency permit is entirely tied to their employment, and if they quit or are fired they must pay the cost of the return trip. In addition, since it is a unilateral program, Mexican labor law does not apply, and they receive no employment benefits or guarantees (Garrapa, 2020).

The presence of the H-2A program in Baja California shows the extent to which the labor force is international. In the ENJOREX Baja California 2021, 28% of the men and 5% of the women say they have gone to work in the U.S. This experience is more common among those currently working in vegetables (19%) than in berries (17%). It is a crucial step in saving to buy land and build a house in San Quintín. Since enforcement against undocumented migration was stepped up in 2005-2007 and use of the H-2A program began a rapid increase, Mexican agricultural workers have gone to the U.S. as part of their life cycle. This experience varies significantly according to domestic migration status and age. Among natives of the region and permanent immigrants, 21% have gone to the U.S., but only 12% of younger temporary migrants have done so.

The agricultural labor force in the U.S. has been mostly undocumented since the NAWS (National Agricultural Workers Survey) was created. However, since 2021, only 36% is undocumented; more than 50% are U.S. natives of Mexican descent.[34] In other words, although the Mexican agricultural labor force continues to form the basis of U.S. agriculture, what is new is that in 2021 that labor force is mostly legal and mostly U.S.-born, thanks to the H-2A program and possibly also punitive immigration policy.

Does it really benefit a worker to participate in the H-2A program? The formal wage for H-2A workers is 15 dollars an hour, amounting to a monthly wage of 3000 dollars. If transportation and housing are provided at no cost, as the program stipulates, a worker could save enough to buy land or most of the materials to build a house in Mexico. However, the NAWS finds that workers report an average monthly wage of 2000 dollars after deductions. According to this calculation, H-2A wages are four times those in Baja California.

The other type of temporary migrant arrives in San Quintín having been hired in their community of origin. This type of hiring is not new: the so-called enganche ("hook") by a contractor has been the traditional means of recruiting workers from other states. Various studies have identified the corrupt practices in this form of hiring (Saldaña, 2014; Lara & Sánchez, 2015; Red Nacional de Jornaleros y Jornaleras Agrícolas, 2019), pointing to the informality of oral agreements about wages, work, and housing conditions that are not fulfilled when workers arrive. In addition they have described the dangerous conditions in transportation from workers' communities to the regions where they work, including fatal accidents. These practices in hiring, combined with transportation and housing conditions, can lead to forced labor and even human trafficking. In recent years, large companies in the San Quintín Valley have improved their processes of hiring and transportation. Many have eliminated the contractors and now hire workers directly. One of the large companies in the region, for example,

34 Personal communication, Philip Martin. The figures do not reflect 100% of the U.S. agricultural labor force because the NAWS does not include workers in the H-2A program. In other words, the proportion of documented workers is greater, and the proportion of U.S. natives is less.

now sends its manager of worker housing to recruit in communities. This person contacts prospective workers in their communities, goes to those communities, and accompanies them on the trip. He told us that before leaving, he explains the company's policies, values, and workplace rules to the workers.

Although company staff support the hiring process, the participation of intermediaries continues to be fundamental in recruitment in workers' communities. One of these intermediaries is Humberto, a young worker from Veracruz who has worked for a large export company for six years. Before his current job, Humberto worked for five seasons growing grapes and asparagus in Hermosillo; when he was younger, he worked in corn and sugar cane fields. In Hermosillo one of his coworkers invited him to work for his current employer, "because in the vineyards the housing and food are awful," while in San Quintín, the food "is good" and the housing, he says, "is a small house where eight people live, two per room, and if you bring your partner you have a room to yourselves." Since he started working in San Quintín, Humberto has worked for the same company every season. In addition to working in the harvest, three years ago he started working as an intermediary. His job is focused on recruiting people from his own community and others nearby. "I invite them to work, and in the seasons I have been coming, I feel like I've been earning money" (Interview with Humberto, 24 June 2021). As intermediary he also represents the workers he recruits with the company, and vice versa:

> I bring the new people and I explain to them, I say, 'I'm going just like you.' I'm just going to represent you in case you have any questions, if you don't like the dining room or any service or any engineer that doesn't pay attention, you can tell me so I can insist that they do their job well, but I'm also going to be in the field, in the furrows, I'm going to be with the workers there, until maybe they yell at me for picking the fruit or packing it badly. . . I always tell them that I'm no more than you, that I'm not more and you're less, no, I tell them we're equal. (Interview with Humberto, 24 June 2021).

The company pays him 100 pesos for every worker he recruits, but only if they stay the full two months. If one of them leaves before the seasons ends, he is not paid, because that worker "did not fulfill" the contract. The first year, Humberto filled a bus with workers, and the next two years he filled two. Transportation is in the company's buses, each with a capacity of 70 people. The contracts are signed the day before they leave, with the workers showing their identification, so any accident during the trip is covered by insurance. When they arrive, Humberto delivers the contracts to the office.

There can be problems with this hiring system, however, if there is no control over the intermediaries. Several workers in this same company said that intermediaries in their communities had personal preferences that prevented some from getting work. Several workers from Hidalgo complained that the intermediary did not hire women, which primarily affected single mothers from the community who might have benefited from the income. They told us that their group included almost no young women or single mothers because the intermediary's wife "is very jealous" and did not want to

accept their papers, even though there were places for more workers. Another two workers added that they had not been accepted because the intermediary gave preference to people he knew. However, on the day they left there was still room, so they were accepted at the last minute.

The workers also said that many intermediaries choose only the most efficient, experienced people, which prevents many from returning for another season. Many of the workers in the group were there for their first season, and shared their worry that they hadn't been "productive" enough and that they wouldn't therefore be chosen again. They believed this was unfair, because "we all have the right to work. We . . . well, I don't have so much experience picking, but I tried to work hard" (Focus Group on Transportation with Temporary Workers, 28 June 2021). Although this type of hiring has problems, it is regulated and involves formal contracts. However, there are still contractors who are not regulated. An attorney in the region specializing in labor rights said that many migrant workers are hired in their places of origin with promises that are broken when they arrive:

> A lot of people come from the south, and a lot of them are deceived when they are hired. Because what we find is that they go there to hire them to work here, and they do it with a lot of promises. We're not talking about slavery or anything, but we are talking about deception. From saying, "you're going to have a room there, with everything furnished, just for your family," but sometimes when they get here the reality is otherwise, no? (Interview with Irasema, 16 June 2021).

When the workers are hired from their communities of origin, the companies or bosses are responsible for transportation and for housing while they are working. For this reason, the topics of transportation and housing are important to an understanding of their working conditions. It is in these areas that we can see the differences between temporary workers who arrive on their own and those who are hired directly by the companies. It is also possible to see the problems that persist and the conditions that can be improved, as seen in the next section.

4.1.1. Transportation of Temporary Workers

The transportation of temporary workers to agricultural export regions is by bus from their communities of origin. The workers are primarily from southern and central Mexico, which means they are on the road for three days or more, and the trips are exhausting, with costs to the workers' safety and health, and also economic costs. This season, a large company undertook a pilot program to transport the workers by air rather than by bus. During our field work, we conducted a focus group with some of the workers who participated, who described the problems they had with bus transportation.

The major problem they described was related to safety. On the bus they are exposed to traffic accidents. The trip is long, and although there are two drivers, there is still a risk. They also mentioned

the problems of insecurity in the country and of organized crime. This is especially a problem on the return trip, when they are carrying the savings from a season's work. One of the workers even told of how in Sinaloa, their bosses usually accompanied them for the first three hours to protect them from organized crime groups:

> I have come to Sinaloa a few times, to a company there, and when the bus starts out on the return trip . . . some of the bosses of the company accompany us. . . . I don't know if they are the boss's sons, I don't know if it's one or two vans, that go ahead of the bus for about three hours. I think they know why they are leading the bus. . . . That place is very dangerous, and more dangerous on the return trip because every guy, every person returning has their money, a little or a lot, I don't know, but it's more dangerous on the return trip than getting there. (Focus Group on Transportation with Temporary Workers, 28 June 2021).

In addition to security, health is another problem during the trip. Stops are very limited; in the course of the trip there are only four to six stops for the workers to eat or go to the bathroom. They say that although the buses have bathrooms, these are generally in bad condition, and if they use them, the odors fill the bus. For this reason they have to wait for a stop to use the bathroom. Many prefer not to eat or drink for the entire trip to avoid this problem. The difficulty is worse among indigenous workers who do not speak Spanish and prefer not to express their needs. The length of the trip makes it physically taxing; space to move around or change position is limited. Some workers stand up to stretch their legs, or they alternate between lying on the floor and sitting. The cumulative exhaustion and the limited opportunity to go to the bathroom or move around leads to swollen feet, urinary infections, and stiffness and pain, which makes it difficult to begin work as soon as they arrive.

Finally, the workers have significant expenses during the trip, which is a particular problem on the way to work, before they have any income. The drivers have agreements with particular restaurants, and their priority is not that they be economically accessible. Expenses can be 150 to 180 pesos per stop, and total as much as 1200 pesos for the entire trip. All of the workers who participated in the pilot program agreed that air transportation had great advantages: in addition to being safer, they also spent much less money. They also said that they were less tired when they arrived: "We were even ready to work." Replacing the bus with air transportation meant a four-hour flight from Mexico City to Tijuana, plus the bus trip from their communities to Mexico City and another from Tijuana to San Quintín, instead of three days on the bus.

The pilot project was conducted with a group of workers from Hidalgo, most of them from San Antonio el Grande, in Huehuetla. They said they would also like the company to cover the cost of transportation from their communities to the meeting place, because apart from the question of security, they had no money when they left for work, and such assistance would be very helpful.

> It's good when several communities can meet in between, but you have to pay your way out of your own pocket . . . from where you leave to that place. It depends on the distance. Sometimes it's a half hour, an hour, and hour and a half to get there . . . Many of us, we just want to come and work and we don't have the resources, although it seems like it's nothing, but for those who don't have it, well, it's a lot, sometimes it costs $50 or $100. (Focus Group on Transportation with Temporary Workers, 28 June 2021).

These testimonies from the workers, show that although transportation from their communities is more regulated, there are still important problems of health and cost, and especially of security. Air transportation could be a solution to these problems.

4.1.2 Temporary Worker Housing

Temporary workers' access to housing while they are working in the region is also a fundamental issue. Temporary migrant workers who arrive on their own usually rent in private *cuarterías* or tenements.[35] Although there are no more encampments and the trend has shifted to settlement, workers who come for the season need a place to live. According to information gathered in field work, the rent for a room in a *cuartería* usually costs around 300 pesos a week. The *cuarterías* are one or two-story buildings in neighborhoods in the region. We visited one in the area of Lázaro Cárdenas, a one-story L-shaped building with 10 or 12 rooms around a patio. The patio had a dry toilet and a washing machine that the residents shared. Each room had a white door, although the resident of the room we visited had a sheet hanging from the door frame to let in air while maintaining privacy. The room measured about 2.5 x 3 meters (8 x 10 feet), with a concrete floor and unfinished walls. It was furnished with a twin bed, a dresser, a table like an altar, and another piece of furniture with a television. A harvesting bucket, full of clothes, was used as a chair during the interview. The rooms are small, and they can house entire families. They are distinguished by the precariousness of the construction and the lack of privacy.

Large and medium-sized companies in the region, mainly those affiliated with the CABC, maintain housing complexes for their migrant workers. This housing varies according to the company, but those that belong to a large multinational wholesaler that exports berries have to comply with company standards as well as international regulations, including those of the U.S. Occupational Health and Safety Administration (OSHA).[36] One of the managers in the department that oversees this area in a large wholesaler says that some of its producers workers' housing has won international prizes. This wholesaler assists producers in complying with standards in the development of its housing. These

35 In Sinaloa and Baja California, a tenement for workers where each family has a room is called a *cuartería*. The residents usually also share a kitchen and bathrooms.

36 The U.S. Occupational Health and Safety Administration (OSHA) is part of the U.S. Department of Labor. It was created with the Occupational Health and Safety Act of 1970, and establishes the regulations for health and safety in the workplace (Occupational Health and Safety Administration, 2017).

standards specify essential issues like space (square meters per inhabitant), materials, access, and other conditions. The producer decides how to build it, as long as it complies with the regulations. Once the housing is finished and the workers arrive, there is follow-up by the wholesaler to verify that the workers are receiving the proposed accommodations and services.

During our field work we had the opportunity to visit the housing complexes of two companies affiliated with the CABC. They were constructed from cinderblock, with floors and ceilings, a clinic, dining room, and recreation areas. Two of them had a courtyard garden with a kiosk. Some housing of CABC-affiliated companies also includes a store.[37] The complexes are made up of modules, whose distribution varies. In one we visited there are three modules with 32 rooms each, for a total capacity of 576 persons. Each room has three to four bunk beds and a full bathroom. The room we saw measured about 6 x 4 meters (20 x 13 feet). According to information provided by the social worker, their certification allows up to six bunk beds per room. People are distributed according to the numbers needed in a season.

Another company's worker housing has a capacity of 554 persons. Modules consist of two houses sharing a patio where residents can wash and hang clothes. Each house has four rooms for two persons each, with two full bathrooms, for a total of eight persons per house. Each room has a shelf for each person, and they are given a blanket when they arrive. According to information provided on a tour of the housing in 2018, workers must provide their own bed linens and dishes. Among the problems in these complexes is conflict over the clotheslines. The houses also have a kitchen and dining room, which include an electric hot plate and a refrigerator. The dining room includes a table and two metal benches. This company's housing provides more space than the previous example, with fewer people per room and the kitchen to prepare meals.

The dining rooms of both companies have a 50% subsidy, and the workers pay 20 pesos per meal. The amount is deducted from their weekly pay. One company also has a program called *modo foráneo,* for newly-arrived migrants, who are given "21 coupons for the dining room, which equals seven days of food at no cost. They can use them as they wish" (Interview with Social Worker for a Large Company, 29 June 2021). Housing in both companies includes a grocery store; one of them is "administered by outsiders who are not charged rent so they do not raise prices; the requirement is that they have to have the same prices as in the market" (Field Notes, 30 November 2018). In the other company we were told that the store follows the fair trade standards and thus does not generate any income for the company. These stores sell personal hygiene and cleaning products, fruits and vegetables, and packaged food.

The housing also includes clinics where workers can go for ordinary complaints or emergencies like accidents, animal bites, heat stroke, and wounds. There is also treatment of some chronic illnesses, such as asthma, epilepsy, diabetes, and hypertension. More serious situations are referred to the IMSS clinic or the Rural Hospital. These clinics allow for faster treatment of problems that are not serious.

37 An official from the company says that the store was contracted to the store owner in the nearest town, under the condition that prices at the store in the worker housing are the same as in the store in town.

According to a nurse in one of them, workers go to the company's clinic because they are seen more quickly: "It takes up to three or four days to get an appointment at the IMSS because of the long waiting lists" (Field Notes, 29 June 2021).

Workers must comply with regulations in the housing, including restrictions on hours of entrance and exit, prohibition of alcohol, and the prohibition of minors. The latter is problematic for workers with families or for women who are pregnant, since it limits the ability to use the housing and requires them to look for their own. This policy is related to security and the prohibition of child labor. One company affiliated with the CABC does allow children, and even includes a childcare center and school in the complex.

The housing administrator or social worker is in charge of resolving any problems that arise, and they also serve as a conduit for any worker complaints in the fields. The company housing is a great advantage for the workers; they are very different from the encampments and *galerones* in previous times, and from the current *cuarterías*. There are those, however, who say that they encourage greater dependence and allow the bosses greater control over their workers. The testimonies we collected describe long working hours in these companies, beginning at 7 a.m. and continuing sometimes until 6 p.m. When workers are paid by the task, they are not paid overtime for working 11 hours; it is considered a standard day's work. However, the irregularities do not end there, since the workers have the right to eat in the dining halls in company housing and in many cases depend on them. When the workday is very long they may not get home in time for dinner.

In spite of these problems, there is still an important difference between the living conditions of workers who have access to this type of housing and those who migrate on their own and have to find and pay for unregulated *cuarterías*. This too is a product of the difference between the formal labor market and the informal market of "pay and go," and it is necessary to look more closely at the differences, and at the reasons why the informal market persists.

4.2 Between Formal and Informal

The clear differences between these two labor markets raise the following questions: "Why does the "pay and go" system continue? and Why do some workers choose this option instead of working for companies that offer formal employment? The "pay and go" system has developed into a labor market where bosses find a constant availability of labor at the same time that the workers can apparently make decisions about wages and the crops and activities they want to work on. For the bosses, there is flexibility without commitments or benefits. For the workers, there is the freedom to work or not to work.

Bernardo, the small producer introduced above, has a three-hectare *rancho*. He says that a lack of resources does not allow him to have permanent workers, and that he, his brothers, and his father

do most of the work on the *rancho*: it is only during planting and harvesting that they hire temporary workers, to do what family labor cannot manage. The temporary workers are "pay and go," that is, they are hired by the day. He says they only need workers a few days a week and for that reason they cannot give them social security. The crops grown by small producers usually have short cycles, which also makes it difficult to maintain a steady labor force on the *ranchos*. Bernardo told us that planting and harvesting onions can be done in a day, that cutting *cempasúchil* flowers takes two months, and that the squash season lasts three months. In these periods Bernardo goes to Lázaro Cárdenas Park and hires four to ten workers a day to do the work. Although he hires them for the season, the pay is still by the day and they are not enrolled in social security. The problem, he says, is that he cannot offer them work year-round. However, it should be noted that the large companies do not retain their workers the whole year, either: workers can be hired formally, even for short periods. Clearly, part of the problem is the cost of social security, and lack of enforcement and incentives from the government.

For their part, the "pay and go" workers give different reasons for staying in the system. One reason is that the workers known as "champions,"[38] who follow the harvests to earn more money, could not do so working for a fixed company, since the high seasons and piecework wages are only in certain parts of the year. Another reason is the possibility of changing *ranchos* if there is a disagreement with the regulations or the way they are treated. Finally, there are considerations like health and identification papers, since companies require documents and a health certificate for formal employment. In many cases, especially with recently-arrived migrant workers, there are complications with identification, not only with proof of residence—sometimes these workers do not even have birth certificates. For this reason, in recent years various government agencies have helped workers arriving from other states to obtain their papers.

The information collected in field work shows that part of the choice of "pay and go" has to do with having greater control over earnings, wages, and hours, and lesser control on the part of companies. Workers note that companies are very strict with regulations and work hours. One who has worked "pay and go" for six years was asked if he would be interested in having social security:

> When I asked him if social security wasn't important to him, he said yes, but most important of all was liking your work, and that "if the companies were so good everyone would be there." He told me that the regulations in the companies were very strict and that they made you work hard. Working by the day, if he didn't like a boss, he simply didn't have to work for him anymore. (Field Notes, 18 June 2021).

There are, however, two sides to this coin, because although the workers are not dependent on the strawberry, berry, or tomato seasons, as "pay and go" workers they have some days in which they can

38 As previously noted, the "champions" are workers who excel in speed and efficiency at piecework.

earn a good wage for productivity, but others in which they have no work at all. Some days end at one in the afternoon, but other days last until seven at night. This is a point made by Ernestina, who worked for several days harvesting green beans until seven at night because they had to fill an order for three container trucks. She prefers "pay and go" because she is active in the community. The days on which she has to take care of government paperwork or go to community meetings she simply decides not to go to work. When we were in the field, she worked only two days in one week because the other days she went to a meeting about opening a health center in her *colonia*, and traveled to Mexicali to deliver a letter to the governor. There are other workers who say they prefer to work under this system, such as Gabriel:

> . . . also because you like to *rancheriar*.[39] In the companies, to work for a company you need all your papers, all your documents, and there I understand you earn 300 a day and you work at a reasonable pace. Maybe they don't take, I mean they take the usual, but you're working directly in a company. It's just that you don't want to do it, you want to be *rancheriando* and all. Like, I have all my papers and I can go work for a company, but I don't know, I don't do it, maybe it's just my laziness (Interview with Gabriel, 25 June 2021).

Behind the arguments some workers give for preferring "pay and go," there is a lack of information about their labor rights. Activists and community organizations have emphasized that many people are not aware of the advantages of having legal benefits. This is particularly true of younger workers who do not see the importance of social security. The other factor that feeds this labor market is that it provides work to those who cannot enter the formal labor market, such as those under 18 and those older workers whom the companies no longer hire. A small producer explains that it is sometimes entire families that are looking for work. In these cases he hires them and pays a piecework wage to the family as a whole. In addition to children and adolescents, older adults also find a niche in this market. Many of them have worked their entire lives, but because of the nature of agricultural work do not have access to a pension. These workers need an income, but cannot find formal employment in large companies because of their age. However, they can work "pay and go"—without any access to health care even when it is most needed. Their persistence in the agricultural labor market can be seen in the labor force participation rates by age group, especially in comparison with the two other agricultural municipalities in the state (Table 11).

The persistence of this labor market thus responds to various interrelated factors. There are the needs of particular crops and the economic difficulties of the small producers. Workers continue to meet the demands of the market because in certain cases it is the best option for them. Finally, there is a clear lack of government regulation. It is also important to mention that this market absorbs the

39 *Rancheriar* refers to the dynamic of moving from *rancho* to *rancho* looking for the best pay. The small producers known as *ranchos* generally hire "pay and go" workers.

workers who need to continue working when the harvests end with the companies that hire formally. For this reason, the labor market in San Quintín is not a question of black and white. There are also workers who combine formal hiring with "pay and go," or with temporary work under the H2-A visa program in the U.S. In the latter program the workers have better wages, and it becomes a strategy for saving, especially in order to build a house. However, in that system workers are also without legal benefits. Workers do not necessarily stay in one labor system; they commonly combine two systems, according to the availability of work and their individual possibilities. This means that segmentation, in Baja California, does not correspond to the classical model of labor market segmentation, in which race and gender stratifies different social strata within the working class. In Baja California, the same workers move between segments, although those finding permanent positions in large companies do stay there, and they are saving up for retirement.

Table 11. Labor Force Participation Rate by Age Group and Sex in Agricultural Valley Municipalities of Baja California, 2020

Age Group	Mexicali			Ensenada			San Quintín		
	Total	Men	Women	**Total**	Men	Women	**Total**	Men	Women
Population 12 years and older	**866,472**	436,317	430,155	**361,229**	**179,396**	**181,833**	**88,002**	**44,962**	**43,040**
12-14 years	**6.00**	6.99	4.98	**8.04**	9.29	6.76	**10.09**	11.80	8.28
15-19 years	**29.43**	35.87	22.70	**34.48**	41.27	27.44	**43.36**	53.02	33.28
20-24 years	**65.51**	75.05	55.47	**67.51**	77.60	57.29	**75.42**	90.88	58.44
25-29 years	**81.10**	91.45	70.32	**81.60**	92.30	71.02	**80.30**	96.60	63.30
30-34 years	**83.74**	94.30	72.78	**83.93**	94.36	73.58	**82.94**	96.61	68.82
35-39 years	**85.15**	95.15	74.40	**84.98**	95.25	74.65	**84.29**	96.95	71.59
40-44 years	**84.46**	95.12	73.40	**84.00**	94.86	73.12	**83.86**	96.71	70.47
45-49 years	**83.10**	94.98	70.63	**82.26**	93.88	70.28	**82.54**	95.67	68.70
50-54 years	**78.78**	92.40	64.86	**77.36**	91.26	63.91	**77.56**	93.18	60.90
55-59 years	**70.82**	86.67	55.04	**70.17**	86.66	54.65	**70.89**	88.63	54.36
60-64 years	**50.57**	66.61	35.81	**52.94**	69.67	37.29	**62.33**	79.80	42.97
65-69 years	**36.31**	49.70	24.24	**39.64**	52.76	27.65	**53.52**	71.04	35.95
70-74 years	**25.02**	35.84	15.89	**28.40**	39.15	18.39	**40.49**	54.43	25.90
75 years and more	**13.45**	20.50	8.02	**15.31**	22.74	9.15%	**25.01**	34.68	14.83
Labor Force Participation Rate	**63.34**	**74.10**	**52.42**	**64.10**	**74.78**	**53.57**	**67.28**	**80.29**	**53.69**

Source: Authors' elaboration based on the 2020 Census of Population and Housing, INEGI.

The advantages and disadvantages of each of these labor systems is precisely what makes it necessary to analyze them and find a way to formalize labor like the "pay and go" system. Although the most obvious differences are in the working conditions and benefits, these also affect workers' social conditions, such as their access to housing and transportation, in the case of temporary workers, or in access to health care through IMSS or company clinics. Formal hiring allows for access to social security, and companies with this type of hiring make commitments to social responsibility. This translates into improved housing, health care, and childcare, although there are also limitations and deficiencies in these that will be analyzed in the next section. These companies also develop their own welfare programs, including scholarships and materials for water storage systems. The absence of benefits for informal and "pay and go" workers adds to the general lack of services in the region and reduces the quality of life even more. "Pay and go" workers are the most vulnerable of all.

Once workers join one of the companies affiliated with the CABC, they tend to stay there. In other words, although there are few differences in the social and demographic characteristics of formal and informal workers, those who take formal employment normally keep it. Technological changes, greenhouse agriculture, and the combination of crops with different growing schedules have contributed to reducing the contrast between the high seasons and the rest of the year; it is increasingly possible to keep a larger proportion of workers in the fields for most of the year. Women in the sample have an average of 3.2 years with their company, and men an average of 2.9 years. As in all labor markets, women are more stable. These averages are greater among tomato and chive workers (3.4 years) than among berry workers (2.8 years). They depend, of course, on migratory status. Natives of Baja California have an average of 3.6 years with their companies; permanent immigrants, the oldest group, an average of 4.5 years; and temporary workers an average of only 0.8 years. These figures are substantially less for indigenous workers (2.3 years) than for non-indigenous workers (3.4 years). In part, this is because most indigenous workers are temporary migrants, but there may also be other reasons.

V. Living Conditions: Housing, Health, and Childcare

The growth of the labor market and the settlement of workers in the valley brought with them a series of needs for daily life. Workers arrived in a thinly populated area without the government institutions that would provide basic services like water, sewers, and electricity. Within a short time, there was a critical shortage of housing, health care, and childcare. Although there are more services nowadays than twenty or forty years ago, there are still problems that make access to these difficult. This section analyzes access to housing, health care, and childcare in order to assess the current living conditions of valley residents. It first describes the changes in housing from the first temporary migrations through the settlements that are now characteristic of the area, with an emphasis on the continuing lack of housing and public services. It then examines the health problems resulting from agricultural work and the limited health services available. Finally, it discusses the extreme scarcity of childcare services and its implications for women and their participation in the labor market.

5.1 Access to Housing: From Galeras to Settlements

The workers who arrived in the valley decades ago not only found a source of employment, but also a place where they could set up permanent residence. At first, workers were temporary migrants, with either back-and-forth or circular migratory routes. The former meant arriving from their communities of origin only for the harvest, and then returning home. The latter involved workers whose migratory routes took them through the country's different agricultural regions, where they worked in various places on a migratory circuit. The workers who came to the valley lived in encampments or galeras provided by the companies. Barrón (1993) and Velasco et al. (2014) described these as structures made of sheet metal or even plastic and cardboard refuse materials,[40] where the workers lived in crowded conditions, without access to basic services.[41] Martín, who came with his family from Oaxaca in the late 1980s, says the company he worked for had an encampment, consisting of a cardboard and sheet metal structure with about 60 rooms that was cold in the winter and unbearably hot in the summer. Each room housed a family, and there was a section for people who arrived alone. Water for drinking and washing was pumped directly from a well. It was not until some time later that a group of doctors came to talk about how they had to boil the water or add a few drops of bleach before they could drink it. In addition

40 Barrón (1993), based on information from the Programa Jornaleros en Solidaridad, notes that the galeras made of cinderblock with concrete floors originated in the 1990s (p. 126).

41 Velasco et al. (2014) describe this period as one of one of residential dependency, because housing was located within the companies or *ranchos* and this meant that the workers were under the control of the bosses, both because of the distance from population centers and because of their employment relationship.

to the lack of potable water, they had no electricity: they used candles for light, which caused several fires. A small number had stoves with small tanks of gas.[42] They cooked with wood over metal drums, which they cut and fitted with bars to make a grill; this too caused fires. "Whole *cuarterías* burned," Martín recalls. "There were people who were at work, got home, and there was nothing left but ashes" (Interview with Martín, 23 June 2021).

Another worker, Zacarías, tells of the problems his mother had years later with the living conditions in this type of housing. Like Martín, Zacarías grew up in a *galerón* without electricity; residents used candles and oil lamps. "Everyone washed clothes in one place, and there were a lot of people," he says. "Sometimes there were two families per room" (Interview with Zacarías, 12 June 2021). After Zacarías had grown up, his mother was diagnosed with cancer, and the doctor told the family that her lungs looked like she had smoked her whole life. The family attributes this to her cooking with firewood in the same room in which they slept, where they breathed the smoke. Zacarías says that there have been no *galerones* for ten years now.

These conditions, like other aspects of the social and working environments in the valley, have changed over time, as described by a public official who worked at that time in the Programa de Atención a Jornaleros Agrícolas:

> At that time the fields were completely different. There were galerones with small rooms, without toilets, where people cooked with wood stoves. They stored water in the plastic containers for pesticides. People were transported to the fields in the same tubs used to transport the fruit. There were children working in the fields, there was no shade netting, and women who had recently given birth were in the fields, working. (Field Notes, 14 July 2021).

This change is part of the same process of development and transformation of agriculture in the valley. The consolidation of the region as an agricultural export zone, the technological changes that allowed for harvests independent of the seasons, the increase in labor demand, and family migration all favored the settlement of workers in the region during the 1990s. Dalila, a native of San Quintín, remembers when the "squatters" began to arrive, people who settled in the first neighborhoods, like the Colonia 13 de Mayo and the surrounding areas: La Triqui, Las Misiones, and Las Lomas de San Ramón. People began to squat or buy lots and start building with the few resources they had. According to Teresa, a Mixteca woman who arrived with her family in 1989, when she was 11 years old: "When we came to live here, don't think that we got here and had a house. There was nothing here! So my father went and cut four branches off a tree over there, nailed them together, [and] threw some plastic and cardboard on one side and over it . . ." (Interview with Teresa, 18 June 2021). Today, Teresa lives in a solidly-constructed house.

42 These small tanks were *minas de gas,* with a capacity of 4-10 kg.

Over time this type of settlement has continued to appear in the region; people with the possibility of buying a lot start to build, little by little. Ernestina, 56, from Oaxaca, came to the valley at the end of the 1990s. Her goal was to work in the fields to save money and migrate to the U.S. However, when she crossed the border she was deported, and she decided not to try again. She stayed in San Quintín, and met her current partner, Gabriel. At first they rented a home together, until he proposed buying a lot so they would not have to pay rent. Both of them worked "pay and go," following the crops, planting and harvesting onions, peas, squash, and green beans. Gabriel was very productive, one day earning 2600 pesos *tapeando* onions.[43] Between the two of them they were able to pay for one lot and buy another one nearby. They used all their money to build their house, even if they had to make certain sacrifices. Ernestina explains:

> Sometimes we had nothing but lunch until the next day. Once we had no money, but there were cheap restaurants where we could run a tab and pay every week. They helped us a lot with food, it was cheap, ten pesos for a meal, and that's how we managed to finish. With what we were paying he built a room and then we came to live here. (Interview with Ernestina, 25 June 2021).

Ernestina and Gabriel went as far as El Rosario to follow the harvests. They supplemented their income from working in the fields with money from *cundinas*, or *tandas*,[44] and bank loans: Ernestina describes how they used this money to make the payments for the construction of their house: "First a payment for cement, then another for cinderblock, another for *armes*,[45] rebar, stone, with every *cundina* we went to make a payment" (Interview with Ernestina, 25 June 2021). They now have a concrete house under construction, with a dirt floor. They still have some loans to pay off, but they have paid the construction worker, and they have some materials left over which they decided to sell in order to continue the project. They both still work as "pay and go."

A 250-300 square meter lot in San Quintín currently costs from 60,000 to 120,000 pesos, or $3,000 to $6,000 USD. As we discuss below, most of these are without services, and some do not have individual deeds, which may cause problems later on. They can be purchased with a down payment and monthly installments. Once the down payment is made, the buyers can live on the lot while they build. People use various strategies to build their houses, including working in the H2-A visa program, according to several people interviewed during field work. The construction proceeds little by little, according to people's abilities. Most begin with inadequate materials, like particle board, wooden pallets, shade netting, and in some cases metal screens with wooden stakes. In one visit to a worker's

43 *Tapeando* means pulling up the onions and packing them into sacks.

44 Also known as *rifas*, a way of saving money in which a group of people each contribute a certain amount of money at periodic intervals, for example every month, and at that moment one of the group receives the total collected, on a rotating basis.

45 *Armes* is the common term for the welded rebar frames used for the core of cement pillars. The name comes from a commercial brand, "Armex."

home we noted not only the entire house built from such materials, but also that the wood in one of the walls was rotten, putting the family at risk. This family does not have the resources to replace the wood or other materials the house is built of.

The lack of government assistance for the construction or improvement of housing is a reality. One of the problems we discovered in carrying out our survey is that although almost 98% of the workers say they are registered with IMSS, very few report that they have Infonavit. An Infonavit official explained that all workers registered with IMSS are also registered with Infonavit; they share a computer system, and a worker with IMSS cannot avoid being enrolled in Infonavit. However, in addition to the factors mentioned in Section 3, he recognizes that the main obstacle for farm workers is that Infonavit does not have housing in developments they can afford, especially not in rural locations. However, this official notes, Infonavit will soon be launching the program "Yo Construyo" ("I Build"), directed more at farm workers, which will provide loans in three installments, each of which will be paid after an Infonavit inspector certifies the progress of construction. The loan is assured as long as the worker makes payments, and it is not necessary to own the land on which the house is constructed, as long as the worker can demonstrate that possession is secure. The program already exists in Mexicali and Tijuana, and Infonavit is planning to implement it in the southern part of the state, but as of July 2021 it had not yet made any loans. Another program is Mejoravit, which is more restrictive: it provides a debit card that can only be used for building materials in designated stores, but people do not like this limitation.

Difficulties with housing have been an issue for some of the large companies in the region that have begun projects to improve working conditions, including those in the Fair Trade program. Among these projects are one to improve housing that consists of constructing floors, walls, and roofing. According to one of the program's managers in a large company, it began in 2019 when the company realized that there were many leaks during the rainy season: "The main problem with the roofing was that if it leaked it would be very damp inside and that would make people sick" (Field Notes, 11 June 2021). In the first year work focused on solid roofs and in the next two years it included floors and walls. In addition to being constructed with flimsy materials, it should be noted that many houses still have dirt floors, which create the conditions for respiratory and gastrointestinal illness.

The ease with which workers can buy a lot to build a house has another side: the development of the valley has been chaotic. In many cases, *ejidatarios* sold land without zoning or other permits, which has also had an effect on access to public services. A government official from San Quintín explains that the situation complicates the introduction of water and electric service because the rules for those utilities do not allow their installation where there are irregularities. From his point of view, the obvious lack of public services in the area has been caused by "anarchic" growth. In his words, "[if] they go live on the hill, how do you send them water and power?" He also notes that the lack of regulation also prevents people from receiving services such as garbage collection. A local truck company owner who had been in charge of municipal services for the region noted that when he worked in Camalú,

there were two garbage trucks providing service to 20,000 residents. He was later director of public services in San Quintín, which had two trucks for 110,000 inhabitants spread out over a distance of 80 kilometers, which was clearly insufficient. He requested seven more trucks, but did not receive them. For this reason, this service is provided by people who charge 25 pesos per barrel and burn the garbage in enclosed spaces or in the open air. Some people burn their own garbage.

Given these problems with irregular ownership and the lack of public services, the regularization of property is a priority for San Quintín. In spite of the great concentration of population between Camalú and the ejido El Papalote, there is no sewer system, very few paved roads, and next to no garbage collection. Many new neighborhoods have no water or electricity. The oldest *colonias*, 13 de Mayo, Las Misiones, Maclovio Rojas, and Lázaro Cárdenas, have better conditions, but they have to manage access to these services. A resident of the Colonia Benito García says that there is a new *colonia* behind them, and that the two *colonias* agreed to call the new one Ampliación Benito García so that it could more easily get access to electricity. According to a 2017 proposal for a desalination plant in the municipality, there is no water or sewage treatment in the area; 42% of the population have septic tanks, and the rest have cesspits.[46]

Among the community's more pressing problems is access to potable water. In addition to the lack of sufficient water to supply the whole community, there is inadequate infrastructure to distribute it. This has been a problem in the community for decades. Various governors have come to San Quintín and promised the region's urban areas a desalination plant. One of us was taken to see the location where construction had begun on a well for this plant: it consisted of nothing but an eight-inch pipe for the extraction of saltwater, but no pumps, no desalinator, and no pipes leading to the community. One of the large companies in the region recently constructed the first seawater desalination plant for agricultural purposes in all of the Americas. However, the construction process also demonstrated the lack of public investment in the region. In 2015, during construction, the government said there would not be enough electricity for its operation, and that it would be necessary to run an 80-kilometer high-tension line from San Vicente to San Quintín, at a cost of 10 million dollars. It proposed that the company cover the cost and then deliver ownership to the Comisión Federal de Electricidad (CFE). In the end, this investment was not necessary; the plant is currently operating with electricity from the CFE (personal communication, T.A., 8 September 2021). Although these actions have been a solution for the agricultural sector, the shortage of water has also affected the population of the valley. What is currently available is chlorinated water that comes directly from underground wells fed by the San Simón, San Quintín, Camalú, and Vicente Guerrero aquifers (Banco de Desarrollo de América del Norte, 2017). The problem goes beyond the scarcity and low quality of the water; there is also no infrastructure to deliver it to the population. There are still *colonias* without pipes, where people have to buy water from private tanker trucks, and the price is high. According to information from the North American

46 A cesspit is a hole in the ground for sewage, lined with porous material. The liquid filters into the ground, and the solids decompose through bacterial action. A septic tank is sealed; the sewage it contains is treated, and it is periodically emptied.

Development Bank (Banco de Desarrollo de América del Norte, BDAN, 2017) regarding the certification of the desalination plant in San Quintín, the trucks sell water at a cost of 60 pesos per cubic meter, but information from field work shows that the cost can reach 100 or 150 pesos per cubic meter from private trucks, and a 200-liter barrel costs around 20 pesos. Only about 64% of the houses have plumbing, but the service comes only once every 1-3 weeks for a limited time between three and 24 hours (BDAN, 2017). It is thus necessary to have a storage tank, and it is common to see these on the roofs or in the patios of houses.

The subject of water as a residential or urban service has become a labor issue. The water problem was one of the issues that unleashed the workers' movement of 2015. Companies and producers have tried to alleviate the problem in different ways. One of the large producers said in an interview that they have tried to help the population centers by supplying them with a well: "We worked together with the State Public Services Commission of Ensenada (Comisión Estatal de Servicios Públicos de Ensenada, CESPE), which is in charge of providing water to communities, and they were given a well to get water from and take it to the communities. This was all for the purpose of seeking peace and quiet for the people in those settlements" (Interview with O.Z., 24 June 2021). Another action, carried out by the Fair Trade program, was to donate storage tanks. For three years it provided farm worker families with 800 tanks a year. The problem is urgent, however, and goes beyond having ways to store water. For this reason, the desalination plant was proposed to provide the community with potable water. Construction began in 2016, but the only sign of it so far is the eight-inch pipe.

Given this situation in the valley, one of the major demands of the agricultural sector is the creation of a seawater irrigation district. However, it has dismissed this option unless the needs of the community are addressed first:

> The companies' problem is that they cannot grow any longer, and for the companies themselves the irrigation district is not a priority, because there isn't even potable water in the communities. . . . Because that's where we live, and if there's not enough for the ones who are already there, why do we want another 30,000 workers? Where are they going to put them? How are we going to get them water? (Interview with T.A., 9 June 2021).

The availability of water is the region's major problem, both for the agricultural producers and for its residents. People have had to contend with the high cost of water in time and money. It is not only a matter of storage, but one of rationalizing the use of the resource. It is necessary to take advantage of the days when there is water to fill barrels, wash clothes, water plants, and do other household chores. The water problem adversely affects people's quality of life, and it is accompanied by the problems with housing and other public services previously noted. The situation is a product of the neglect of San Quintín by all three levels of government. The new municipalization is one step toward improvement of these conditions. However, the cumulative lack of investment over decades means the needs are now

urgent. Unfortunately, the problems do not end here; among the most pressing needs are health care and childcare, two other areas in which the population has been forgotten, and which are fundamental human rights.

The deficiencies in housing quality and services are shown in Table 12, taken from the ENJOREX Baja California 2021.

Table 12. Housing Quality and Services, ENJOREX 2019 and ENJOREX Baja California 2021 (%)

Migrant Status	Plumbing	Concrete Floor	Concrete Roof	Concrete walls	Electricity	Sewer	Gas Stove	Refrigerator
				ENJOREX 2019				
Total	91	95	75	90	99	90	N.D.	N.D.
				ENJOREX Baja California 2021				
Native	83	76	23	56	95	59	93	79
Immigrant	71	76	21	52	94	59	91	63
Temporary Migrant	87	69	28	58	97	55	80	33
Total	79	74	24	55	95	58	88	56

Source: ENJOREX 2019 (Escobar, Martin, and Stabridis, 2019; p. 145) and ENJOREX Baja California 2021.

In spite of the improvements seen in the testimonies here, the structural conditions of housing as well as basic services are inadequate, even though 19% of all the farm workers in the sample live in company housing, where the conditions and services are better. But the process of settlement takes place in highly precarious conditions. Even native workers live in precarious housing with limited access to services. The most extensive service is electricity, but others are limited. The comparison with the sample from the ENJOREX 2019 shows that the quality of housing in Baja California is clearly inferior to that of workers in export agriculture in the rest of the country.

5.2 Access to Health Care Beyond Affiliation with IMSS

Since the first settlements in the valley, one of the farm workers' main demands has been access to health care. This demand has motivated workers organization and mobilization since the 1980s. As Velasco et al. (2014) note, at that time the only option they had were "ill-equipped community clinics, without surgical services" (p. 256). They describe how in 1994, construction was approved for a rural hospital under the IMSS-Solidaridad program,[47] but it was postponed when the funding was sent instead to Chiapas:

47 Now called IMSS-Bienestar.

> . . . with the Zapatista rising that year, the funding was sent to the state of Chiapas, in the southern part of the country. The news caught the attention of a group of residents active in Lomas de San Ramón who decided to fight for the construction of the hospital. The state property department began a process of acquiring a large tract belonging to the Collins family, called Las Misiones. In a climate of doubt about federal resources and in the midst of the indigenous uprising, there continued to be budgetary difficulties, and it was announced that construction of the hospital would be delayed. (Velasco et al., 2014, p. 256, translated for this text by Larry Goldsmith).

This decision generated various conflicts and the organization of the workers settled in the area.[48] In 2000, construction was finished on Rural Hospital No. 69 in the Delegación Vicente Guerrero, also part of the program IMSS-Solidaridad (Velasco et al., 2014), which was created in 1973 to address the lack of medical services in areas of extreme poverty and marginalization, especially in rural areas with a significant indigenous population. Today, there are 11.6 million people enrolled in the program, now called IMSS-Bienestar, 4 million of whom are indigenous. Its infrastructure includes rural hospitals and clinics, health brigades, mobile clinics, and rural obstetric clinics (Instituto Mexicano del Seguro Social, 2021). The operational rules for the program in fiscal year 2021 state that "its objective is to guarantee the constitutional right to health care through the provision of first- and second-level care... favoring the population without social security where the program has a presence" (Diario Oficial de la Federación, 2020).

In its time, the construction of this hospital was a great milestone in access to medical services in the region. Now, the valley also has the Unidad Médica Familiar No. 13 of the IMSS, the Unidad Médica Familiar No. 03 of the Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE), the Clínica del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Gobierno y Municipios del Estado de Baja California (ISSSTECALI) of San Quintín, some primary care clinics in different *colonias*, as well as private hospitals, clinics, and doctor's offices. We also observed three private clinics operated by international religious organizations. However, these services are clearly insufficient for a population of 117,568 in an area of 32,953.3 square kilometers (INEGI, 2020). The problem is not only in the number of institutions, but also that they all offer primary care except the IMSS-Bienestar hospital, which offers secondary care. The nearest specialized hospital is three hours away, in the city of Ensenada. According to one engineer, "if you can't hang on for two hours in an ambulance, you're dead." He also points out that several business owners have died on the way to Ensenada: "rich, poor, good-looking, ugly, everyone dies the same" (Interview with O.A., 9 June 2021).

48 As described by Velasco et al. (2014), this conflict over the hospital was still unresolved two years later. One of the major business owners in the region donated land in the delegación of Camalú, in the northern part of the valley. At that time people mobilized in Vicente Guerrero to demand that the hospital be constructed in their delegación. Among the circumstances that contributed to the conflict was the settlement of 40 farm workers on the land in Vicente Guerrero where residents wanted the hospital located. In the end, these workers took only part of that land, respecting the boundaries of the hospital.

Access to health care institutions in Mexico is determined by a person's employment status or their ability to pay, which is an additional problem. Formal workers are enrolled in health care through social security, but informal workers are completely unprotected. In 2001, the government implemented a pilot program directed at informal workers and those in other situations that did not provide social security. In 2004, this program was given the name Seguro Popular; it covered all three levels of health care, and was meant to reduce catastrophic health care costs for the poorest households. However, with the new administration that took office on December 1, 2018, many existing social programs were replaced, and as of January 1, 2020, Seguro Popular was replaced with the Health Institute for Well-Being (Instituto de Salud para el Bienestar, INSABI). Most users we have talked to assert that services under INSABI are fewer and of lower quality than they were under Seguro Popular.

Among formal workers the most common forms of social security are with IMSS and ISSSTE, which cover 32.30% and 5.52% of workers, respectively.[49] The cost of these services is divided among the employer, the worker, and the government.[50] In the municipality of San Quintín, the largest portion of the population with social security is registered with IMSS, followed by the INSABI program that replaced Seguro Popular (Table 13).

Table 13. Percent Distribution of Social Security Affiliations in the Municipality of San Quintín, 2020*

Municipality	IMSS	ISSSTE[1]	Pemex, Defensa or Marina	Instituto de Salud para el Bienestar[2]	IMSS Bienestar	Private Institution	Other Institution[3]	Total with Social Security	Total without Social Security
San Quintín	44,281	6,111	1,373	30,989	3,622	840	846	86,259	31,154

Source: Authors' elaboration with data from the 2020 Census of Population and Housing, INEGI.
*The sum of workers registered with different institutions may be more than the total because some are registered with more than one.
[1] Includes those registered with ISSSTE or the state ISSSTE.
[2] Includes those responding that they are registered with Seguro Popular.
[3] Includes public and private health institutions.

The agricultural sector, especially that part focused on exports, has experienced a process of transformation in recent decades. Some of these changes we have seen in the evolution of crops and the inclusion of high value-added products. However, these transformations have not only brought about changes in production, but also in the conditions of the workers producing for a more demanding international market which expected workers to be provided with legal benefits. The formalization of export agriculture can be seen in registrations with IMSS, which is required by law to cover these workers. These workers have not always been covered: until a few years ago, registration with IMSS in

49 Calculated from Use and Affiliation with Health Services, 2020 Census of Population and Housing, INEGI. According to this census, the Secretariat of Health (including Centros de Salud, Hospitales de la SSA, Seguro Popular, and the Instituto de Salud para el Bienestar) covers 29.5% of the population using health services, but these services do not depend on employment.

50 For workers' retirement, severance, and old-age account with IMSS, the employer, the worker, and the government together contribute 6.5% of the average base wage, and the government contributes a social quota based on the worker's earnings. In addition to these contributions, the employer pays for the housing benefit, and there are additional voluntary contributions that the employer and the worker can make. For the account with ISSSTE, the employer and the worker contribute 5.175% and 6.125% of the base wage, respectively. The government contributes 5.5% of the Mexico City minimum wage as social quota. In addition to these contributions are the housing contribution, the voluntary matched contribution (ahorro solidario), and the voluntary contribution (ahorro voluntario) (pensionissste.gob.mx).

the agricultural sector was not formal; it was carried out with "medical passes" that covered immediate treatment and emergencies, but did not provide paid sick leave (Moreno-Mena and Niño-Contreras, 2004). A 1995 change in the social security law established required enrollment[51] for agricultural workers (Aranda and Castro 2016). This new requirement created a conflict between business and government, with the companies complaining that the contributions to IMSS were very high, and that the services were inadequate. For this reason, "in 1998, a presidential decree established a subsidy to support employer contributions to social security for a period of six years" (Marañón, 2011, p. 21). In 2004, using the same argument about cost and quality, business leaders filed a legal challenge.[52] Finally, in 2005, a new reform allowed for employers to be compensated for expenditures on infrastructure for health care and childcare (Marañón 2011).[53] Companies are reimbursed for health care services through a reduction in employer contributions, and IMSS pays $4200 per child per month for childcare.

This process of change means that the system of medical passes in the San Quintín Valley is now a thing of the past. It can be seen clearly in the increase in IMSS registration in recent years. From 2010 to 2020, there has been a general increase in registrations. IMSS data is aggregated by municipality; the recent municipalization of San Quintín does not allow us analyze it as such. However, if we analyze data for the municipality of Ensenada, which is part of the valley, we can clearly see the increase (Table 14).

Table 14. Number of Workers Registered with IMSS by Municipality and Percentage of Statewide Participation [1]

Municipality	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% participation 2020
Ensenada	68,281	68,790	72,426	75,577	76,878	82,408	84,195	90,396	99,856	99,289	99,998	10.89
Mexicali	180,972	195,405	200,768	196,473	209,240	216,194	219,867	222,768	226,969	231,715	234,822	25.58
Tecate	18,419	18,679	19,634	20,390	20,818	21,132	22,394	23,711	25,315	25,483	25,965	2.83
Tijuana	326,724	336,810	353,349	364,916	401,118	424,713	456,125	481,984	510,325	518,898	542,286	59.08
Playas de Rosarito	8,841	8,781	9,291	9,387	9,744	10,605	11,906	11,611	14,479	13,563	14,036	1.53
Isla de Cedros[2]	566	558	552	553	543	527	514	506	501	948	741	0.08
TOTAL	603,803	629,023	656,020	667,296	718,341	755,579	795,001	830,976	877,445	889,896	917,848	100.00

[1]Data shown are the number of affiliated workers at the end of December in each year.
[2]Isla de Cedros is considered a municipality in the IMSS public data. We show it as such, although other sources consider it a part of Ensenada.
Source: Authors' elaboration using IMSS data for the years 2010 to 2020.

51 This regime includes coverage for "I) job-related risks; II) pregnancy and illness; III) life and disability; IV) retirement, old-age severance, and old age; and V) child care and social benefits" (Aranda and Castro 2016, p. 66).

52 Aranda and Castro mention that during the presidential administration of Vicente Fox (2000-2006), agricultural company owners negotiated a payment plan for the money they owed IMSS and the registration of temporary workers. However, when the payments came due they refused to pay, and negotiated again (2016, 64).

53 They were also offered a 20% discount in the calculation of the productivity bonus, and the contribution basis was set at 2.1 times the minimum wage (Marañón 2011, 163).

The analysis by economic sector in Table 15 shows the increase in IMSS affiliation in the primary sector. The affiliation rates of the primary and tertiary sectors are similar: the primary sector is only five percentage points below the tertiary. In 2010 there were a large number of affiliates, but in 2011 there was a substantial decrease, which recovered only after four years of steady growth, and then an abrupt increase starting in 2015. Interestingly, this peak coincides with the workers' movement in San Quintín. The increase of approximately 60% was not maintained in 2016. The drop in affiliation may respond to the fall in production after the strike. Since 2017 growth has been constant, and from 2019 to 2020 there was an increase of almost 10,000 workers. In just ten years the number of affiliates has tripled. Given that the agricultural sector has been characterized by informal employment, this increase in the number of affiliates represents a great advance. It can be explained by the expansion of export agriculture in the region. Competition in international markets and demanding consumers in the U.S. and Europe insist not only on the quality of fruits and vegetables, but also decent working conditions for those who produce them.

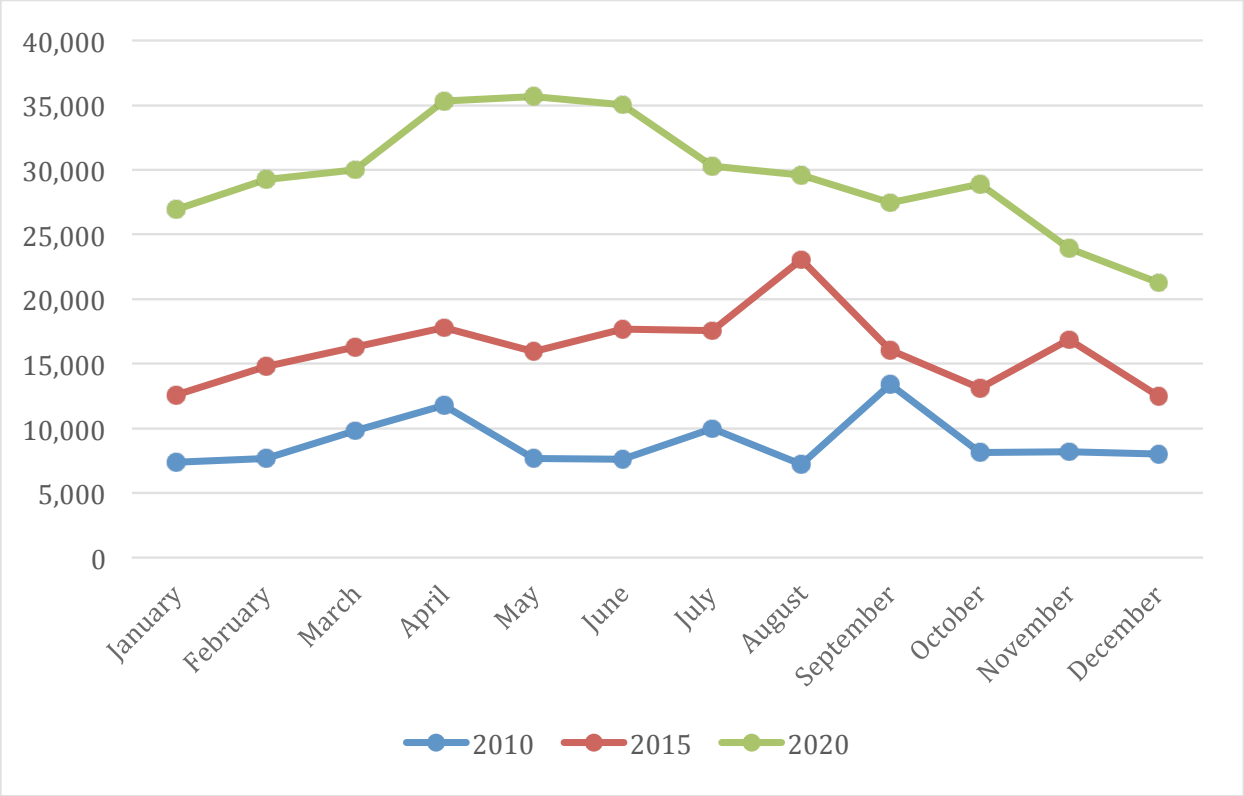
Table 15. Number of Workers Registered with IMSS by Economic Sector in the Municipality of Ensenada[1]

Economic sector	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% participation 2020
Primary	12,967	9,231	10,383	11,921	12,128	19,512	17,156	19,519	19,970	27,544	37,204	32.93%
Secondary	24,772	26,503	26,222	26,449	28,867	30,975	32,289	31,681	34,420	35,177	32,857	29.09%
Tertiary	33,177	33,676	34,812	36,930	35,426	36,689	37,407	39,731	41,181	43,285	42,906	37.98%
Total	70,916	69,410	71,417	75,300	76,421	87,176	86,852	90,931	95,571	106,006	112,967	100.00%

[1] Data shown are for the month of April in each year. April is one of the months in which strawberries are picked; it was chosen because it allowed a year-by-year comparison of a season in which there is a major hiring of workers.
Source: Authors' elaboration based on IMSS public data for the years 2010 to 2020.

Figure 4 shows a monthly comparison on the municipal level of the number of agricultural workers registered with IMSS in 2010, 2015, and 2020. This comparison allows for the identification of the months with the greatest number of registrations, in order to see the relationship between production cycles and the harvest seasons for the major crops in the municipality. The marked seasonality shows that temporary agricultural jobs are also registered with IMSS. In Ensenada there is a clear upward trend in the spring months, especially in April, the strawberry season. In 2020, this peak is maintained until June, when many workers are hired to work in the U.S. Other peaks appear in the second half of the year: September 2010, August 2015, and October 2020. This could be as much a result of the diversification of crops in the region, as it is of the elimination of seasons brought about by greenhouses and other technologies of industrial agriculture.

Figure 4. Number of Agricultural Workers Registered with IMSS in the Municipality of Ensenada, 2010, 2015, and 2020



Source: Authors' elaboration using IMSS public data for the years 2010, 2015, and 2020.

The most important observation, however, is the growth in the number of workers registered with IMSS between 2010 and 2020. In San Quintín, the formalization of agricultural activity has created a positive trend in working conditions. However, this trend does not necessarily mean that there is better access to health care. As various observers in the valley have pointed out—including company owners, public officials, community organizations, and agricultural workers—the increase in the number of registrations has not translated into an improvement in infrastructure, supplies, or even effective access to quality health services. All agree that health services in San Quintín, through both social security and other options, are insufficient. There is only one IMSS family medicine clinic (Unidad Médica Familiar, UMF) in the entire valley. It provides primary care services with a focus on preventive medicine and monitoring of chronic illness, with four doctor's offices and a dentist's office in the morning, in addition to two additional examination rooms that are used when space is not sufficient. One of the doctors emphasizes the clinic's policy that no one is turned away, but this also means that they have had to see people in the social worker's office or the emergency room. They have three ambulances and a room with four beds used for natural childbirth, but not for Cesarean sections. Those who need a higher level of care are referred to Rural Hospital No. 69 or to the IMSS clinic in Ensenada. One doctor told us that they treat minor accidents like sprains, but patients with broken bones must be referred

elsewhere. Trauma cases must be sent to Tijuana, a significant problem in an agricultural region where the physical demands of field work and the equipment used are associated with a high incidence of musculoskeletal injuries. The clinic also employs health promoters who go to the fields to provide information about contraception and family planning.

Although a large number of agricultural workers are affiliated with social security, the workers who are hired informally under the "pay and go" system still lack this benefit. The manager of one of the ranchos operating under this system told us that if a worker feels sick, they are given a pass to go to the IMSS clinic and are paid for the day. However, the reality is that these workers are not affiliated with IMSS, that they are enrolled only when they need the services. Thus, in addition to not receiving cumulative credit for time worked, workers cannot use the services at will. The health care options for people without social security are the valley's health centers and the Rural Hospital No. 69 in the IMSS-Bienestar program. The health centers provide primary care services to the general population, including those who have social security or INSABI; the only requirement is that patients show identification or a CURP (Clave Única de Registro de Población). The health center in the Colonia Lázaro Cárdenas has three interns (*médicos pasantes*) and two dentists. It is open only until 4 p.m., which conflicts with the working hours for field workers. The nursing supervisor says that they usually treat problems like diabetes and hypertension, and monitor pregnancies. They see about 20-25 patients a day; those who arrive with other types of complaints are sent to a secondary clinic, in this case Clinic No. 69. Those needing laboratory tests are sent to hospitals or private facilities. One of the staff told us that the center lacks many necessities, among them medication, which patients must pay for themselves and often purchase in pharmacies selling generics.

Rural Hospital No. 69, part of the IMSS-Bienestar program, includes lodging for family members of patients from other areas, such as San Vicente or Colonet, underlining the fact that the hospital is the only secondary care facility within a 160-kilometer radius. Although this hospital met a need in its time, it is now inadequate for the population and its demands. During the movement of 2015, one of the government's commitments was to build a specialized hospital (Aragón and Cruz, 2015). However, this promise turned into an expansion of the rural hospital, completed on June 26, 2021, which increased the number of beds from 30 to 60 and added the specialties of traumatology, orthopedics, otolaryngology, and ophthalmology. In spite of the expansion of services for residents of the region, there are still unmet needs and a lack of trust. Stories of malpractice, lack of medical attention, and bad treatment are common. One such story concerns the case of R., a woman who died three weeks before we arrived in San Quintín, which according to a government official "was big news" in the community. R. was a victim of malpractice at the hospital related to a transfusion, and died of cirrhosis of the liver. One of our informants told us that pregnant women are afraid to go to this hospital "because a lot of children have died." According to this informant, the doctors used to be very friendly, but now they are all interns who scold people "as if they were children."

According to information collected in field work, the most common medical complaints among farm workers in the valley are respiratory and intestinal infections, back, ankle, and knee sprains, and chronic illnesses. The organophosphorus poisonings that required special showers in the health centers are no longer frequent, but if one should occur, the hospital still has these showers. One of the doctors says that there are sometimes allergic reactions from organic pesticides, which he says is because "the workers do not use the safety equipment correctly." Bee stings and insect bites are another common complaint;[54] these can be treated by the available health care services. However, the health care available in the valley is clearly insufficient. For many families, this is a daily battle, especially if they have some kind of disability or a serious illness like cancer. In these cases, a timely diagnosis can make a big difference, but the shortage of specialists and medical equipment, and the crowded clinics, make it difficult to find quality care.

We had the opportunity to speak with four families of children with cancer in San Quintín, whose prevalence in the region is described by residents as a result of pesticide use. All of their stories have three points in common: 1) in all four cases the families had to insist in order to receive care with the necessary tests; 2) the diagnoses made by local doctors were erroneous; and 3) once diagnosed, the children had to travel to Tijuana or Mexicali to receive the necessary treatment. One example is the case of Lucía's son, who presented symptoms from a very early age and later died of a brain tumor. His first symptom was a frequent bloody nose. The doctors at IMSS said it was nothing, that it was probably because he picked his nose. "They said no, that there was nothing wrong," Lucía says, "that it was ordinary bleeding, that maybe he picked his nose, that was their version" (Interview with Lucía, 13 June 2021). He also had bruises on his legs and bone pain, which the doctors described as growing pains, prescribing only Tylenol. When he stopped eating and lost a lot of weight, Lucía took him to the IMSS-Bienestar for a second opinion, since at that time she had only Seguro Popular. Doctors there agreed with the previous diagnosis.

In 2015, his eye began to swell and he began to have headaches. The hospital never sent him for thorough testing; they simply diagnosed him with tonsillitis. The bleeding became more frequent and copious, but the doctors stood by their diagnosis. After much insistence, with the boy seriously ill, they sent him to Ensenada for laboratory tests, a CT scan, and x-rays. It was not until they performed an MRI that they realized he had a tumor of the brain stem. The doctors left the MRI for last because it was not covered by Seguro Popular. He was then sent to Tijuana for treatment, but because the diagnosis was so late the chemotherapy had no effect. He received radiation therapy in Mexicali, but there was no improvement. After a year of worsening symptoms, he died. His case clearly shows the consequences of a lack of specialists and medical equipment for the timely detection of this type of illness. This lack of staff and infrastructure is one of the reasons why people do not receive the attention they should.

Griselda and her daughter Perla had a similar experience. At first, Perla had headaches. Her father brought her to IMSS, but they gave her only Tylenol and Advil. At the IMSS-Bienestar they told her

54 In protected agriculture, bee hives are rented to pollinize blooming plants for many different crops.

it was only an infected molar, and the hospital dentist told them "there's nothing wrong with the girl." The pain persisted for three months, when a group of doctors from the U.S. visited Perla's school and the pediatrician told her parents that "what she had was not just any illness." They took her to IMSS Clinic No. 13, which sent her to Clinic No. 8 in Ensenada. Perla was in Ensenada about three months without receiving a diagnosis. After performing a biopsy, doctors found a tumor, but they assured her parents that it was not malignant. They took her to Guadalajara for surgery, and she was later discharged. Four months later, Perla again felt ill, and her cheek and eye began to swell. Although she continued going to appointments at the IMSS ophthalmological clinic in Ensenada, she was not referred to a specialist for evaluation of her symptoms. Her parents spoke again with the doctor in Guadalajara, but they had to reinitiate the protocol in order for her to be seen there. The pediatrician in Ensenada told them that he would send them to Tijuana so that they could then go to Guadalajara. In search of a solution, her parents decided to take her to the General Hospital in Tijuana, where they diagnosed her with a type of sarcoma. For the last two years, she has been traveling constantly to Tijuana to receive treatment.

This case not only shows the difficulties families experience in seeking diagnosis and treatment, but it also demonstrates the effect of those difficulties on the family. The trips to Tijuana have a high cost in time and money, and Griselda had to return to work in the fields after a long time dedicated to the household. However, she cannot seek permanent employment because she has to take Perla to Tijuana for her treatment. Public officials and community organizations have joined forces to support people with advice and resources to facilitate access to medical attention, including when it is necessary to travel outside San Quintín. The National Institute of Indigenous Peoples (Instituto Nacional de los Pueblos Indígenas, INPI) has a program called Third Level, which offers financial support for health problems not covered by social security. These funds can be used for gasoline, travel expenses, and the cost of the treatment itself. Through the Pension Program for the Welfare of Disabled Persons (Programa Pensión para el Bienestar de las Personas con Discapacidad), the federal government provides a bimonthly payment of 2,550 pesos.

There are also important efforts from community organizations, such as an association for children with cancer that provides families with financial and material assistance, as well as advice and support. Another association, for disabled children, provides support for therapy and transportation to the Children's Rehabilitation and Integration Center (Centro de Rehabilitación e Inclusión Infantil, CRIT, a private charity) in Tijuana and to appointments with specialists. The founders of both associations explain that the majority of families they support are farm workers. The costs associated with illnesses like these are very high, not only in economic terms, but also in terms of care. In many cases, parents, especially mothers, must juggle their work in the fields with the care children need.

5.3 Women's Labor Force Participation and the "Double Shift"

The development of the San Quintín Valley as a community of migrant workers from southern Mexico has given it particular characteristics. One of these is that the largest age groups are children, adolescents, and young people of productive age. The largest group is children aged 0-4, who make up 11% of the population, followed by age 20-24, who are 10.32%. As previously noted, the dynamic of migration changed from circular to one of family reunification. In addition, women have been entering agricultural wage work since the 1980s. Although women have traditionally participated in agricultural work, for decades their participation was invisible. Traditionally, agricultural work has included the labor of the entire family, with the family head receiving the payment. Changes in agriculture, especially export agriculture, have transformed this arrangement. The formalization of agricultural labor has allowed other members of the family to be hired formally and receive their own wages.

Since the 1980s women's increased entry into labor markets, the impoverishment of rural families, and the formalization of agricultural labor have all contributed to the growth of women's participation in this sector. In recent decades export agriculture has become a highly important employment niche for rural women (Arizpe and Aranda, 1981; Lara, 1995; Arias, 2013; González de la Rocha and Martínez, in press), and this is certainly true for San Quintín, as can be seen in the figures for women's labor force participation (Table 16), which is 1.27 percentage points higher in San Quintín than in Mexicali and 0.12 percentage points higher than in Ensenada.

The women's labor force participation rate in San Quintín is an important indicator of women's incorporation into agricultural wage work, the major economic sector of the microregion. However, although women have been integrated into the labor markets, the distribution of domestic and care work has not changed. The burden continues to rest on the shoulders of women, who are in charge of daily household reproduction (Filgueira and Martínez, 2019). This includes household chores, meals, and care for small children, older adults, and those who are ill. If we consider the high percentage of women's participation in wage work, the fact that 21.22% of the population is under the age of ten, and the lack of childcare facilities in San Quintín, we can see one of the valley's most serious problems.

Although it is generally argued that women work a double or triple day, since they work one (or two) shifts for a wage, and also take care of their families and partners, in San Quintín the burden is even greater, and its contradictions more visible, given their high rate of participation in the labor force and the time dedicated to wage work that includes long hours of transportation. Workers' demands in the 2015 strike explicitly and visibly included health care and childcare. One outcome of the negotiations was that the federal government made a commitment to construct childcare centers for the children of farm workers (Aragón and Cruz, 2015). However, not only has this demand not been met, but with the change in social policies of the new administration, the funding for childcare, including the Program for Childcare centers of the Secretary of Social Development (Programa de Estancias Infantiles de

la Secretaría de Desarrollo Social, Sedesol) has been eliminated. The people who used this program have been left without any options. One of the producers in the region says that when the government canceled this funding, six childcare centers in the valley had to close. Another reported eight.

Table 16. Labor Force Participation Rate by Sex, 2020

Indicator	Mexicali			Ensenada			San Quintín		
	Total	Men	Women	**Total**	Men	Women	**Total**	Men	Women
Population 12 years and older	**866,472**	436,317	430,155	**361,229**	**179,396**	**181,833**	**88,002**	**44,962**	**43,040**
Labor Force Participation Rate	**63.34**	74.10	52.42	**64.10**	74.78	53.57	**67.28**	80.29	53.69
Percent of population employed	**98.55**	98.32	98.89	**98.66**	98.42	98.98	**98.95**	98.70	99.34
Percent of population unemployed	**1.45**	1.68	1.11	**1.34**	1.58	1.02	**1.05**	1.30	0.66
Percent of population not economically active	**35.93**	24.70	47.31	**35.31**	24.32	46.16	**32.42**	19.35	46.07
Not specified	**0.74**	1.20	0.27	**0.58**	0.90	0.27	**0.31**	0.36	0.24

Source: Authors' elaboration based on data from the 2020 Census of Population and Housing, INEGI.
*Data are estimations of low to moderate accuracy.

In our field work we visited one childcare center that was part of Sedesol until funding ended in 2019. It now operates independently. The space has a capacity of 50 children, but because of the COVID-19 pandemic the number was limited to 25. A total of 40% are children of farm workers, who leave them at 5:30 a.m. on their way to work. The cost depends on the parents' income and ranges from 200 to 350 pesos a week per child. Other options are the childcare center of the National System for Comprehensive Family Development (Sistema Nacional para el Desarrollo Integral de la Familia, DIF), administered on the state level together with the Cristo por Su Mundo Home for Needy Children, and the San Quintín Childcare Center, part of the IMSS system. According to an IMSS official, meetings began a few weeks ago to discuss the construction of an additional facility; according to a company owner, the current one only accepts children of unionized IMSS employees. This is worrisome, given that affiliation with social security includes access to IMSS childcare centers, and there are 44,281 people registered with

IMSS in the municipality of San Quintín, 26.90% of whom are women aged 15-49, a total of 11,916 of reproductive age (INEGI, 2020). These figures clearly show that childcare facilities are insufficient, and the lack of resources is accompanied by distrust on the part of parents. The manager of the childcare center we visited told us that it was very difficult at first to gain the trust of parents, especially of indigenous mothers. A large part of the problem stems from the shortage of facilities, which forces parents to look for other options, and in some cases these have resulted in situations involving child abuse, drugs, and violence.

One of the producers in the valley told us of a woman who left her four children in the care of a relative, a man who sexually abused one of the girls. The producer added that it was unfair that companies pay taxes that should be used for childcare centers, but that this money is not seen in construction: "A girl shouldn't be raped because of the lack of a childcare center, she shouldn't!" (Interview with O.A., 9 June 2021). The lack of these services becomes a limitation for the mothers who have taken agricultural wage work in the region.

These problems are seen clearly in the cases of two women from Camalú, both of whom have been able to take advantage of family networks so that they can continue working. Even with this support, however, the lack of childcare services strongly influences their decisions. Mariela, who works in the dining room of a large company, has a one-year-old child who she currently leaves with a cousin when she goes to work. She would like to go to college in Ensenada, but she concluded that she would stay in San Quintín because she has family there who can take care of her baby while she studies. "You can't be leaving your child with just anyone," she says. "It has to be someone you trust." When we asked her about childcare centers, she referred to the shortage of places, the lack of trust in them, and the high cost of the available options:

> Right now, yes, that's the problem with the childcare centers, that there aren't any. There aren't any childcare centers, there aren't any here. I think I wouldn't leave my baby in one. Because the situations that have been seen in social networks, I don't think so. But other people, for example single mothers or mothers who work in the fields, I think that yes, it would be good if there were childcare centers for them, because they are the ones who struggle most, the single mothers. Because there's nowhere to leave your child, and in addition it's expensive...So maybe they can't pay for something so expensive, because now there are people who charge you for example 80 pesos [a day] to take care of a child. Eighty pesos. Imagine. If it were seven days a week, how much would that be? (Interview with Mariela, 19 June 2021).

Flor, who supervises food safety in the same company, is 28 and pregnant. She already has two daughters, four and seven years old. Her 19-year-old sister, who lives two blocks away, has taken care of both girls since she was a girl. Flor pays her 500 pesos a week, which also helps her continue her

college education. Having this help from her sister has made it possible to do without the services of a childcare center; there is none where she lives.

> There are no childcare centers here. Here it's a neighbor, a relative, or someone else who takes care of them for you. But there is no childcare center as such where I live, no. . . . Most of them are relatives or someone like that who takes care of them. And they prefer it that way because in the childcare centers there are a lot of children. Who can be sure that they are going to take care of them? (Interview with Flor, 21 June 2021).

Although both of these women have been able to meet their childcare needs within their family networks, not all women have this possibility. Flor says she know some who have to pay neighbors to take care of their children, from 700 to 800 pesos a week for two children, not including food. "I know people, they might have two children, and they pay a lot, maybe half their week's pay!", she says. Flor is grateful that her pregnancy has coincided with the low season, and that she works in food safety, which does not require much physical effort. However, she says that after this baby she wants an operation so she does not have any more. For women, the lack of facilities means that work and childcare are constantly in conflict. "The more being here is nothing but work," she asks, "why have children with someone else taking care of them? No." (Interview with Flor, 21 June 2021). Her sister is currently taking classes online because of the pandemic, but once that ends, she will have to leave home to go to class, and Flor will have to find a new childcare strategy.

Most children of farm workers thus end up under the care of relatives, neighbors, or even older siblings, who are sometimes no older than seven. When parents do not have sufficient support networks, the children are left by themselves, a situation that is most common with temporary migrant workers, who in many cases arrive alone with their children, without the support to solve this problem. Residents of San Quintín speak often of how the lack of childcare results in many children and young people getting into trouble. According to one of the most well-known community leaders in the valley, low wages mean that both parents and older siblings have to go to work, and so many children are left alone and exposed to problems of crime, including organized crime: "For this reason there are many boys and girls who are sexually abused, or who get involved in drugs, gangs, and stealing from a very early age" (Interview with N.A., 21 June 2021).

One example of this latter problem is the case of Gracia and her three children, aged 16, 14, and 9. Gracia came to work in San Quintín a year ago after she separated from her husband in Oaxaca. She currently works under the "pay and go" system. In San Quintín, her older son began to use drugs, and his problems brought threats to the entire family. When Gracia went to work, her children were left alone in the *cuartería* where they lived, and she decided to send the two younger ones back to Oaxaca. There they live with a cousin and work in construction. "They weren't better off [in Oaxaca], but they weren't in as much danger, because here people came and threatened them, or they told me that they were going

to kill them, and I had no other choice but to send them back" (Interview with Gracia, 22 June 2021). She tried to send her older son to a rehabilitation center, but the cost was 3000 pesos to start and 1000 pesos a week to keep him there. With her income and without the assurance of finding work every day, Gracia could not afford it, and so she sent her son to live with his father in Sinaloa. This is the first time that Gracia has been separated from her children. Her plan was to move to a new place and bring them back after a month when things had calmed down. However, her younger children have now been in Oaxaca for four months, and she has not been able to see them because the return trip would cost her 5000 pesos. "And now that everything is ok," she says, "now that I want them back . . . there is no way to bring them back because there's no money. As much as I try to save a little, I can't. There's no money."

Although some companies have schools and childcare centers, not all of them do, especially in the fields that hire "pay and go" workers, which is where recently arrived workers usually end up. The childcare situation is worse for children with illnesses or for people who need special care. The lack of institutions that address these needs requires parents to "decide" between one thing or the other; we say "decide" in quotation marks because families must work in order to have money for the household. The founder of a community organization for disabled children in the San Quintín Valley draws on her experience to provide a concrete example of the type of conflict involved: "For example, mothers who worked in the fields had to leave their children to go to work, sometimes alone or to be taken care of by their siblings. . . . I have literally seen a girl from the community here *mosqueándose*,[55] all by herself" (Interview with Dalila, 12 June 2021). All of these cases show the urgent need for institutions and support for childcare. As long as there are no options for childcare, inequalities among workers are going to continue, affecting primarily mothers. Childcare centers will continue to be hypothetical resources which parents would consider using "if there were any," although it is also necessary to take account of the parents' lack of trust in these institutions. Accounts of sexual abuse and crime continue among residents of the valley.

55 *Mosqueándose* means that the girl was covered with flies.

VI. COVID-19: Impact and Responses

One last aspect of the farm workers' situation that should be considered is the effect of the COVID-19 pandemic on their lives. This section analyzes these effects and the responses to them from different sources. From the beginning of the pandemic, farm workers have been considered essential workers, meaning that they have continued to work. The implications of this decision have affected them unequally, according to the system under which they are hired. As already noted, the type of hiring can be considered to be the basis of agricultural labor market segmentation in the San Quintín Valley. On April 9, 2020, the Secretary of Labor and Social Welfare and the Secretary of Health published the COVID-19 Action Plan for Agricultural Workplaces (Guía de Acción para los Centros de Trabajo Agrícolas ante la COVID-19), with the objective of continuing agricultural production on a national level. According to data from our survey of agricultural companies in Baja California, the COVID-19 health protocols were universally implemented. However, it is important to emphasize that these protocols are designed especially for those producers with sufficient resources and infrastructure to apply the necessary measures to their working conditions (Becerril Quintana et al., 2021), and many of the workers in the valley do not work for these formal companies. On the contrary, a large number work in the informal sector with small and medium-sized producers under the "pay and go" system.

The most well-known and common measure implemented in workplaces as well as among the general population has been the covering of the nose and mouth. This measure does not seem to have created a major difficulty for workers, as they already covered their faces as part of their work clothing. In place of masks they usually use handkerchiefs of different colors or masks similar to balaclavas that leave only their eyes exposed. In both formal and informal companies there are portable toilets and handwashing stations with soap, water, and hand sanitizer. However, with respect to physical distancing, there is a clear difference between formal and informal workplaces. In our experience in one field of "pay and go" workers, we saw that the selectors, or *rezagadoras*,[56] work shoulder to shoulder. Conditions in transportation are also far from physically distant. Buses pick up workers in the Lázaro Cárdenas Park without any protocol. Some fill up at the park, and others pick people up along the way, but workers generally sit next to one another. On one "pay and go" day we got on a bus that the driver was unable to fill. Even so, the ventilation was inadequate; only the driver's window was open. We were not told of any protocol when we got on and were not asked to maintain distance or alternate seats. Before they arrive at the fields, workers share their breakfast on the bus, which means it is a closed space where neither masks or face coverings are used.

56 This job consists of reviewing the produce picked and removing that which does not meet the requirements for export.

Companies with formal hiring have responded to the pandemic by reconfiguring their common spaces, including transportation, dining facilities, and warehouses. All of these have been adapted to comply with physical distancing protocols: on buses there is one passenger per seat, and there are markers in lines to enter dining facilities and warehouses. These companies also provided assistance to their workers during the COVID-19 vaccination campaign. Vaccination of those over 18 took place during our field work in San Quintín.[57] The vaccination program in Mexico requires a state-level online registration using the official CURP identification. Since many farm workers do not have access to a computer or internet, company personnel completed the registrations for their workers. During this week administrators' desks were covered with vaccine registrations, and company buses became the official transportation to vaccination centers. The process was carried out with workers organized into teams that took turns being transported to get the vaccine. "Pay and go" workers, on the other hand, had to register themselves, in many cases with questions about the process. Two of them, Ernestina and Miguel, had to go to an internet cafe to get their registrations, and pay 10 pesos to print each one.

Companies with formal workers also created strategies for workers considered vulnerable because of their age or chronic conditions. In one of the companies we visited, these workers stayed home at the beginning of the epidemic and continued to receive their wages. When they returned to work, they were assigned to a special team of older adults in order to isolate them from the rest of the workers. One of the workers on this team was Hugo, a 63-year-old man who has worked for the company for 23 years. Before the pandemic, Hugo was the overseer for a team of 40 or 50 people. Now he is part of the special team for older adults that clears the fields, which involves less physical effort and is relatively isolated, for which he is paid the same wage as before. He describes his experience as follows:

> "Hugo for two weeks you're not going to be working." "Why?" "Because of the pandemic." "So how are we going to eat?" "No, you're going to get paid." No, those two weeks became six months where we didn't work. We just came in to get paid. It was nice. We were getting fat and everything, just lying around, we just came in for our checks. Until finally they said, "You know what? The doctor asked us to call you . . . to come in so we can give you a check-up." We got here and they said "you can work now, you can." But they didn't assign us to teams. They sent us here . . . and we have been working here for five or six months. (Interview with Hugo, 23 June 2021).

57 The COVID-19 vaccination campaign in Mexico was carried out by age groups, beginning with adults aged 60 and over. Baja California was the first state to vaccinate the youngest group, aged 18 and over. A total of 1,247,998 doses of the Johnson & Johnson Janssen vaccine donated by the U.S., were administered to people in border municipalities, a strategy that sought to reopen the U.S.-Mexico border (Carrillo, E., 2021).

Temporary workers, on the other hand, are one of the most vulnerable groups in the agricultural sector. "Pay and go" workers have no formal contracts, social protections, or stability of employment, problems which are aggravated by the economic contraction and the difficulties with mobility caused by the pandemic (Becerril Quintana et al., 2021). Factors like transportation from their places of origin to the fields where they work, and their residence in shared temporary housing could mean a greater risk of contagion for this group than for others. However, data from our survey shows that temporary migrant workers were the group least affected by COVID infections. It is important to note that the temporary migrant workers in the survey were those hired directly by companies affiliated with the CABC, which provide transportation and housing, as well as formal contracts. Company housing seems to have had a beneficial effect in avoiding propagation of the virus. The survey included one question about cases of COVID in workers' homes and another about cases among workers themselves. The results, seen in Tables 17 and 18, show fewer cases in the homes of temporary migrant workers than in those of local workers. There were twice as many cases among individual local workers than settled workers, and four times as many as among temporary migrant workers.

Table 17. COVID-19 by Migratory Status: Natives versus Permanent Migrants

	Natives (%)	Permanent Migrants (%)	Difference	*Z* significance
COVID in the household	16	14	.0194	2.86***
COVID in individual	8	4	.0442	10.18***

Source: 2021 ENJOREX Baja California

Table 18. COVID-19 by Migratory Status: Natives versus Temporary Migrants

	Natives (%)	Temporary Migrants (%)	Difference	*Z* significance
COVID in the household	16	8	.0797	12.86***
COVID in individual	8	2	.0601	14.52***

Source: ENJOREX Baja California 2021

As previously described, we visited worker housing belonging to five companies in the region. Two of them told us about the measures they had implemented to prevent COVID contagion among migrant workers. In both cases, workers with symptoms were sent to the company's doctor, who tested them for COVID. If they tested positive, they were isolated in their homes, with pay, for 14 days; one of the companies brought them food from the dining room at no cost. Workers who had respiratory problems

were taken directly to IMSS. We believe that these measures, as described below by the company supervisors, were in large part responsible for reducing the impact of COVID on temporary migrant workers formally employed by large companies.

> The maximum capacity [of the housing] is 544 persons. In this case we left two homes,... 16 places that we left free as protection in the pandemic. If someone had symptoms. . . we immediately isolated them in one of those homes . . . We tested them, and if they tested negative, they went home. If they tested positive, we kept them there. . . Yes, we had a couple of positive cases, but these are people who are mostly 30, 35 years old, young people, very strong. We didn't have any complications with them. There was no need to hospitalize them; we kept them under observation. They got better, and the next week they were back at work. (Interview with manager of company housing, 24 June 2021).

> We have COVID tests . . . free. Last year, when the pandemic was a little bad, we did a total of 30 tests. . . . Fortunately the majority were negative, and those who tested positive were isolated in the housing. If they were migrants, they were isolated for 14 days with pay, because it was a general illness, after all, an occupational risk, in other words. It was managed internally, but if the patient had any respiratory problems or any deficiency. . . they went directly to IMSS. (Interview with company nurse, 29 June 2021).

Apart from the measures implemented by employers, working in the fields is relatively safe, given that it is done in the open air, with masks and physical distancing (Escobar and Stabridis, 2021). But in spite of these data, testimony from producers and workers in the valley show that COVID has introduced complications into their daily lives. The pandemic has not only affected their income, but has also reconfigured household dynamics and has even prompted a reorganization of the workforce. A few examples will illustrate these changes.

Bernardo, the small producer of seeds and vegetables on a family *rancho*, whose lack of technological resources and commercial networks already put him at a disadvantage with respect to the large companies, has encountered even more difficulties with the pandemic. The main one, he says, is the closing of the border since last year. The export of products to the U.S. now gives priority to goods of "prime necessity," which do not include the flower seeds he produces. As a grower for a large seed company, Bernardo produces under a contract. Although this contract stipulates in advance the cost of production and provides him with a secure income, he receives payments on a deferred basis, often not until the company sells the seeds. Under this system, and without the ability to export his seeds, his income has been almost zero.

The restrictions at the border on vegetables have begun to be relaxed, but the flow of produce continues to be limited. Because he has no networks of his own through which to export his goods,

Bernardo depends on a wholesaler. However, this wholesaler is also a producer, and with the slowing of exports it prioritizes its own goods; with demand low, it no longer needs produce from Bernardo. Domestic prices are very low, and sometimes it is better to take a loss than to try to sell the produce in Mexico:

> If I harvested one week and did my accounts at the end of the week, how much did they pay me? It was less than what I had spent that week, between boxes, people, fertilizer, gasoline...I ended up paying more, I was paying them to take my crops. At that point it was a decision to abandon the crop. I had to abandon it. (Interview with Bernardo, 13 June 2021).

One unanticipated effect has been the demand for jobs from urban workers. In fact, during the pandemic the fields have become an employment option for many people who have lost their source of income in other areas. According to the testimony of social workers in a Maneadero company, demand for jobs increased during the pandemic, including from people who had never worked in the fields, such as professionals and business owners who had lost their jobs and were looking for work:

> A lot of people came. Unfortunately the economy was badly affected in other places, and people came who learned to work in the fields, and . . . yes, we saw . . . the harsh reality of the situation. I mean, it was seeing this guy who had a job or a business and all of that, but it had closed and he had to come and work. And that there was a company that could help him and provide him with something, even though it was very far from home. . . . People even arrived with college degrees, they arrived. . . . It was incredible, the need to contribute something to your family because where you were working closed down. . . . (Interview with social worker, 29 June 2021).

The effects of the pandemic on numerous economic sectors made agricultural work an option to consider, even for people who had never before worked in the fields. Miguel, a 34-year-old man from Orizaba, Veracruz, had worked in construction since he was 16. He was working in Mexico City, sending remittances to his wife and children and returning only sporadically to his hometown to see them. When the pandemic began, many construction projects were cancelled, and he had to return to Orizaba and look for other work. His brother-in-law had been going to work in San Quintín for four seasons, and so Miguel and his wife decided to go with him. They arrived in the valley five months ago, hired by a company from their place of origin. They now work together and live in company housing. Miguel's plan is to renew his contract and stay in Baja California until October to save a little more money. Right now the season is ending and he has not been able to earn much, only about 255 pesos a day.

Agricultural work has also become an alternative for workers who left the fields in the past, but who return because of their limited options. Gracia is a 30-year-old Mixteca woman who arrived in San

Quintín a year ago. Her father recruited people to work in the tomato fields in Culiacán, and she worked in the fields from the age of eight, until she got married and went to live in Veracruz. After a time, she and her husband had problems and decided to separate. She returned to her community in Oaxaca with three children, where she prepared food to sell at a school and on weekends sold corn or fruit. She and her children ate whatever food went unsold. She lived in this way for three years, until the pandemic arrived, the schools closed, and she was left without work. At this point she decided to return to the fields. She is currently a “pay and go” worker, which provides her a daily income in different crops, but she has no employment benefits. The effects of the pandemic and the strategies developed in the agricultural sector not only represent current reality, but they also confirm the differences between the two types of workers in the valley.

Conclusions

The development of the San Quintín Valley has followed the development of industrial export agriculture. Since the 1970s, foreign and domestic companies have settled in the region and transformed it into a strategic place for the production and export of agricultural crops. With its Mediterranean climate, the valley was ideal for agriculture, and its proximity to the United States allowed for the transport of its crops on the Transpeninsular Highway that had recently been constructed. What had been a limited market was transformed to produce fresh crops especially for a foreign market, which expanded its profitability. Producers from Sinaloa and Michoacán, and later from the U.S. and other countries, became key actors in the agricultural organization of the valley. In subsequent decades, the demands of the international market and the valley's semi-arid climate required producers to develop new strategies, which they found in high-technology irrigation systems and in protected agriculture. The introduction of these technologies and of high value-added crops made San Quintín one of the country's most important agricultural areas. However, the agricultural boom went beyond the number of hectares cultivated and the millions of pesos generated every year. The area not only developed into an agricultural nucleus, but also a region of multiple dynamics in response to agricultural labor. Since the 1970s, workers from southern Mexico began to arrive in San Quintín in response to the explosion in labor demand that accompanied the growth of export agriculture. Since then, the valley has become a destination for thousands of workers seeking employment opportunities and who have found them in the berry and vegetable fields. Some of these opportunities are in companies that hire workers formally, with the benefits required by law, according to social responsibility norms. Many of these companies actively participate in community projects and provide better conditions for their workers. However, although the formal sector stipulates these benefits in written contracts, the testimony of many workers continues to describe irregularities. Ninety-eight percent of the workers report being enrolled in social security and slightly less than ninety percent report having access to social security health services, but a few employers continue to use strategies to avoid paying social security or allowing workers full credit for their time employed. And the situation is worse in the informal sector, where employment benefits disappear without a contract.

The workers' movements in San Quintín have become a reference point for labor struggles on the national and international levels, which are demanding improved working conditions for farm workers. Over time, these demands have brought favorable changes for workers in housing, transportation, and benefits, as confirmed by multiple testimonies from the valley. However, these changes are not equally distributed, and the studies of San Quintín show persistent problems in working conditions, with practices like those of the recruiters known as *enganchadores*, with long working days, and with the persistence of informal labor. Throughout this account we have explained that the segmentation

of the labor force in San Quintín is generated by the enormous difference between types of hiring: that while there is formal employment, there are also more vulnerable arrangements, especially those of the "pay and go" workers. These workers are hired by the day and have no employment benefits. Their employers are usually small producers known as *rancheros* whose commitment to their workers ends at the end of each workday.

Informal labor persists in San Quintín because of a variety of factors and interests. It is a strategy of small producers of crops with short seasons, which tend to require small numbers of workers, relying even on family labor, except in short harvest seasons where it is difficult to get by without additional workers. However, it is also a dynamic source of employment well adapted to the slow seasons for large companies, and that allows some workers, who can follow the harvest seasons of different crops, to earn a good income for a good part of the year. It is also a market that can accommodate those who have been excluded from the formal market, either because of age, health problems, or a lack of identification papers. Finally, informal labor persists because of a lack of government enforcement, which in many cases only issues recommendations, while violation of labor rights continues to be the reality in the fields.

Although informal labor is responsible for many problems, the situation of San Quintín is more complex than just the problems in agriculture. Many of the workers who come to the valley decided to settle there and make it their home. The growth of settlements has brought new problems, not only in working conditions, but also in social conditions and the quality of life. The problems in the valley are not only in the fields, but also in access to housing, basic services, health care, and childcare. Housing constructed with inadequate material and a lack of potable water, sewage, and trash collection are all problems affecting the quality of life that residents contend with on a daily basis. Health services are not only insufficient, but their quality is poor. To see a specialist people must travel several hours to Ensenada, Mexicali, or Tijuana, which is not only very expensive, but has also cost lives. The absence of childcare services has required people to resort to family networks or informal arrangements that have often resulted in negligence, mistreatment, child abuse and lower effective incomes. This latter problem exacerbates the inequality between men and women: under current social and cultural expectations, women are still mainly responsible for childcare and domestic labor. The absence of public policy to close this gap, or institutions that alleviate this burden, maintain women in a position of inequality with respect to men. These problems demonstrate that agricultural labor cannot be separated from questions of social conditions and public policy. That is, the well-being of farm workers is not limited to their work environment, but must also include a set of factors that connect working conditions and social conditions.

The development and well-being of San Quintín comes from agricultural labor. Its origin as a community born of industrial agriculture means that it can illustrate like few other places the dynamics it contains, including technological advances and new economic orders, as well as advances and setbacks in working conditions. Although its worker struggles have become a reference point,

its workers' demands have not always borne the fruit they have hoped for. Although there have been clear improvements in housing and working conditions for the employees of several large export companies, in particular those affiliated with the CABC whose workers were the objects of our survey, smaller companies with less capital who are not CABC members continue to offer conditions that are unacceptable, even if their workers accept them. The companies' strategies to favor a flexibilization of labor have been transformed over time to include a variety of favorable changes, but it is also clear that much remains to be done. A continued consciousness of the vulnerabilities experienced by the workers of the valley can help us to understand what is happening in the centers of industrial agriculture throughout the country, including in those whose voice is not as strong.

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