



## **Farm Workers in Mexico's Export Agriculture: New Regional Realities**

*Agustín Escobar Latapí / Elisa Alejandra Martínez Rubio /  
Diana Haidé López López / Michelle Judd de la Luz*





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# Project “Farmworkers in Mexico’s Export Agriculture” Jornaleros en la Agricultura Mexicana de Exportación

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The findings, conclusions and recommendations presented in this book are those of the author(s) alone, and do not necessarily the opinions of the sponsors.

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## Abbreviations

- AARC: Asociación de Agricultores del Río Culiacán. Culiacán River Agricultural Association
- ACS: Association for Canadian Studies.
- AFOMAC: Asociación Pro Formación y Orientación de la Mujer. Association for the Education and Counseling of Women.
- AHIFORES: Alianza Hortifrutícola Internacional para el Fomento de la Responsabilidad Social. International Horticultural Alliance for the Promotion of Social Responsibility
- AMHPAC: Asociación Mexicana de Horticultura Protegida A.C. Mexican Association of Protected Horticulture.
- ANEBERRIES: Asociación Nacional de Exportadores de Berries de México. Mexican National Berry Exporters Association.
- APEAM: Asociación de Productores y Empacadores Exportadores de Aguacate de México. Mexican Avocado Growers and Packers Export Association.
- B.C.: Baja California.
- B.C.S.: Baja California Sur
- CAADES: Confederación de Asociaciones Agrícolas del Estado de Sinaloa. Confederation of Agricultural Associations of the State of Sinaloa.
- 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
- CAI: Centro de Atención Infantil. Child Care Center.
- CAIC: Centros de Atención Infantil Comunitarios. Community Child Care Centers.
- CAISES: Centros de Atención Integral en Servicios Esenciales de Salud. Comprehensive Care Centers for Essential Health Services.
- CCE: Consejo Coordinador Empresarial. Employers' Coordination Council.
- CDI: Comisión Nacional para el Desarrollo de los Pueblos Indígenas. Commission for the Development of Indigenous Peoples. Renamed as INPI in 2019 (National Institute of Indigenous Peoples).
- CDIL: Centro de Desarrollo Indígena Loyola. Loyola Indigenous Development Center.
- CDMX: Ciudad de México
- CEA Jalisco: Comisión Estatal del Agua Jalisco. Jalisco State Water Commission.
- CEAG: Consejo Estatal Agroalimentario de Guanajuato A.C. Guanajuato State Agri-Food Council A.C.
- CELADE: Centro Latinoamericano y Caribeño de Demografía. Latin American and Caribbean Demographic Centre.
- CEPAL: Comisión Económica para América Latina y el Caribe de las Naciones Unidas. Economic Commission for Latin America and the Caribbean.
- CESPE: Comisión Estatal de Servicios Públicos de Ensenada. State Commission for Public Services in Ensenada.
- CFE: Comisión Federal de Electricidad. Federal Electricity Commission
- CESSA: Centros de Salud con Servicios Ampliados. Health Centers with Expanded Services
- CIESAS: Centro de Investigaciones y Estudios Superiores en Antropología Social. Center for Research and Higher Studies in Social Anthropology.
- CIHR: Canadian Institute for Humanities Research.
- CIOAC: Central Independiente de Obreros Agrícolas y Campesinos. Independent Central Organization of Agricultural Workers and Peasants.
- CNA: Consejo Nacional Agropecuario. National Agricultural Council
- CNPH: Confederación Nacional de Productores de Hortalizas. National Confederation of Horticultural Producers.
- COFOCE: Coordinadora de Fomento al Comercio Exterior del Estado de Guanajuato. Foreign Trade Promotion Coordinator of the State of Guanajuato.
- COLEF: El Colegio de la Frontera Norte. North Border College.

CONAGUA: Comisión Nacional del Agua. National Water Commission.  
CONAPO: Consejo Nacional de Población. National Population Council.  
CONEVAL: Consejo Nacional de Evaluación de la Política de Desarrollo Social. National Council for the Evaluation of Social Development Policy.  
COPARMEX: Confederación Patronal de la República Mexicana. Mexican Employers' Council.  
COVID-19: 2019 Coronavirus Disease.  
CRIT: Centros de Rehabilitación e Inclusión Infantil de la Fundación Teletón. Centers for Children's Physical Rehabilitation and Inclusion of the Teletón Foundation.  
CUO: Clasificación Única de Ocupaciones. Unique Classification of Occupations.  
CURP: Clave Única de Registro de Población. Unique Population Registration Code.  
DEALTI: Distintivo Empresa Agrícola Libre de Trabajo Infantil. Agricultural Company Free of Child Labor Distinction  
DIF: Sistema Nacional para el Desarrollo Integral de las Familias. System for the Comprehensive Development of Families.  
DOT: Denominación de Origen Tequila. Tequila Designation of Origin.  
DOF: Diario Oficial de la Federación. Official Government Gazette.  
EAP: Economically Active Population.  
ENJOREX: Encuesta Nacional de Jornaleros en la Agricultura de Exportación. National Survey of Farm Workers in Mexico's Export Agriculture.  
ENOE: Encuesta Nacional de Ocupación y Empleo. National Occupation and Employment Survey.  
FES: Facultad de Estudios Superiores. Faculty of Higher Studies.  
GATT: General Agreement on Trade and Tariffs.  
GDP: Gross Domestic Product  
IIEG: Instituto de Información Estadística y Geográfica. Jalisco Institute of Statistical and Geographic Information.  
ILO: International Labor Organization.  
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. National Institute for Workers' Housing.  
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.  
IPLANEG: Instituto de Planeación, Estadística y Geografía del Estado de Guanajuato. Institute of Planning, Statistics and Geography of the State of Guanajuato.  
ISEA: Instituto Sonorense de Educación para los Adultos. Sonora Government's Adult Literacy Institute.  
ISSSTE: Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado. Social Security Institute for State and Civil Service 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.  
JORNAMEX: Jornaleros en la Agricultura de Exportación. Farmworkers in Mexico's Export Agriculture.  
LFT: Ley Federal del Trabajo. Federal Labor Law.  
NADB: North American Development Bank  
NAFTA: North American Free Trade Agreement.

NAWS: National Agricultural Workers Survey  
 NGO: Non-Governmental Organization.  
 NOM: Norma Oficial Mexicana. Official Mexican Standard.  
 NSS: Número de Seguro Social. Social Security Number.  
 OSHA: Occupational Safety and Health Administration, U.S. government  
 PAJA: Programa de Atención a la Población Jornalera. Program for the Protection of Farm Workers.  
 PEMEX: Petróleos Mexicanos. Mexico's State Oil Company.  
 PUED: Programa Universitario de Estudios del Desarrollo de la UNAM. UNAM's Program of Development Studies.  
 RNJJA: Red Nacional de Jornaleros y Jornaleras Agrícolas. National Network of Farm Worker Men and Women.  
 SCIAN: Sistema de Clasificación Industrial de América del Norte. North American Industrial Classification System.  
 SDN: Servicios de Salud para la Defensa Nacional. Health Services for the Armed Forces.  
 SEDESOL: Secretaría de Desarrollo Social, renombrada como Secretaría de Bienestar en 2019. Secretariat of Social Development, renamed as Secretariat of Well-Being in 2019.  
 SEG: Secretaría de Educación de Guanajuato. Ministry of Education of Guanajuato.  
 SENASICA: Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria. National Agrifood Health, Safety and Quality Service.  
 SIACON: Sistema de Información Agroalimentaria de Consulta. Agrifood Information System.  
 SIAP: Servicio de Información Agroalimentaria y Pesquera. Agri-food and Fisheries Information Service.  
 SINACEM: Sistema Nacional de Control Escolar de Población Migrante. National Control System for the Schooling of the Migrant Population.  
 SINCO: Sistema Nacional de Clasificación de Ocupaciones. National Occupational Classification System.  
 SISPPPI: Sistema de Indicadores Sociodemográficos de Poblaciones y Pueblos Indígenas. Indicator System for Indigenous Peoples and Communities  
 SIVIL: Sistema de Información de Violaciones Laborales. Labor Violations Information System  
 SM: Servicios de Salud para la Marina. Health Services for the Navy.  
 SPSS: Sistema de Protección Social en Salud. Social Protection System in Health.  
 SSA: Secretaría de Salud. Secretariat of Health.  
 STPS: Secretaría del Trabajo y Previsión Social. Secretariat of Labor and Social Prevision.  
 TPT: Taxis, Praxis, Telos, Evaluación y Proyectos [TPT Consultants].  
 UABC: Universidad Autónoma de Baja California. Autonomous University of Baja California.  
 UMAPS: Unidades Médicas de Atención Primaria a la Salud. Primary Health Care Medical Units.  
 UMF: Unidad Médica Familiar. Family Medical Unit.  
 UNAM: Universidad Nacional Autónoma de México. National Autonomous University of Mexico.  
 U.S.: United States of America.  
 USDA: U.S. Department of Agriculture.  
 USITC: United States International Trade Commission.  
 USMCA: United States-México-Canada Agreement.



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## FOREWORD

During the past twenty years, 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 to employment opportunities. While many earn a respectable living, others are subject to exploitation. The working conditions of Mexico's agricultural sector have long been a concern for 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 partner governments. Trade agreements and domestic reforms are critical aspects of efforts to improve labor conditions but are 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 serving the domestic market.

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, the Woodrow Wilson Center, the TPT Evaluación y Proyectos [TPT Consultants], and the Centro de Investigaciones y Estudios Superiores en Antropología Social (CIESAS) [Center for Research and Higher Studies in Social Anthropology] conducted four studies. Each focuses on labor conditions in a region specializing in different crops: In Southern Jalisco, we study berries; in the Culiacán Valley, tomatoes and bell-peppers; in San Quintín in Baja California, strategically poised to supply the Western United States, a diversity of crops; and in Guanajuato, which used to be Mexico's largest supplier of staple foods, the processes leading to the export of fresh, frozen and processed fruits and vegetables. Through demographic and economic analysis, a clear understanding of the relevant provisions of Mexican law, specially developed surveys, and 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 each region. In doing so, they hope to contribute to an enhanced understanding of the nuances and complexities of Mexico's agricultural sector, including significant differences between formal and informal workers, and to effective improvement in working conditions in specific places, crops and types of companies.

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

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## INTRODUCTION

Arturo Warman, writing in 2000, stated what was, at the time, a widely recognized problem: Rural Mexico's chronic crisis.

[Starting in the late 1960's] The crisis turned out to be deeper and more persistent than forecast by its first analysts, and its solution escaped the government's capabilities. During a quarter of a century, data confirmed that farm production grew slower than Mexico's population, and the aggregate deficit therefore widened. Crisis, as a concept, became permanently embedded in the Mexican countryside. This association persists today... (Warman, 2001, p. 20).

Further,

The value of farm production at the end of the XX Century is less than 6% of Mexico's GDP. If we take into account that 22.3% of Mexico's population works there, one of the guiding principles of our analysis emerges: inequality. The average income of those working in the farm economy is 29.1% of the average nationwide, or one quarter of the one received by workers in other areas of the economy (Warman, 2001, p. 23).

The state of Mexico's agriculture in 2022 could hardly be farther from Warman's perception. Its export performance is particularly striking. Exports have been growing at rates that sometimes exceed 10% per year. Mexico's largest farm imports to the United States correspond to avocados. In 2022, imports totalled \$2.9 billion, up 13% from a year earlier. The second largest import corresponds to berries —excluding strawberries—, at \$2.49 billion, up 15% in one year. The third largest is tomatoes, at \$2.43 billion, up 3% in one year.<sup>1</sup> The trends in peppers, strawberries, and many other crops are similar: The United States is increasingly relying on Mexico for fruits and vegetables. As a result of this growth, Mexico's trade balance in farm goods with the United States, long in the red for Mexico, shows a large and growing surplus since 2014. Mexico continues to import U.S. cereals, mainly corn and wheat, but its exports have shifted to high-value, labor-intensive crops. According to Zahniser (2020), from 1989 to 2019 Mexico's fruit and vegetable exports to the U.S. rose 800% by volume, and 1000% in value. Exports create jobs. For a country with a significant scarcity of good jobs at the bottom of the labor market, a growing number of jobs in the farm export economy could, if properly managed, substantially lower Mexico's poverty rates.

The Mexico Institute at the Woodrow Wilson Center published *Farm Labor and Mexico's Export Produce Industry* in 2020 to provide an extensive, rigorous evaluation of Mexico's working conditions in export agriculture. That report analyzed the results of our random, stratified survey

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<sup>1</sup> Karst (2023) <https://www.thepacker.com/news/produce-crops/mexicos-dominance-imports-revealed-usda-statistics>



—the first among Mexico's farm workers— as well as anthropological fieldwork, in five different states, and refers mostly to export agriculture as a whole in Mexico. That report focuses on the national phenomenon of export agriculture and its workers.

But Mexico is a country of contrasts. According to the 2020 population census, farm workers in Baja California earn three times as much as those in Chiapas. At the municipality level gaps are even starker. Farm workers in the municipality of Tijuana, according to the census, earn \$15,000 pesos per month, or over \$750 dollars, while those in some Chiapas municipalities report \$1,990 pesos, or \$100 dollars. This book deals with the contrasts and the realities of farm workers in four different export regions, and with the agricultural histories that have led each one of them to their current status. Mexico's agriculture has been associated with extreme poverty ever since official estimates began, in 1992. Rural poverty is the problem Mexico's most substantial social programs were designed to alleviate. Has Mexico's countryside undergone its most significant change since the 1960's? Have its workers participated in that change, and have they benefited from it? Are pay and working conditions comparable in all export regions? What is the story behind this change in Jalisco, Sinaloa, Baja California and Guanajuato?

These questions are relevant because they would mean one of the factors underlying Mexico's social inequality has shifted gears and come closer to the rest of the economy. They are also particularly relevant because, since 2019, the United States-Mexico-Canada Agreement has incorporated labor conditions as one of the grounds on which one participant can stop imports from another.

### *Methodology*

Our study aims to provide the most rigorous analysis of working conditions in Mexico's main farm export regions. Our methodology is therefore crucial. It consisted of four main components: 1) random surveys, 2) non-random surveys developed among informal or precarious workers as well as avocado workers, 3) detailed on-site and remote interviews with workers, human resources staff, local, regional and national leaders, and government officials, and 4) official statistics.

In 2019 we implemented the first stratified, random survey of workers in Mexico's export sector. This survey was made possible thanks to the active collaboration of Mexico's alliance for social responsibility in agriculture, or AHIFORES. AHIFORES brings together the main exporting firms and the main export grower associations, such as the Asociación Nacional de Exportadores de Berries de México (ANEBERRIES) [Mexican National Berry Exporters Association] or the Asociación de Productores y Empacadores Exportadores de Aguacate de México (APEAM) [Mexican Avocado Growers and Packers Export Association], the main association of berry growers and the main association of avocado growers. It is both therefore a "first-level" association of firms and a "second-level" federation of associations. By various estimates, it brings together over 80% of Mexico's export growers. AHIFORES's collaboration through its member roster allowed us to select firms in four of Mexico's top five export crops. With AHIFORES, we randomly selected firms exporting berries, tomatoes, bell



peppers and cucumbers. This list was then adjusted to represent a range of firm sizes in each crop. A random selection of firms represents firms, but underestimates employment in large firms. We oversampled large firms to reflect the structure of employment in the entire sector. AHIFORES obtained permission to interview workers in each of the firms selected; and once there, our interviewers randomly selected workers at the farms. Technically speaking, therefore, our survey represents firms that either belong individually to AHIFORES, or that belong to associations belonging to AHIFORES. The expanded sample represents 83,000 workers in those firms. Because of its coverage of the main export crops, the sample represents export firms for those four crops.<sup>2</sup> We estimate employment in the entire sector, including other export crops, at close to 750,000.

The subsamples for Jalisco and Sinaloa were quite useful to estimate working conditions from the survey in these two states. They were therefore used for the regional studies implemented in those two states. But the Baja California and the Guanajuato samples collected in 2019 were small. Thanks to the CABC, we were able to obtain a second random, stratified sample of 917 workers in 12 firms in Baja in May-June 2021. This is a high-quality sample, comparable to our earlier survey of workers in five states. These workers represent working conditions in firms employing 19,000 workers, in a state employing 53,000 farm workers in total. In our view, it is a reliable sample of employment in the firms affiliated to the state council. In Guanajuato in 2022, the CEAG also collaborated to help us devise a sample of firms in the council. In this case, however, few growers allowed interviews in their companies. We don't consider the Guanajuato sample to be representative of the firms in the council. But it is very useful to delve into workers' benefits, health, family and household arrangements, and other subjects. Relationships between academics and farm employers have been tense for decades. We understand growers' reluctance to collaborate in Guanajuato. We are particularly grateful to the associations and councils, and to all those that allowed us to work under our rules. They understood the value of a study that accurately portrayed working conditions.

Second, our non-random surveys are of two main kinds: first, we needed to develop a comparable sample of workers who did not work for Mexico's formal exporting firms. The bulk of Mexico's farm labor force is in fact unrelated to Mexico's main export firms. Our random survey would provide a biased picture of employment in Mexico's agriculture unless we could provide a comparison with the rest of Mexico's agriculture. We asked Luz Emilia Lara Bretón to take charge of an ethnographic team whose mission was to locate significant communities of precarious agricultural workers. She had ample experience with farm workers. They visited communities Luz Emilia had detected previously, during fieldwork for her PhD dissertation, in San Luis Potosí, Jalisco, Michoacán, and Sinaloa. Most of these communities were in regions of those states in which we did not develop our random survey. Workers were not reached via their employers, but rather through their communities, and Luz Emilia's previous acquaintances. This non-random survey was extremely useful to qualify the positive findings from the random

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<sup>2</sup> Omar Stabridis Arana was in charge of developing the sample, contacting firms, and supervising the implementation of the survey. The 2019 interviewing team was led by Sergio Juárez, an economist specializing in survey work.



survey. Wages were lower, and working conditions and benefits were far worse. The second kind of non-random survey was implemented among avocado workers. Luz Emilia organized two new teams, consisting mostly of advanced students at the technological universities of Uruapan and Ciudad Guzmán, and she compiled an additional worker sample in Jalisco and the Uruapan region. In both non-random surveys, our interviewers chose the workers. We consider they enable us to illustrate either informal employment on Mexico's farms or work at avocado farms. The avocado sample was implemented in 2020, under strict COVID-19 protocols: in the open air, with face masks, and at a 1.5 m. distance.

Thirdly, we carried out substantial ethnographic work. This included interviews and focus groups with working men and women, including special groups with temporary migrant workers; human relations officers; operations officers; labor leaders; state delegates of the Instituto Mexicano del Seguro Social (IMSS) [Mexican Social Security Institute], and of the Instituto del Fondo Nacional de la Vivienda para los Trabajadores (INFONAVIT) [National Institute for Workers' Housing]; labor union representatives; labor authorities from the U.S. and Mexico; and many more. In 2020 this was done remotely, with less than one week's presence in the field. In 2021 Elisa A. Martínez and Diana H. López spent three weeks in Baja California, and in 2022 they spent seven weeks in Guanajuato, as COVID-19 restrictions were eased.

Finally, at the start of the pandemic we decided to explore official statistics. They turned out to provide extremely valuable information on population —from the census office of the Instituto Nacional de Estadística y Geografía (INEGI) [National Institute of Statistics and Geography]—, on farm worker wages —Encuesta Nacional de Ocupación y Empleo (ENOE) [National Occupation and Employment Survey]—, crop production and exports —Servicio de Información Agroalimentaria y Pesquera (SIAP) [Agri-food and Fisheries Information Service]—, job formalization —IMSS—, poverty —Consejo Nacional de Evaluación de la Política del Desarrollo Social (CONEVAL) [National Council for the Evaluation of Social Development Policy]—, and subjects such as water use —Comisión Nacional del Agua (CONAGUA) [National Water Commission]—. Official sources allowed us to estimate change. They were vital to assess the role of agriculture in changing poverty levels and many other topics.

### *Structure*

This book is organized as a collection of regional studies. Producing —and exporting— regions are not identical to states. Normally they are organized along river or water basins, sharing water sources, roads and railroads —or access to ports—. More substantively, regions constitute territories in which social actors have interacted in ways that bind them together around resources, markets, and politics. They tend to form coherent sets of social cooperation and conflict. Thus, this book starts with an analysis of the Ciudad Guzmán valley, which has over 140 years as a significant agricultural producer, but had been gradually marginalized. It is now booming. The second case study deals with the Culiacán river valley, where export production took off since the start of the XX Century. The third analyzes San Quintín, which had no political recognition until 2020, when it acquired municipal status. Nevertheless, San Quintín is Baja



California's farm export engine. Finally, the book closes with an analysis of several historically relevant municipalities in the Bajío, in the state of Guanajuato. The Bajío, as a region, has fed Central and Northern Mexico since the XVI Century. As such, it is inextricably linked to Mexico's significant role as a silver exporter from that time onwards. Its modernization and incorporation of substantial food processing have served to dub it "Mexico's freezer".

### *The Ciudad Guzmán Valley*

The concept of region is characterized by multiplicity and change. Among the diverse elements that contribute to configuring a specific geographic space into a region are the productive systems that serve as linkages to define and organize it (De la Peña, 1999). In the Zapotlán Valley, located in the heart of the southern region of Jalisco,<sup>3</sup> the productive system has revolved around agricultural activity. In "Evolución agrícola y poder regional en el sur de Jalisco" (1980), Guillermo de la Peña describes how agriculture has been fundamental to the economic development of the region since the seventeenth century, when the haciendas provided the region with an internal market that allowed for its organization and development. Because of their economic and social importance, the haciendas also generated relationships in other areas. De la Peña defines these relationships as "dynamic nuclei of production," which offered the needed products and services for the territory's major economic activities.<sup>4</sup>

In southern Jalisco, space was organized by the hacienda system through the mid-twentieth century, until it was replaced by an agroindustrial model specializing in the production of sorghum, corn, and sugar cane (De la Peña, 1980; Escobar & González de la Rocha, 1988). The change in agricultural production was a consequence of the social and economic transformations in Mexico at the time, including the end of the Revolution and the Cristero War, land reform, the creation of new transportation networks, the consolidation of the state, and the integration of a national market. In the Zapotlán Valley these changes narrowed the options for agriculture to seasonal corn and vegetables planted by the lakeside (De la Peña, 1980; Escobar & González de la Rocha, 1988), resulting in economic stagnation. Years later, the situation changed with the introduction of hybrid varieties of corn and sorghum that adapted to the soil<sup>5</sup> and allowed for investment in fodder and sugar cane (De la Peña, 1980). These

3 The Zapotlán Valley is bounded by the Tigre and Tapalpa sierras, the Colima volcanos, the basins that form the Tuxpan River, and the Sayula Basin (De la Peña, 1980; Escobar & González de la Rocha, 1988). This geographic space includes the municipalities of Gómez Farías and Zapotlán el Grande. Southern Jalisco is made up of "the Sayula Basin and the Zapotlán Valley, the Tapalpa and Tigre Sierras, and various communicating basins, flanked by the Tigre mountains and the Colima volcanos, that is located southwest of Zapotlán and northeast of the state of Colima" (De la Peña, 1980, p. 40).

4 An example of the dynamic nuclei of production are the sugar mills and mines that supplied the hacienda system in the nineteenth century (De la Peña, 1980). As De la Peña explains, the mills "provided stimulus for the sugar plantations, the production of food for the sugar workers, the construction of roads for transporting the cane, the breeding of draft animals, the collection of firewood for the cauldrons, the forging of cauldrons, the collection of mesquite wood to make plows, the forging of agricultural implements" (1980, p. 48).

5 De la Peña explains that because of its climate and soil type, the Zapotlán Valley is less conducive to agriculture than other parts of the region: "its soils (brown, reddish brown, Chernozem) are less rich or deep than the agricultural area of the Sayula Basin: they have less nitrogen, phosphorous, and magnesium. They are also much more



were the characteristic crops in the Zapotlán Valley until a decade ago. In recent years they have been displaced by an agroindustrial model dedicated to the production of berries and avocados for export.

The recent development of an agricultural export industry has affected not only agriculture itself, but also other aspects of society and the economy, generating new relationships and ways of organizing geographical space. According to De la Peña (1980), prolonged agricultural use of a territory can become a project that configures the space as a region. In this chapter, we argue that the kind of export agriculture that has developed in the Zapotlán Valley in recent decades is the basis for its definition as a microregion. This model has favored socioeconomic changes that are reflected in population, in labor migration, in the structure of employment, in access to social security, and poverty. From a regional standpoint we analyze social change triggered by the development of export agriculture in the Zapotlán Valley. We use census data and other databases that allow us to compare the years before and after its development. We also include ethnographic data collected during two periods of fieldwork in southern Jalisco,<sup>6</sup> which complement census data and allow us to estimate change.

The first section of this first chapter analyzes the demographic dynamics of the Zapotlán Valley, which show a clear increase in the population of economically productive age groups, a remarkable change for a region that used to be marked by emigration. It presents information concerning immigration and the indigenous population of the region. Section two focuses on the agricultural changes and describes the transformation in crops and production. These data show a clear decrease in the production of traditional crops, with ever greater crops of berries and avocados. A section on employment and economic change provides data on the distribution of the working population, which shows a clear increase in primary sector workers. This section also analyzes enrollment in social security by economic sector. The final section presents a comparative analysis of the CONEVAL 2010 and 2015 indices of multidimensional poverty, where we describe the impact of export agriculture on poverty for ten years. Its effects on various socioeconomic characteristics of the municipalities in the Valley allow us to argue that industrial export agriculture is a project that organizes space and configures it as a microregion.

### *The Culiacán River Valley*

The second regional study provides an in-depth look at the Culiacán Valley and its two main municipalities, Culiacán—a sprawling urban center as well as the state capital—, and Navolato, its more rural neighbor. These two municipalities are the leading producers and exporters of tomatoes in Mexico.

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permeable, with a high clay content, and their usual base of quartz contains fissures through which the water drains to deep levels" (1980, p. 42).

6 The first period of ethnographic fieldwork period was January-July 2019; the second was carried out during one week in July 2020 in the context of the COVID-19 pandemic. Both periods included interviews with agricultural workers, personnel from the berry companies, and important social actors in the community.



The Culiacán Valley's farm export economy is 100 years old, though it has boomed in recent years. Suspension of traditional subsidies to growers in the late 1980s and early 1990s led to a reorganization of production that affected workers. Specialists claim that the disappearance of most subsidies led employers to impose more flexible and insecure working conditions in order to compete with U.S. growers.

Today, the majority of farm workers in the valley come from poorer states in Western and Southern Mexico. In most states where agricultural exports are significant, over half the workers come from the same state. In this respect, Sinaloa is akin to Baja California –the next chapter–, where most workers are temporary or permanent immigrants from Southern Mexico.

The workforce consists of two different segments: one works for large export growers, earns acceptable wages –slightly less than twice the 2020 minimum wage– and is entitled to all legally mandated job benefits. The other earns about 12% less; employers avoid paying social security and other payroll tax funded benefit programs, and workers are flexibly employed and dis-employed upon demand.

The top, or formal, segment, benefited from large public-private investments on social infrastructure and services, including health clinics, child care centers, elementary schools, and company housing. This segment's employment conditions comply with the law, although they are not the best in Mexico. Company housing, in particular, evolved from tin-sheet barracks in the seventies and eighties to solid, adequate lodgings in 2014-2018. In Sinaloa, somewhat unexpectedly, women return to farm work in their late thirties. We believe this is due to the operation of a large network of child care centers. Social investments used to be channeled through the federal government's program supporting farm workers –the Programa de Atención a la Población Jornalera (PAJA) [Program for the Protection of Farm Workers]–. This program comprised numerous actions: it advised workers in their hometowns on the legality and reliability of work contracts, secured safe transport from Southern Mexico, provided cash to workers to help them avoid debt, and partly funded the construction and operation of social infrastructure.

Our anthropological fieldwork found significant disadvantages to working in the lower segment, locally known as “saliendo y pagando” [workers get paid when they end a day's work]. This includes almost no social security affiliation, longer hours, shorter breaks, and “flexible work”, meaning workers may not be required to work full weeks, thus lowering their earnings. However, some workers prefer the immediate cash provided by informal work, although this significantly curtails their benefits and potential retirement benefits.

In 2019, the federal government suspended or cut spending on PAJA and other social programs aimed at protecting migrant workers and improving their recruitment, employment, and living conditions. As of 2020, the infrastructure is still there, but we encountered significant uncertainty as to who will be responsible for the provision of services. Also, far more infrastructure is needed, because export agriculture is booming and employment is growing. Will new workers benefit from the expansion of services? The future of such government interventions is unclear. Certainly, the town of Navolato requires significant social investment urgently, because it is growing, but service provision is significantly deficient.



The recent suspension of federal subsidies, and budget cuts to social security, healthcare, childcare and other services—which were already deficient— begs the question: Will this impact working conditions?

### *Baja California's San Quintín Valley*

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 and demands. The latter were particularly significant in San Quintín in 2015. These changes have taken place mainly in export agriculture.

This chapter provides 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.<sup>7</sup> 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 U.S. 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 (COLEF) [North Border College], the Universidad Autónoma de Baja California (UABC) [Autonomous University of Baja California], and the Universidad Nacional Autónoma de México (UNAM) [National Autonomous University of Mexico]. Second, we employ data from official sources regarding population, affiliation to IMSS, agricultural production, and other topics. Third, we use a survey we designed and administered with the support of the CABC. Finally, we conducted fieldwork in the Mexicali Valley and particularly in San Quintín and its environs, during two visits, in June and July 2021. Fieldwork was particularly fertile thanks to 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.

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 a large presence in international markets. In Baja California there are two major regions for export

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<sup>7</sup> This chapter included one firm in the valley of Mexicali. The rest were in what is now referred to as Baja's "Coastal Region", stretching from Maneadero in the North to Venustiano Carranza to the South, some 200 km.





agriculture. The Mexicali Valley is still one of the state's leading agricultural producers. 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 liberal 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.

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

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

Source: Authors' elaboration with data from the SIAP via SIACON.

\*Value of production expressed in real pesos based on the INPC, base year 2018.

\*\* Value of production of the agricultural valleys taken from data from the 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.

The region was previously part of the municipality of Ensenada. On February 27th, 2020,<sup>8</sup> it became the state's sixth municipality, and includes the *delegaciones* of Camalú, Vicente

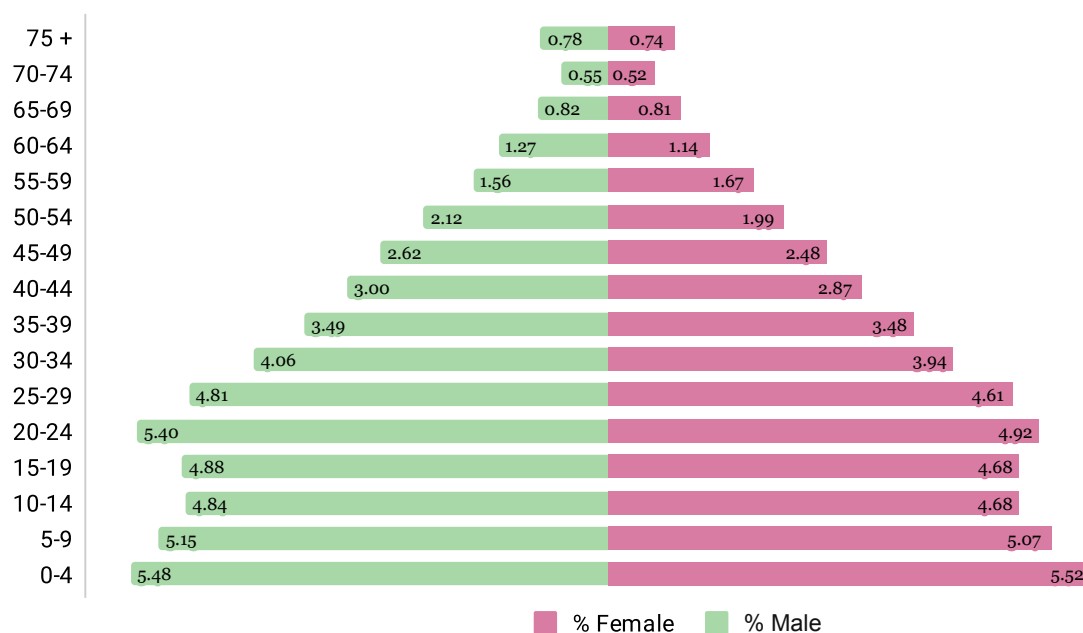
8 The Órgano del Gobierno Constitucional del Estado de Baja California (2020) announced that effective February 27, 2020, San Quintín was a municipality of the state, according to an act of the XXIII Legislatura del Estado de Baja California. Previously it had been part of the municipality of Ensenada.



Guerrero, San Quintín, El Rosario, Cataviña, Punta Prieta, Bahía de los Ángeles, and Villa Jesús María.<sup>9</sup> It is now the country's second largest producer of strawberries and the third largest of tomatoes,<sup>10</sup> 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.

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 (Espinoso-Damián, 2013).

**Figure I.** Population Pyramid by Percentage for the Municipality of San Quintín, Baja California, 2020



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

The population pyramid for 2020 shows a clear bulge among young adults, i.e., working age immigrants. Migrant farm workers began to arrive in the 1970s, brought by tomato producers from Sinaloa and Mexicali who sought to export their product to the U.S. (Velasco et al., 2014).

<sup>9</sup> The *delegaciones* Vicente Guerrero and San Quintín are now administrative areas. (Ing. Torres, Centro de Gobierno de San Quintín, personal communication).

<sup>10</sup> 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](https://www.gob.mx/cms/uploads/attachment/file/578358/Boleti_n_informativo_municipio_San_Quinti_n_BC_.pdf)



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 alone, 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-Pérez, 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 today's population profile. Data from the 2020 Census of Population and Housing show that 43.9% of the population of San Quintín was born in another state, and that 41.3% of those come from Oaxaca (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-Smith & Cruz-Hernández, 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.<sup>11</sup>

The settlement of migrant workers from other states not only increased the population. 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 had 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 legal benefits, 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. The study focuses on working conditions. Nevertheless, it also intends to contribute to an understanding of the evolution of agriculture and its likely futures.

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11 INEGI (2020) Censo de Población y Vivienda 2020 [2020 Census of population and housing].



### *Guanajuato's Bajío Region*

Guanajuato agriculture has been central to Mexico's development since the XVI Century. Since colonial times, the availability of resources allowed for the development of economic activities that were essential for colonial society; New Spain transferred wealth to Spain in the form of precious metals; Guanajuato's agriculture was essential for mine workers (Gómez-García, 2018). Since then, such activity has been fundamental for the area, although it has undergone various stages and transformations. Guanajuato's climatic and environmental conditions are ideal for planting all kinds of different crops. As Gómez-García mentions, its rural areas "are distributed in wide valleys of alluvial origin" (2018, p. 66). Its rivers have also been an important resource for agricultural development since colonial times; a case in point being the Lerma River (see Map I).

In addition, this state has a privileged geographical position that allows it to connect with various parts of the country (Estrada-Iguíniz and Labazée, 2007). This has been one of the advantages that has long since led to the growth of agriculture. The products that were grown in the state began to be marketed beyond regional borders, until they became an important part of the food market at the national level (Gómez-García, 2018). Furthermore, over the last 20 years, its role in the international market has been key.

The agricultural sector continues to be of great importance for the state's economy, although industry and commerce have also grown significantly in recent decades. Currently, the state of Guanajuato is characterized precisely by its diversity and economic dynamism. It is a state where all major economic sectors play significant roles for the regional and national economy. However, the economic activities of these three sectors have been concentrated in a specific geographical area known as El Bajío [the lower lands]. One characteristic of the state of Guanajuato is the sociocultural and economic relationships it has had historically with surrounding territories. Due to the relationships between these territories, it has been possible to define El Bajío as an extensive geographical area that includes municipalities in Jalisco, Michoacán, Querétaro and Guanajuato. This vast geographic area is subdivided into regions that fall within the administrative boundaries of each state. A large portion of El Bajío territory is located in the state of Guanajuato. This specific area is called the [El] Bajío Guanajuatense.

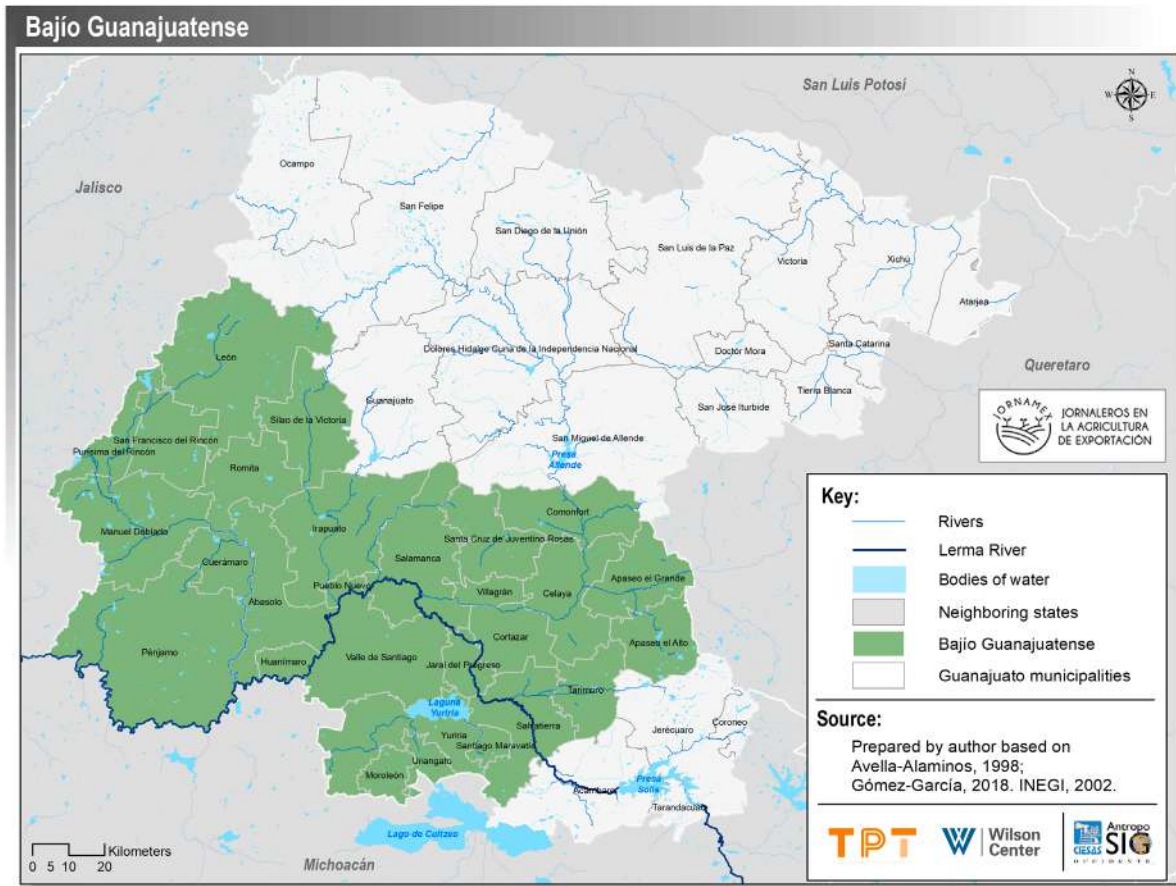
This region encompasses the center and south of the state. In the upper limit, from west to east, a fringe of municipalities includes León, Silao, Irapuato, Salamanca, Santa Cruz de Juventino Rosas and Comonfort. To the south, the entire state is included, except for the southeast where the municipalities of Acámbaro, Jerécuaro, Coroneo and Tarandacuaio are located<sup>12</sup> (Avella-Alaminos, 1998; Gómez-García, 2018) (see Map I).

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12 The region is defined by geographical, historical, economic, and social factors. Authors have identified its boundaries with some minor differences. For example, according to Avella-Alaminos (1998), Bajío Guanajuatense includes Acámbaro and a part of Jerécuaro. Meanwhile, Gómez-García (2018) follows the regionalization identified by Martha Chávez (2012) which, in addition to excluding Acámbaro, Jerécuaro, Coroneo and Tarandacuaio, does not consider the municipalities of Yuriria, Uriangato and Moroleón in the south either. For this study, we have used the regionalization outlined by these two authors, as well as the sub-regionalization identified by the Instituto de Planeación Estadística y Geografía del Estado de Guanajuato (IPLANEG) [Institute of Statistical Planning and Geography of the State of Guanajuato], which divides the state into four regions: northeast, north, center, and south, which are further



Map I. Bajío Guanajuatense



Most of the population and the economy are concentrated in this area of the state. In terms of the state's population, 80.40% of its people live there. Of the total economically active population in the state, 81.37% live in this area with a specific economic participation rate of 62.30%.<sup>13</sup> The high concentration of population and economic participation is largely due to the León-Celaya industrial corridor, a labor niche stretching over a string of urban centers (Estrada-Iguíniz and Labazée, 2007, p. 47). Along this corridor there is León, which exceeds one million inhabitants, as well as the medium-sized cities of Irapuato, Celaya, Salamanca and Silao, which range between 80 thousand and half a million people.

divided into subregions. We consider that Bajío Guanajuatense is made up of the entire central region and the southern region, with the exception of the subregion of the Sierra de los Agustinos that includes the municipalities of Acámbaro, Jerécuaro, Coroneo and Tarandacuao.

13 It refers to the percentage represented by the economically active population, with respect to the population aged 12 and over. The specific rate of economic participation in the entity is 61.84%.



Surrounding the urban centers are the rural areas where 28% of the state's population lives; 22% of the rural population is concentrated in Bajío Guanajuatense. The rural area has been essential to supply labor for the agricultural and industrial sector. It is a complex panorama where the borders between the urban and the rural have been blurred. A large number of people in rural settlements have non-rural occupations, including industrial and service jobs. It is an area where diverse activities intertwine and extend over the region (Arias, 2007; Estrada-Iguíniz and Labazée, 2007). Among these activities, agricultural production has not only retained its importance, but over the years it has become even more relevant. In recent years, the value of agricultural production, both at the state and regional levels, has shown a significant increase. Between 2015 and 2020 the value increased by 52% in the state and 57% in the Bajío Guanajuatense alone.

The increase in the value of agricultural production is largely due to the importance of Guanajuato as a national and international producer. According to data from the Coordinadora de Fomento al Comercio Exterior (COFOCE) [Foreign Trade Promotion Coordinator of the State of Guanajuato], in 2019, Guanajuato was the main national producer of cauliflower, lettuce and broccoli; the second of asparagus; and the third of onion, strawberry and chickpea (2020). In addition, it was the food industry's fourth national exporter and the fifth world exporter of asparagus.

Agricultural production is concentrated in the municipalities that make up the Bajío Guanajuatense, although in recent years some municipalities in the north of the state have gained relevance, such as Dolores Hidalgo, San Felipe, Doctor Mora and San Miguel de Allende (COFOCE, 2020). According to data on production value from the SIAP, the state's main producing municipalities are Romita, Pénjamo, Irapuato, Valle de Santiago and Abasolo. The municipality of Romita has the greatest participation in 2020 with 2,376 million pesos, which represents 7.16% of the state's production value. Its position as the municipality with the highest participation with only 7.16% shows how widespread agricultural activity is in the region. The municipalities with the least participation in the state are Atarjea, Santa Catarina and Tierra Blanca, which are located in the northeast of the state outside the Bajío region.

In general terms, the state of Guanajuato is one of the states with the highest national agricultural participation in 2020, by value. This state is in seventh place with 5.64%, after Michoacán, Jalisco, Sinaloa, Sonora, Veracruz and Chihuahua. It is also one of the states with the most agricultural workers. According to data from the 2020 Population and Housing Census by the INEGI, there are 116,223 farm workers in this state, ranking below Veracruz, Michoacán, Puebla and Chiapas. This figure is higher than those presented for other agro-exporting states such as Sinaloa, Baja California, and Sonora. Of the five main exporting states, Guanajuato employs most farm workers. This reason alone is enough to signal the importance of agricultural labor conditions in this state.

Despite the importance agriculture has for the state and the increase in production value in recent years, in terms of working conditions, Guanajuato remains at a disadvantage compared to other agro-exporting states. Analysis of the data from the INEGI 2020 Population and Housing Census allows us to identify Guanajuato's position regarding the wages and conditions of agricultural farm workers. In terms of salaries, Guanajuato is in twelfth place with



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an average monthly income of 4,995.76 pesos. This income is less than that received in the agro-exporting states of Baja California, Sonora, Jalisco, Baja California Sur, Colima, Chihuahua, Nayarit, Michoacán, Nuevo León, Sinaloa and Coahuila.

Regarding other labor rights such as end-of-year bonuses, disability and profit sharing, the situation is similar. Unlike states such as Baja California, Baja California Sur, and Jalisco, where labor rights are mostly upheld, Guanajuato ranks below tenth place. Only 15% of agricultural workers receive end-of-year bonuses. The situation is even worse when it comes to profit sharing and disability payments, with only 5% of agricultural workers covered. Compliance with the right to vacations and the right to health care is also lacking with only 7% and 9% respectively, according to the census. The situation is even more worrisome when analyzing the percentage of child labor. According to census figures, 6% of the farm worker population are minors. In this category, Guanajuato is positioned within the top 10 for the most child labor, ranking ninth.

The proportion of workers who exercise their labor rights allows for an estimate of the labor violations that occur in the state and in each of the municipalities. Seven categories are taken into consideration when estimating labor violations: end-of-year bonus payment, vacations, health care entitlement, profit share payments, disability payment, pension fund, and housing credit. According to the proportion of workers who receive these labor rights, the state has an average of 6.49 labor violations out of 7. This means that compliance with the labor rights of agricultural farm workers in the state is very low.

At the municipal level, the same analysis shows that the municipality of Romita, which presented the highest agricultural participation in 2020 according to production value, is one of the worst in terms of compliance with labor rights. This municipality accumulates an average of 6.93 labor violations out of 7, which is below the state average. In other words, Romita workers exercise almost zero labor rights. Likewise, according to census data in this municipality, 9% is underage labor. The situation is similar for the municipality of Valle de Santiago, which has the most agricultural workers in the state. This municipality is also below the state average when it comes to the payment of bonuses, profit sharing and disability, as well as its compliance with vacation and health care rights. This municipality accumulates an average of 6.90 labor violations out of 7 with 6% child labor. Of the 10 municipalities with the most agricultural workers in the state, only Pénjamo and Salamanca are above the state average for complying with labor rights, while the municipality of Santa Cruz Juventino Rosas joins them when it comes to profit sharing. The five municipalities that present better compliance according to the average number of labor violations are Villagrán, San Francisco del Rincón, León, Silao de la Victoria and Cortázar. All of them have an average of less than 6, ranging between 5.26 and 5.84.

The panorama presented thus far justifies an in-depth analysis of the conditions faced by agricultural workers in the state of Guanajuato. The importance of Guanajuato as a national and international producer contrasts with its ranking in terms of compliance with labor rights, which raises significant questions. As one of the entities with the highest production value in the country, of which a large part is destined for export, the expectation would be to see an improvement in its compliance with labor rights and working conditions in recent years. On



the contrary, this state ranks below other agro-exporting states where there has been a turning point in terms of labor standards and a focus on social responsibility. The question this study tries to answer is: What elements are fostering low compliance with labor rights in the state of Guanajuato?

In the investigations we carried out in other agro-exporting states, we found an improvement in compliance with the rights and working conditions of farm workers. Although in states such as Baja California and Sinaloa we have identified the existence of an informal labor market where precarious conditions remain, most workers enjoy legal benefits, albeit on paper (Escobar-Latapí et al., 2021; Escobar-Latapí & Martínez-Rubio, 2021). These studies enable us to state that the informality of labor markets is the main factor affecting the precariousness of work. Where the agricultural labor market has been formalized, workers receive their legal benefits in a greater proportion, such as end-of-year bonus payments, social security affiliation, the right to vacations, disability pay, and profit sharing. This makes a significant difference in the living conditions of farm workers.

This chapter is a diagnosis of the working conditions that prevail in Bajío Guanajuatense. It is based on research carried out during 2022 in different agricultural municipalities of the state. The research is based on an exhaustive bibliographical review and the analysis of databases generated by the INEGI, the SIAP and the CONEVAL, as well as from ethnographic fieldwork carried out during March, April and May in the municipalities of León, Romita, Irapuato, San Francisco del Rincón, Valle de Santiago and Dolores Hidalgo. During fieldwork, formal and informal interviews were conducted with different actors in the agricultural sector. These interviews were conducted by the authors. Finally, a survey was carried out on employers and workers of export companies.

The diagnosis is divided into seven sections that address the working and living conditions of agricultural farm workers in the region. The first describes in detail our methodology and field work in Bajío Guanajuatense. The second recounts the agricultural history of the Bajío Guanajuatense referring to bibliographic sources and data collected in the field, while using data from the SIAP to describe the current agricultural structure presented by the state. Since the agricultural structure has a direct impact on the configuration of labor markets, this aspect is analyzed in the next section.

The third section looks at working conditions. It includes an analysis of the INEGI Population and Housing Census 2020 combined with SIAP –production– databases, which allow us to describe the quality of working conditions in each of the state's municipalities according to their main crops. The analysis includes both the general farm worker population and the indigenous farm worker population and was carried out by Jornamex for the entire country, although in this document we only delve into the main agricultural municipalities of Guanajuato.<sup>14</sup> Next in this segment comes the section that analyzes the results of the Encuesta Nacional de Jornaleros en la Agricultura de Exportación (ENJOREX) [National Survey of Farm Workers in Mexico's Export Agriculture] 2022 that was carried out by our team in Bajío

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14 Maps for the rest of the country can be found here: <https://jornamex.com/mapas.html> and here: <https://www.wilsoncenter.org/collection/municipal-maps-compliance-and-non-compliance-labor-conditions-mexico>





Guanajuatense for this study. With the data collected during fieldwork, the third and fourth sections of this segment characterize the types of agricultural labor market, firstly the formal labor market followed by the informal labor market. In these two sections, working conditions are analyzed for each.

Our ethnography showed that in Guanajuato, in addition to the segmentation that labor markets present according to whether they are formal or not, there is an important differentiation of workers based on their origin and migratory status. For this reason, the fourth segment focuses on the issue of migrant workers and their working and living conditions. Temporary migrant workers account for a small share of the total working population, but their living and working conditions deserve a careful look. The following segment deals with child labor, which we identify as a very significant problem in the region. It stems from a variety of elements such as the type of labor market, the lack of state regulations, the responsibility of employers, and effective access to educational institutions. We address all these factors in order to provide a broad overview of this situation. The sixth segment focuses on the dynamics of agricultural production and poverty in the main agricultural –and exporting– municipalities of Guanajuato. Lastly, given the relevance of social security affiliation as a labor right and the effect it has on people's lives, the final analytical section is devoted to health care and social programs. The aim is to describe the situation endured by workers in the state to serve as input for decision makers to improve the conditions faced by farm workers.

### *Closing Remarks*

This book hopes to show the reader that export agriculture has, in recent years, been associated with far better working conditions than domestic production; that municipalities that are strongly involved in export agriculture lower their poverty rates; and that export agriculture may be a factor providing alleviation for Mexico's chronic inequality. On the other hand, regional farm labor markets differ markedly from each other. They can easily be ranked in terms of income and job benefits, although the sheer numbers only tell a small part of the story of what is involved in surviving as a farm worker in each exporting region. Each chapter explains the hidden costs of living as a farm worker. Also, there is a "gray area" in each one of these labor markets, one in which it is hard to tell whether or not some produce of substandard labor conditions makes its way to the export supply chain. These gray areas are small and clearly bounded in some cases, supporting the case that almost no crops produced in this way are exported, but in others they are intertwined with exports. In each one of the regions analyzed here, the urgency to act is quite different, and the strategies required are also specific. This book is intended not just as an instrument showing most of Mexico's export produce workers benefit from legal wages and working conditions. It is also a call to action to fix the problems we have observed.





# I. JALISCO

## **REGIONAL STUDY**

**Agricultural Change, Population and Labor  
in the Zapotlán Valley**





## 1.1. POPULATION GROWTH AND MIGRATION

The Zapotlán Valley has an area of 639.18 square kilometers, divided into two municipalities: Zapotlán el Grande with 295.29 square kilometers and Gómez Farías with 343.89 square kilometers (INEGI, 2015). Zapotlán el Grande has 52 localities, and the municipal seat is Ciudad Guzmán.<sup>1</sup> Gómez Farías has 19 localities, and its municipal seat is San Sebastián del Sur. The land use in Zapotlán is mostly agricultural: 48.5% of its total area. Gómez Farías is 55.4% forest and 34.3% is devoted to agricultural use (IIEG, 2019a, 2019b). Although a large part of the area is used for agriculture, recent decades have seen growing urbanization driven by real estate development following the 1985 earthquake in Ciudad Guzmán (Cabrales-Barajas & Medina-Ríos, 1997). Since then the urban population of the Valley has increased and the rural population has decreased, mainly in the municipality of Gómez Farías. In Zapotlán el Grande the urban population has been nearly constant, with a decrease of one percentage point from 2000 to 2010.

**Table 1.1.** Urban and Rural Population in the Zapotlán Valley, 1980-2010

	Gómez Farías			
	1980	1990	2000	2010
<b>Urban Population</b>	83%	85%	86%	88%
<b>Rural Population</b>	17%	15%	14%	12%
	Zapotlán el Grande			
	1980	1990	2000	2010
<b>Urban Population</b>	98%	98%	98%	97%
<b>Rural Population</b>	2%	2%	2%	3%

**Source:** Authors' elaboration with data from the 10th General Census of Population and Housing (1980), INEGI; the 11th General Census of Population and Housing (1990), INEGI; the 12th General Census of Population and Housing (2000), INEGI and the 2010 Census of Population and Housing, INEGI.

The urbanization process has been accompanied by a significant increase in population. From 1980 to 2015 the population of the Zapotlán Valley increased by 64%: 34% in Gómez Farías and 69% in Zapotlán el Grande. This increase is seen in the population density: from 1980 to 2015 the density in Gómez Farías increased from 30.87 to 40.4 inhabitants per square kilometer; in the same period the density of Zapotlán el Grande increased from 211.15 to 385.47 inhabitants per square kilometer.

<sup>1</sup> In 1856 the name of the municipality of Zapotlán el Grande was changed to Ciudad Guzmán (De la Peña, 1980). In 1997 the name was changed back, and the municipal seat kept the name of Ciudad Guzmán.



**Table 1.2.** Total Population by Sex in the Zapotlán Valley, 1980-2015

	1980	1990	2000	2010	2015
<b>Total Population in the Municipality of Gómez Farías</b>	<b>10,616</b>	<b>11,699</b>	<b>12,705</b>	<b>14,011</b>	<b>14,278</b>
Male	5,246	5,590	6,051	6,778	6,810
Female	5,590	6,109	6,665	7,233	7,468
<b>Total Population in the Municipality of Zapotlán el Grande</b>	<b>62,353</b>	<b>74,068</b>	<b>86,743</b>	<b>100,534</b>	<b>105,423</b>
Male	30,035	35,704	41,398	48,661	51,215
Female	32,318	38,704	45,354	51,873	54,208
<b>Total Population in the Zapotlán Valley</b>	<b>72,969</b>	<b>85,767</b>	<b>99,448</b>	<b>114,545</b>	<b>119,701</b>
Male	35,281	41,294	47,449	55,439	58,025
Female	37,908	44,813	52,019	59,106	61,676

**Source:** Authors' elaboration with data from the 10th General Census of Population and Housing (1980), INEGI; the 11th General Census of Population and Housing (1990), INEGI; the 12th General Census of Population and Housing (2000), INEGI; the 2010 Census of Population Housing, INEGI and the the 2015 Intercensal Survey, INEGI.

In 2015 the Valley had a total population of 119,701, 58,025 male and 61,676 female, with the majority concentrated in Ciudad Guzmán, with 100,127 inhabitants, according to INEGI (2015). This concentration in Ciudad Guzmán is the result of the economic development of recent decades. The city has become one of the major cities in the state of Jalisco: by 1995 it had become the third-largest city (Cabrales-Barajas & Medina-Ríos, 1997, p. 324). Macías-Macías (2004) calls it one of the state's medium-sized cities, on a par with Puerto Vallarta, Lagos de Moreno, Tepatitlán, and Ocotlán. All of these are distinguished from other urban centers by their economic and commercial growth in the past few decades. Ciudad Guzmán has acquired importance in large part because of its strategic geographic position, which connects Jalisco with the neighboring state of Colima, which hosts one of the country's major ports. Although Zapotlán el Grande is characterized by its urban and commercial growth, agriculture continues to be one of the main economic activities of the microregion.

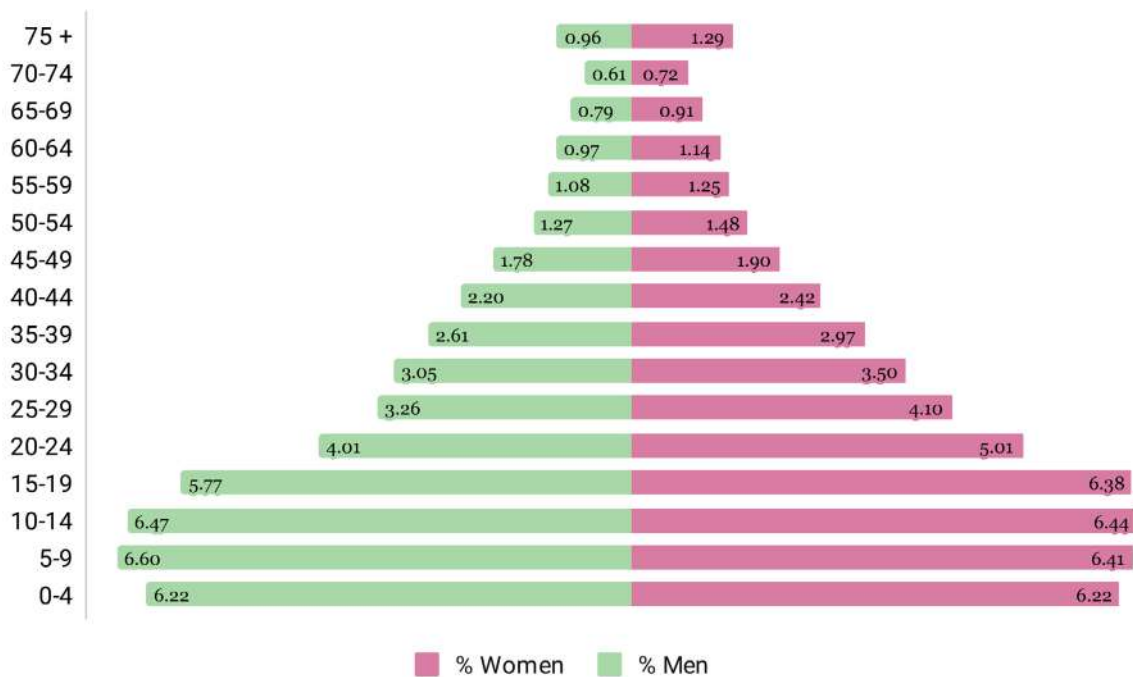
The demographic growth of the past decade has been not only an effect of urban development, but also of the recent emergence of the agricultural export industry of fruits and vegetables. This type of productive development usually attracts labor from other places at the same time that it creates jobs for local workers. The population growth of a municipality not growing fruits and vegetables, in a region still devoted to traditional agriculture, is much less than that in the municipalities of the Valley. One example is Amacueca, 51.9 km from the municipal seat of Zapotlán el Grande, in which the population increased only 15% from 1980 to 2015, a much lower rate of growth than in municipalities that are growing fruits and vegetables. In Tepatitlán de Morelos, however, whose municipal seat is also described by Macías-Macías



(2004) as one of the state’s medium-sized cities, the rate is greater than in the municipalities of the Valley: from 1980 to 2015, it grew by 80%, 66% more than Amacueca and 11% more than Zapotlán el Grande. The dairy, poultry, and textile industries in Tepatitlán have been in the region longer than the fruit and vegetable industry of southern Jalisco, a sign that the agroindustrial or industrial productive systems developed under the economic model of clusters,<sup>2</sup> like poultry and textiles, have the effect of increasing the population.

The age and sex distribution in the region has also changed in recent decades. In 2010 there was a marked increase in the population in economically productive age groups, especially aged 20-24 and 25-29, as seen clearly in the population pyramids from 1990 to 2015 (Figures 1.1, 1.2, 1.3, and 1.4). In this period the bases of the pyramids narrowed and the centers and apexes widened.

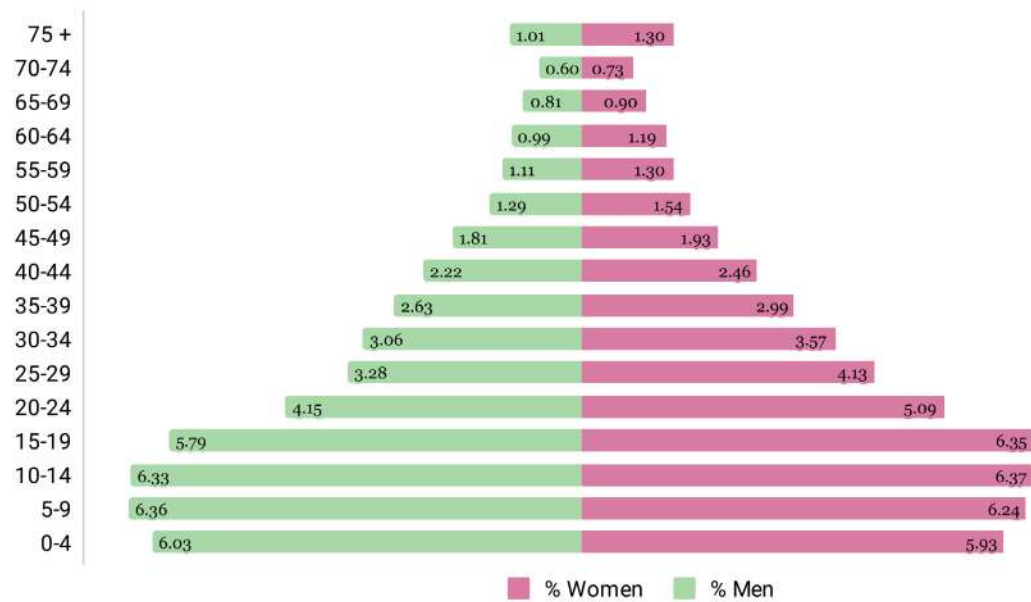
**Figure 1.1.** Population Pyramid by Percentage for the Zapotlán Valley Microregion, 1990



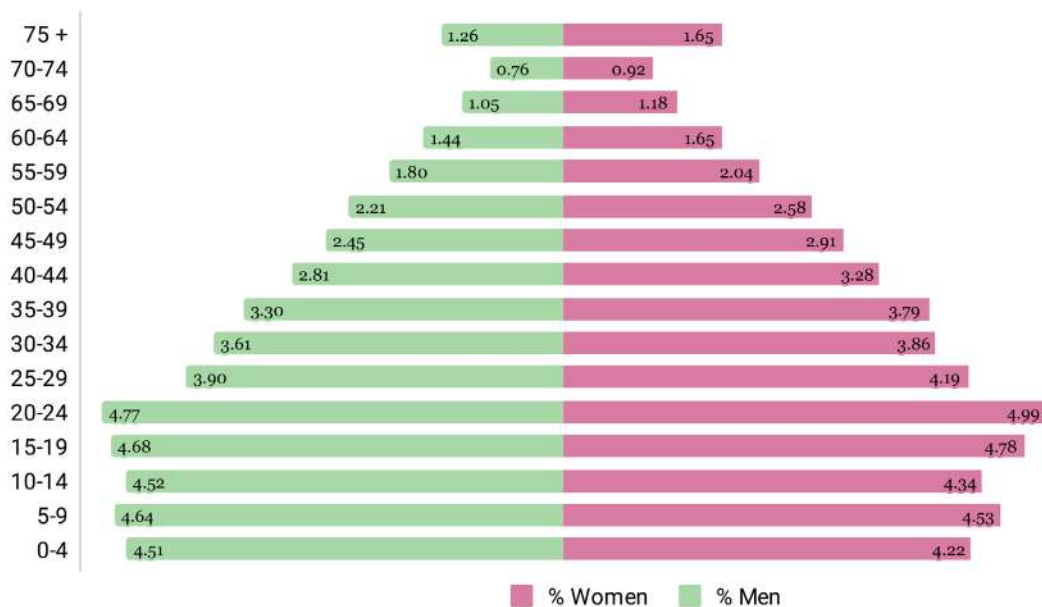
**Source:** Authors’ elaboration with data from the 11th General Census of Population and Housing (1990), INEGI.

2 Alejandro Macías-Macías (2003) returns to Michael Porter’s (1999) concept of “clusters,” defined as a conglomerate of companies and institutions in related, interconnected sectors that are characterized by cooperation and competition in pursuit of greater levels of development and economic growth within a specific geographic space. These companies and institutions must be capable of incentivizing an intense local competition through the supply of goods and services to other industries, as well as the constant stimulation of innovation and the generation of mature and exacting local demand (Macías-Macías, 2003, pp. 94-95). According to Macías-Macías, there were five clusters in Zapotlán el Grande at the beginning of the twentieth century: dairy, lumber, corn, tourism, and medical services.



**Figure 1.2.** Population Pyramid by Percentage for the Zapotlán Valley Microregion, 2000

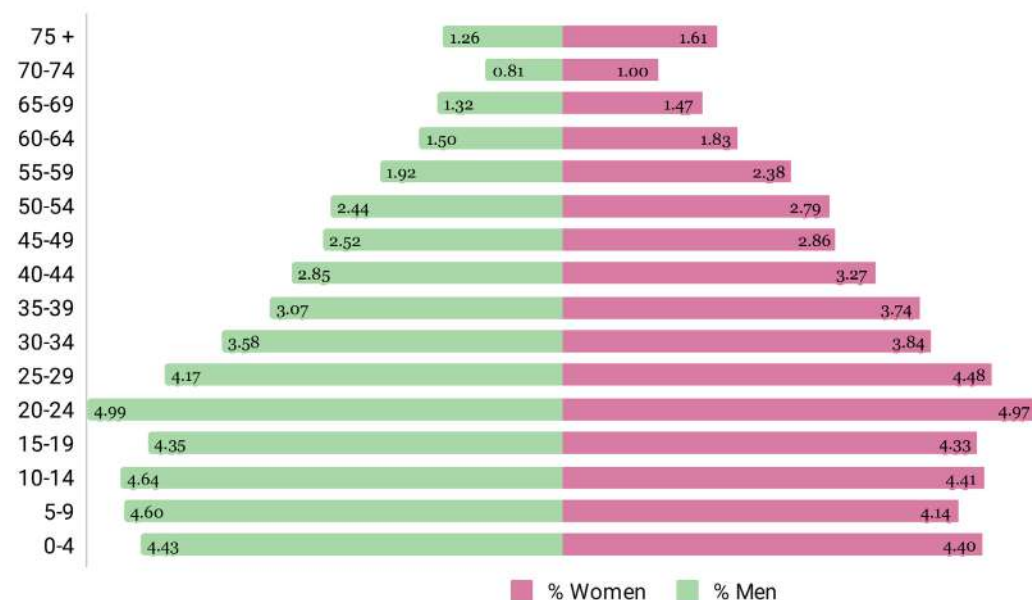
**Source:** Authors' elaboration with data from the 12th General Census of Population and Housing (2000), INEGI.

**Figure 1.3.** Population Pyramid by Percentage for the Zapotlán Valley Microregion, 2010

**Source:** Authors' elaboration with data from the 2010 Census of Population and Housing, INEGI.





**Figure 1.4.** Population Pyramid by Percentage for the Zapotlán Valley Microregion, 2015

**Source:** Authors' elaboration with data from the 2015 Intercensal Survey, INEGI.

As can be seen in these figures, the 1990 population pyramid is progressive, with a wide base that narrows in the older groups. The 2015 pyramid, however, begins to take the form of a rhombus. In 1990 the population was predominantly young, with a high proportion of children and adolescents, the product of high birth and death rates. In 2015, there was a decline in these age groups, with a notable increase in the population of older adults. The dependence index,<sup>3</sup> the ratio between the inactive population –defined as people younger than 15 or older than 64– and the theoretically active population, was 78% in 1990, but had fallen to 52% in 2015. Although not all of the inactive persons were outside the labor market,<sup>4</sup> this indicator allows us to see an increase or decrease over time. Even though the dependence index decreased from 1990 to 2015, the population aged 65 and older increased, a dynamic that can be seen in the composite pyramid that compares data from 1990 to 2015 (Figure 1.5), where the bars representing older adults are widened.

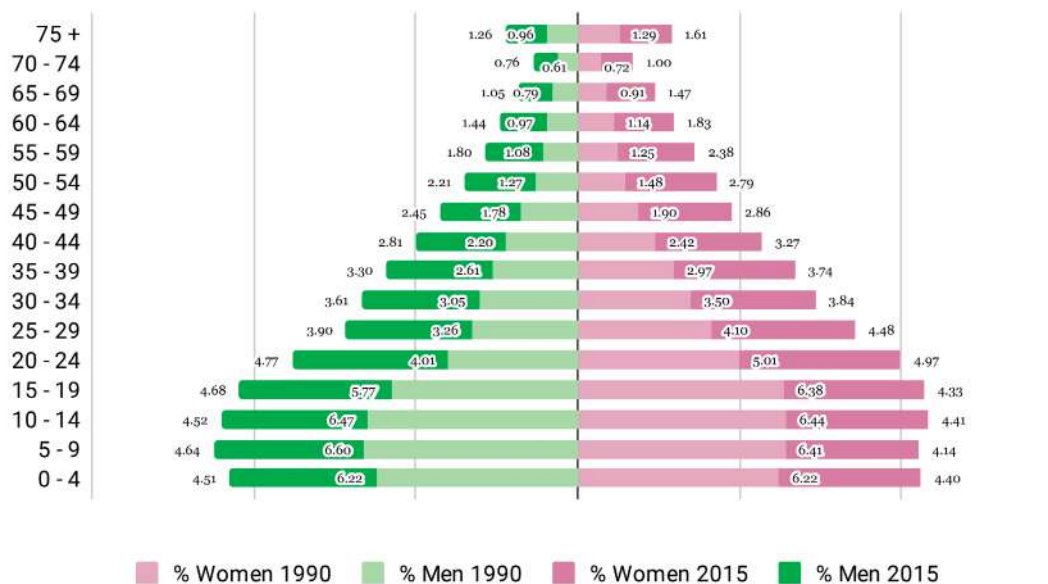
<sup>3</sup> The dependence index or ratio “measures the population in ‘theoretically’ inactive ages relative to the population in ‘theoretically’ active ages” (CELADE, s.f.). The calculation is made by dividing the total population aged 0-14 or 65 and older by the total population aged 15-64, and multiplying by 100. This index expresses a potential relationship of dependence, since not all of those defined as economically inactive are actually outside the labor market. Indeed, there are cultures and communities in which family labor is part of social reproduction.

<sup>4</sup> For example, child labor was previously common in the agricultural sector. The industrial export agriculture in the region now prohibits the hiring of minors, but it also employs workers older than 65, which was not previously a practice (Escobar et al., 2019).



From 1990 to 2015 the proportion of persons older than 60 increased from 7% to 10%. The rate of aging<sup>5</sup>, which describes the ratio of older adults to children and young people, shows a notable increase in the older population. In 1990 it was 19%, meaning that for every 100 persons younger than 15 there were 19 adults older than 60; this figure doubled by 2015 to 41%.

**Figure 1.5.** Population Pyramid Based on Percentages for Zapotlán Valley, 1990-2015



**Source:** Authors' elaboration with data from the 11th General Census of Population and Housing (1990), INEGI, and the 2015 Intercensal Survey, INEGI.

The decline in children and adolescents is a more accelerated process than the increase in older adults, a result of the decline in fertility on a national level as a consequence of the demographic transition.<sup>6</sup> This decline is corroborated by an analysis of the total fertility rate for women in the Zapotlán Valley,<sup>7</sup> which was 3.6 in 1990 and declined to 2.1 by 2015.<sup>8</sup> The age ranges 20-24 and 25-29 were those with the greatest increase in the last decade, which suggests changes in the patterns of migration. The state of Jalisco has had a strong tradition of migration to the

5 The rate of aging is calculated by dividing the population older than 60 by the population aged 0-14 and multiplying by 100.

6 This process refers to the demographic change in which birth and death rates decline. In Mexico the first phase was from 1945 to 1960, a period in which death rates declined but birth rates increased. The second phase began in 1970 with the decline in fertility. The third phase is a convergence of birth and death rates; it is projected to take place in the second half of the twenty-first century (Partida-Bush, 2005).

7 The total fertility rate is the average number of children a woman will have during her reproductive life.

8 The 1990 total fertility rate was obtained from data from the 11th General Census of Population and Housing (1990). The 2015 rate was calculated by adding the specific fertility rates of five-year age ranges for women aged 15-49, multiplied by five, for women usually residing in the municipalities of Gómez Farías and Zapotlán el Grande. This calculation was based on the definition of the Sistema de Indicadores Sociodemográficos de Poblaciones y Pueblos Indígenas (SISPPi) [System of Sociodemographic Indicators of Populations and Indigenous Peoples] (CELADE, s.f.).



United States since the first half of the twentieth century. The 2010 index of migratory intensity of the Consejo Nacional de Población (CONAPO) [National Population Council],<sup>9</sup> classifies the state as high intensity; it is above the national average for the four indicators used by CONAPO. Migration became a highly important phenomenon in the second half of the twentieth century, a consequence of the lack of employment opportunities in the region (De la Peña, 1980). An analysis of the number of persons living outside the state or country for five years prior to each census confirms the persistence of this dynamic of migration (Table 1.3).

**Table 1.3.** Residents of Same State Versus Other State or Country Five Years Ago, by Census Year

	Residents of Same State 5 Years Ago	Residents of Other State or Country 5 Years Ago	Residents of Same State 5 Years Ago	Residents of Other State or Country 5 Years Ago	Residents of Same State 5 Years Ago	Residents of Other State or Country 5 Years Ago	Residents of Same State 5 Years Ago	Residents of Other State or Country 5 Years Ago
<b>Municipality</b>	<b>1990</b>	<b>1990</b>	<b>2000</b>	<b>2000</b>	<b>2010</b>	<b>2010</b>	<b>2015</b>	<b>2015</b>
<b>Gómez Farías</b>	9,848	176	10,848	284	12,135	310 <sup>1</sup>	12,587	232
<b>Zapotlán el Grande</b>	62,514	2,257	74,881	2,212	87,360	2,841 <sup>2</sup>	92,246	3,522
<b>Total</b>	<b>72,362</b>	<b>2,433</b>	<b>85,729</b>	<b>2,496</b>	<b>99,495</b>	<b>3,151</b>	<b>104,833</b>	<b>3,754</b>

**Source:** Authors' elaboration with data from the 11th General Census of Population and Housing (1990), INEGI; 12th General Census of Population and Housing (2000), INEGI; 2010 Census of Population and Housing, INEGI; and the 2015 Intercensal Survey, INEGI.

<sup>1</sup> Of the total number of persons resident outside the state, 125 lived in another state, 184 lived in the U.S., and one lived in another country.

<sup>2</sup> Of the total number of persons resident outside the state, 1,745 lived in another state, 1,050 lived in the U.S., and 46 lived in another country.

Data from the 2010 census are sufficiently disaggregated to determine the number of people who lived in the U.S. five years before. Of the 310 persons in Gómez Farías who lived then in another state or country, 184 lived in the U.S.; of the 2,841 in Zapotlán el Grande, 1,050 lived in the U.S. From 2010 to 2015, the number of residents of Gómez Farías living outside the state or country declined by 25%, which could be related to the development of export agriculture and the new sources of employment it has generated in the region in recent years. Previously, the main employment options were in the commercial cultivation of sugar cane, corn, and

9 CONAPO's index of migratory intensity "considers the demographic and socioeconomic dimensions of international migration, and is a summary measurement that allows for the differentiation between the country's states and municipalities according to the intensity of different modalities of migration to the U.S. and the receipt of remittances" (CONAPO, 2012, p. 27). The estimation of the indices published in 2012 was carried out based on a sample of ten percent of the 2010 Census of Population and Housing, using information from the extended questionnaire. The unit of analysis is the household, and four characteristics are considered: households that receive remittances, households with emigrants to the U.S. during 2005-2010, households with emigrants to the U.S. who also returned to Mexico during that same period and continued to live there until the day they were counted (circular migrants), and households with migrants who lived in the U.S. in 2005 but returned to Mexico before the 2010 census was taken—return migrants— (CONAPO, 2012).



tomatoes, all of which were characterized by low wages, casual employment, and informal hiring. Men chose to migrate in search of other jobs, as in the case of Carlos:

Carlos is a 45-year-old farmworker currently employed as a security guard, fumigator, and picker in one of the berry fields in the region. He began working at the age of 15 as a casual worker growing tomatoes in Sayula. When he formed his own household and increased the number of his dependents, the wages he earned in the tomato fields were not enough to pay his household expenses. Worries about having enough food and the long workdays in the fields caused serious family problems. For this reason, in 2006 Carlos decided to look for a better job in the U.S. There he worked as a gardener and cleaner. A year after he went to the U.S., Carlos made a visit to Jalisco and learned that people were being hired to work in the berry fields that had recently begun to operate in the region. Since then he has worked in different companies dedicated to this crop. This job has provided him with better wages and working conditions than previous jobs, including in the U.S. With the wages Carlos earns in the berry fields he has been able to support his family without having to leave the region (Case study of Carlos, compiled by Michelle Judd).

The phenomenon of migration is directly related to the employment opportunities available in an area. When there are few employment options, people leave their homes to look for other sources of income, reducing the availability of labor. However, when an area has an economic activity with a significant need for labor and that offers better wages, there is migration to that place, as is the case in southern Jalisco.

The berry and avocado crops in southern Jalisco have become an employment option for the people of the region. As a new option in the agricultural labor market, its development could play a role in reducing migration to the U.S. The difference between the CONAPO index of migratory intensity in 2000 and in 2010 suggests an important reduction in migration from the Zapotlán Valley to the U.S. This index measures the number of households that receive remittances and those that report emigrants to the U.S., circular immigrants, and return immigrants. It shows that the degree of migratory intensity has remained steady in Gómez Farías, where it is medium-level, and in Zapotlán el Grande, where it is low.<sup>10</sup> However, all of the indicators have declined except return migration, which has increased. In Gómez Farías the indicators with the greatest decrease are households with emigrants to the U.S., which fell from 8.32% to 4.60%, and circular migrants, which fell from 2.24% to 0.42%. In Zapotlán el Grande the percentage of households with emigrants to the U.S. showed a greater decrease, a reduction of 4.82 percentage points. These figures mean that fewer people are leaving for the U.S. and more are returning to their places of origin. The reduction in migration allows us to posit that jobs growing berries and avocados are retaining local labor, though we also cannot overlook other factors affecting migration, such as increased prison terms, greater border vigilance, and the presence of organized crime.

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<sup>10</sup> The degrees of migratory intensity in the municipalities of the Valley are also a reflection of the greater opportunities for employment in Zapotlán el Grande, given its urban development.



**Table 1.4.** Index of Migratory Intensity, 2000 and 2010

Municipality	Total Households <sup>1</sup>		% Households Receiving Remittances		% Households with Emigrants to U.S. in the Previous 5 Years		% Households with Circular Migrants in the Previous 5 Years		% Households with Return Migrants in the Previous 5 Years		Degree of Migratory Intensity
	2000	2010	2000	2010	2000	2010	2000	2010	2000	2010	
Gómez Farías	2,766	3,566	8.46	8.20	8.32	4.60	2.24	0.42	3.00	4.75	Medium
Zapotlán el Grande	21,057	24,733	6.54	3.51	5.80	0.98	0.93	1.23	1.14	2.11	Low

**Source:** Authors' elaboration with data from the 2000 and the 2010 Index of Mexico-U.S. Migration of the CONAPO (2002, 2012) and the indexes by state and municipality of the CONAPO (2017).

<sup>1</sup> Total number of households in the political-administrative unit; may be greater than or equal to the denominator used for the calculation of each indicator.

Export agriculture has not only had an impact on migration from Mexico to the U.S.; it has also generated new currents of internal migration. The literature on agricultural markets has demonstrated that regions with significant industrial agriculture receive a large number of farmworkers every season from other parts of the country (Lara-Flores, 2006, 2012; Rojas-Rangel, 2017; Sánchez-Saldaña 2001). The Zapotlán Valley is no exception, as noted by Escobar et al., (2019). During the harvest, workers arrive in this region from other parts of the country, mainly from Chiapas, Guerrero, Oaxaca, Tabasco, and Veracruz. This dynamic is visible in the CONAPO data (2017) for the category of municipal migration.<sup>11</sup> In 1995-2000, Zapotlán el Grande had a high level of emigration. By 2005-2010 it was in a state of equilibrium, with emigrants leaving and people arriving from other parts of the country. Gómez Farías, however, went from a medium to a high level of emigration, first, because most of the housing for temporary agricultural workers is located in Ciudad Guzmán, and second, because the expansion of the berry fields arrived there later. Data from the Servicio de Información Agroalimentaria y Pesquera (SIAP) [Agriculture and Fisheries Information Service] show that in 2011 only two hectares of blueberries were planted there; it was not until 2015 that the area dedicated to this crop began to increase. With these data we suggest that the development of export agriculture has affected migration in this region. It has become a new source of employment, one that has reduced migration to the U.S., and it has also generated a dynamic of labor migration that is attracting young people at economically productive ages to work in the berry fields and avocado groves. The growth of this labor market explains the increased numbers in productive age groups: young people from the area stay to work in the region, and men and women arrive from other states to work in the Zapotlán Valley.

Among the latter are the workers who come from the foothills of Guerrero. In their testimonies these workers say that the main economic activity in their communities is agriculture: the planting of corn, beans, squash, and chickpeas, mainly for their own consumption. They plant their own fields and sometimes "rent" themselves as laborers for a wage that varies from 80 to 120 pesos a day. The lack of employment and low wages force them to migrate to the

11 These data reflect the dynamics of internal migration in Mexico.



U.S. or to other states in Mexico in search of subsistence. Among the states they migrate to are Sonora, Sinaloa, Baja California, and Michoacán, where they work at temporary jobs in the cultivation of tomatoes, grapes, and chiles. A little more than five years ago they also began to migrate to Zapotlán el Grande to work in the berry fields. In recent years, berries and tomatoes have become one of the major sources of employment for people from these communities. One farm worker says that in his town “half go to Sinaloa and the other half come to Jalisco” (Interview with Ramiro, July 18th, 2020). Among the many cases is Alberto, who migrated from Guerrero to Ciudad Guzmán in 2016:

Alberto is a young man, 25 years of age, from Pantitlán, a small town in the foothills of Guerrero. When he was very young he began work in the family's field and as a laborer in the corn fields. After much sacrifice he finished high school and entered a technical training program in Chilpancingo in the hope of finding better employment opportunities.

To pay for his studies Alberto worked at a convenience store and in a tortilla shop, jobs where he earned a weekly wage of 800 pesos. When he finished he worked in different auto shops, earning a weekly wage of 1200 pesos. He had no formal contract or benefits in any of these jobs. In 2016, when he was 21, an uncle invited him to work in the berry fields in southern Jalisco. Together with 11 others from Pantitlán —including his uncle, his girlfriend, his sister-in-law, and five cousins— he traveled to Zapotlán el Grande. Since then, he has worked for the same company, and he returns to Guerrero only to visit family and friends. He says he has better wages and benefits in Zapotlán el Grande, which would be difficult to find in Guerrero (Case study of Alberto, compiled by Elisa Martínez).

The testimonies of the farm workers arriving in Jalisco make constant reference to the lack of employment options and the low wages in their communities of origin. The situation is more critical for women, whose only options are working in the family field or in the home. The fields of Jalisco have become one of the destination points on the migratory routes of farm workers, and a better option even than other areas dedicated to export agriculture, like the tomato fields of Sinaloa or the vineyards of Sonora. Many of the farm workers who previously migrated to fields in the north or in the U.S. now choose to stay and work in the Zapotlán Valley.

The agricultural workers arriving from other states include those from indigenous groups (Escobar et al., 2019). According to the Comisión Nacional para el Desarrollo de los Pueblos Indígenas (CDI) [Commission for the Development of Indigenous Peoples],<sup>12</sup> in 2015 0.4% of the population of the Zapotlán Valley were indigenous people aged five years

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12 Data for the indigenous population are obtained using the methodology of the System of Information and Indicators for the Indigenous Population of Mexico of the CDI, which is based on “identification of the indigenous household and the quantification of the population based on the number of household members” (CDI, 2016). “The concept of the indigenous household is defined as one where the head of the household, spouse, mother, father, stepmother, stepfather, grandfather, grandmother, great-grandfather, great-grandmother, great-great-grandfather, great-great-grandmother, father-in-law, or mother-in-law indicates that they speak an indigenous language. All of the household members are counted as indigenous even if they do not speak an indigenous language. To supplement the quantification of the indigenous population in indigenous households, the number of speakers of indigenous languages that do not form part of these households is added” (CDI, 2016).



or older. This figure corresponded to 463 people, 67 in Gómez Farías and 396 in Zapotlán el Grande. The majority of indigenous people were in the age range of 15 to 64 years, that is, in the economically productive age group. We interpret these data to mean that part of this population is not originally from the area, but consists of people who have come from other parts of the country to work in the region.

**Table 1.5.** Distribution by Age and Sex of the Indigenous Population in the Zapotlán Valley

Municipality	Total		Male			Female				
	2015 Indigenous Population	%	Total	0-14 years	15-64 years	65+ years	Total	0-14 years	15-64 years	65+ years
Gómez Farías	67	0.5	32	10	22	-	35	13	21	1
Zapotlán el Grande	396	0.4	210	22	179	9	186	31	146	9
<b>Total</b>	463	0.4	<b>242</b>	32	201	9	<b>221</b>	44	167	10

**Source:** Authors' elaboration with data from Socioeconomic Indicators for the Indigenous Peoples of Mexico, CDI, which uses the System of Information and Indicators for the Indigenous Population of Mexico, and data from the 2015 Intercensal Survey, INEGI.

This interpretation is supported by an analysis of the total indigenous population born in the state. Only 66.3% is originally from Jalisco; 33.7% were born in other states. The 2015 data regarding places of residence show that five years before, 10% of the indigenous population of the Valley had lived in another state. There is thus a migratory dynamic in the population of indigenous households in the region.

This dynamic can also be seen in the number of speakers of indigenous languages, especially in Gómez Farías. In 2015, there were 183 in the Zapotlán Valley, 32 in Gómez Farías and 151 in Zapotlán el Grande. These numbers increased in both municipalities in 1995-2000, and then decreased, but in 2010-2015 there was again an increase in Gómez Farías, from 5 to 32.

These changes in the distribution of the population lead us to argue that the past decade has been a watershed in the demographic dynamics of the Zapotlán Valley. Although the decline in fertility and the increase in population of older adults are part of the process of demographic transition, the growth in economically productive age groups and in the overall population testify to the development of productive activities and the change in the region's migration trends. On the one hand, the proportion of persons leaving their homes to look for better opportunities in the U.S. has decreased. Although this decrease is a response to diverse factors, one of these is the improved options for employment in the region, among them industrial export agriculture as a source of jobs for women and men. On the other hand, work in the berry and avocado fields has promoted the transformation of the Zapotlán Valley



into one of the employment destinations on the migratory routes of agricultural workers. Its importance as an economic activity and in the labor market leads us to conclude that it has played an important role in the demographic dynamics of the past decade, and that changes in the patterns of cultivation have affected other economic and social characteristics of the region.

**Table 1.6.** Indigenous Population by State of Birth and Place of Residence, 2015

Municipality	Total Population of Indigenous Households, 2015	Place of Birth				Place of Residence in 2010				
		Jalisco	%	Other State	%	Total Population of Indigenous Households, 2015	Jalisco	%	Other State	%
Gómez Farías	67	24	35.8%	43	64.2%	59	38	64.4%	21	35.6%
Zapotlán el Grande	396	283	71.5%	113	28.5%	382	351	91.9%	21	5.5%
<b>Total</b>	463	307	66.3%	156	33.7%	441	389	88.20%	42	9.52%

**Source:** Authors' elaboration with data from Socioeconomic Indicators for the Indigenous Peoples of Mexico, CDI, which uses the System of Information and Indicators for the Indigenous Population of Mexico, and data from the 2015 Intercensal Survey, INEGI.

**Table 1.7.** Population Aged 5 Years and Older Speaking an Indigenous Language, 1995-2015

Municipality	1995	2000	2005	2010	2015 <sup>1</sup>
Gómez Farías	3	24	19	5	32
Zapotlán el Grande	110	266	246	214	151
<b>Total</b>	<b>113</b>	<b>290</b>	<b>265</b>	<b>219</b>	<b>183</b>

**Source:** Authors' elaboration with data from the 1995 Population and Housing Count; the 12th General Census of Population and Housing (2000), INEGI; the 2010 Census of Population Housing, INEGI and the 2015 Intercensal Survey, INEGI; and the Socioeconomic Indicators for the Indigenous Peoples of Mexico, CDI (2016).

<sup>1</sup> The data for 2015 were taken from the Socioeconomic Indicators for the Indigenous Peoples of Mexico, CDI (2016). The 2015 INEGI Sociodemographic Panorama indicates that data for these two municipalities is not available for lack of a sufficient sample.





## 1.2. FROM CORN TO BERRIES

The Zapotlán Valley is in Irrigation District 094 in the hydrological administrative region of Lerma-Santiago-Pacífico. During the agricultural year 2017-2018 this district supplied water to a total area of 21,850 hectares, of which 14,319 were irrigated surface for agricultural use (CONAGUA, 2019). The available hydrological basins in the Valley are the Quito basin, the Laguna de Zapotlán basin, and the Laguna de Sayula basin.<sup>13</sup> The largest volume of groundwater from the basins is for agricultural use.<sup>14</sup>

In 2015, 73.31% of the 330 users of groundwater in Zapotlán el Grande were agricultural, and 76.96% of the 218 in Gómez Farías. These figures reflect the importance of agricultural activity in the region. Zapotlán el Grande has one of the highest levels of agricultural participation, measured as the value of its product, of any municipality in the state of Jalisco. In recent years, its participation has been approximately 3%: 3.9% in 2016 and 2.9% in 2019. Although the percentage of participation declined slightly in this period, the value of production has continued to increase: in 2019 it was 2.13 billion pesos.

**Table 1.8.** Value of Agricultural Production in Millions of Pesos\* and Percentage of Participation of the Zapotlán Valley in the State of Jalisco, 2015-2019

Indicator	2015	2016	2017	2018	2019
<b>Value of Production in Jalisco</b>	46,409.15	50,620.44	60,281.11	66,913.17	74,447.71
<b>Value of Production in Gómez Farías</b>	212.44	283.86	286.92	359.80	534.75
<b>% Participation of Gómez Farías in Jalisco</b>	0.46%	0.56%	0.48%	0.54%	0.72%
<b>Value of Production in Zapotlán el Grande</b>	1,334.82	1,972.37	1,787.96	1,891.88	2,130.70
<b>% Participation of Zapotlán el Grande in Jalisco</b>	2.90%	3.90%	3.00%	2.80%	2.90%

**Source:** Authors' elaboration with data on agricultural production for 2015-2019 from the SIACON.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

The increase in the value of production responds to a change in the patterns and types of crops. Although this region has a long agricultural tradition, the volume of production and the value per hectare harvested has increased considerably in the last ten years, with little change to the

13 For geohydrographic file of the Zapotlán Valley, see appendix A.

14 For the uses of water in the Zapotlán Valley, see appendix B.



total area planted. This can clearly be seen in Tables 1.9 and 1.10, which show the evolution of agricultural production in each of the municipalities of the Valley.

**Table 1.9.** Agricultural Production\* in the Municipality of Gómez Farías, 2005-2019

Year	Area Planted (hectares)	Area Harvested (hectares)	Production in Metric Tons	Percent Increase in Production in Tons	Value of Production in Thousands of Pesos	Percent Increase in Production in Thousands of Pesos	Value per Hectare Harvested in Thousands of Pesos
2005	5,817.95	4,489.85	53,226.13		81,030.40		18.05
2006	5,265.50	4,856.50	55,818.35	4.87%	96,278.50	18.82%	19.82
2007	5,379.56	5,053.56	65,615.73	17.55%	163,318.59	69.63%	32.32
2008	5,143.50	4,986.58	60,511.64	-7.78%	147,501.72	-9.68%	29.58
2009	5,298.50	4,407.50	39,589.23	-34.58%	153,687.40	4.19%	34.87
2010	5,488	5,262	50,998.96	28.82%	198,088.29	28.89%	37.65
2011	5,973.20	5,741.50	58,635.41	14.97%	165,074.75	-16.67%	28.75
2012	6,383.20	6,151.50	45,373.60	-22.62%	165,650.35	0.35%	26.93
2013	6,453.61	6,153.61	54,157.88	19.36%	173,123.75	4.51%	28.13
2014	7,244	6,735.60	99,669.62	84.04%	194,693.97	12.46%	28.91
2015	6,693.50	6,258.59	94,106.82	-5.58%	212,445.85	9.12%	33.94
2016	8,326.45	7,249.59	120,953.08	28.53%	283,861.35	33.62%	39.16
2017	8,147.46	7,145.60	142,457.45	17.78%	286,926.69	1.08%	40.15
2018	7,699.96	7,376.33	135,811.72	-4.67%	359,805.59	25.40%	48.78
2019	6,841.96	6,423.33	110,597.55	-18.57%	534,756.65	48.62%	83.25

**Source:** Authors' elaboration with data on agricultural production for 2005-2019 from the SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

In the municipality of Gómez Farías the most notable increases in the value of production were in 2007, 2016, and 2019. In the latter year production increased by 54% over the previous year. However, the area planted and harvested has increased little over the past 14 years. From 2005 to 2019, the area planted increased only 18%, while the value per hectare increased by 361%. The increase in value is constant from 2015, but it was in 2018 that it nearly doubled. These changes coincide with the expansion of industrial agriculture dedicated to the cultivation of berries and avocados. Although the planting of blueberries began here in 2011, it was not until 2015 that the area dedicated to this crop was extended.



**Table 1.10.** Agricultural Production\* in the Municipality of Zapotlán el Grande, 2005-2019

Year	Area Planted (hectares)	Area Harvested (hectares)	Production in Metric Tons	Percent Increase in Production in Tons	Value of Production in Thousands of Pesos	Percent Increase in Production in Thousands of Pesos	Value per Hectare Harvested in Thousands of Pesos
2005	15,298.45	14,775.30	209,586.45		373,699.83		25.29
2006	14,139.50	13,760.50	13,681,672.56	6427.94% <sup>1</sup>	780,136.15	108.76%	56.69
2007	15,389.50	15,041.50	16,178,257.10	18.25%	588,932.75	-24.51%	39.15
2008	15,575	15,366.58	11,885,609.87	-26.53%	554,341.49	-5.87%	36.07
2009	17,584	13,344.80	13,026,709.51	9.60%	496,600.50	-10.42%	37.21
2010	19,401	18,875	22,879,547.51	75.64%	778,788.78	56.82%	41.26
2011	18,075.59	17,508.59	36,317,945.30	58.74%	671,482.10	-13.78%	38.35
2012	19,244.09	19,210.09	25,855,191.51	-28.81%	1,055,141.49	57.14%	54.93
2013	18,034.63	17,589.83	43,177,874.19	67.00%	1,253,942.38	18.84%	71.29
2014	13,811.72	13,009.33	51,693,078.91	19.72%	1,064,087.86	-15.14%	81.79
2015	12,559.79	11,803.70	52,664,456.18	1.88%	1,334,825.95	25.44%	113.09
2016	11,619.29	10,541.86	21,513,667.03	-59.15%	1,972,377.28	47.76%	187.10
2017	10,828.49	9,648.26	62,008,350.27	188.23%	1,787,963.19	-9.35%	185.31
2018	10,825.29	9,722.06	62,591,247.30	0.94%	1,891,884.67	5.81%	194.60
2019	10,175.29	8,905.06	45,186,511.34	-27.81%	2,130,706.71	12.62%	239.27

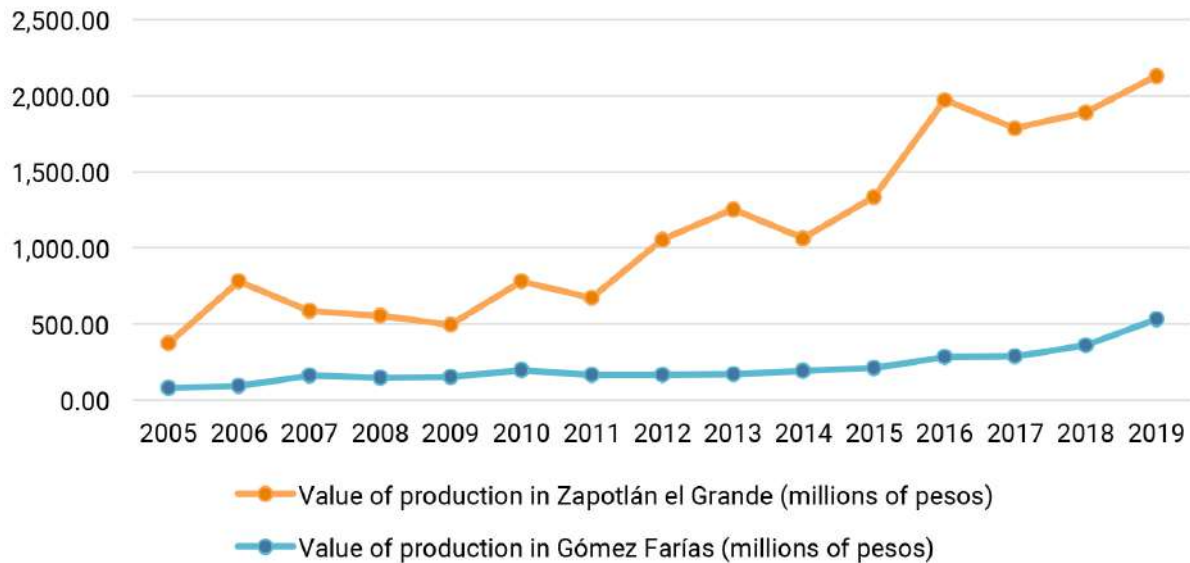
**Source:** Authors' elaboration with data on agricultural production for 2005-2019 from the SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

<sup>1</sup>The increase in the volume of production this year reflects the production of strawberries in the region. The unit of this crop is the plant, not the metric ton, as is the case for the other crops, because production is of the plants in greenhouses. In this year there was also an increase in the area of sugar cane harvested of 216.86%, and an increase in the volume of production of 175.82%. However, the area planted in sugar cane is the same as reported for the previous year.

In Zapotlán el Grande the largest increase in the value of production was in 2006, 2010, 2012, and 2016. From 2005 to 2019 the value per hectare increased 846%, while the area planted decreased by 5,870 hectares. The agricultural data show that in 2012 circumstances favored constant growth in production and value in subsequent years (See Figure 1.6). In this municipality the planting of berries began in 2010, in an area of 26 hectares. It was not until 2012, however, that their cultivation began to be extended in the region; since then their production has been increasing.



**Figure 1.6.** Annual Value of Agricultural Production\* in the Zapotlán Valley

**Source:** Authors' elaboration with data on agricultural production for 2005-2019 from the SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

Analysis of the crops planted during this period shows that the increase in production and the lack of variation in the area planted is the result not only of the introduction of berries, but also of an increased production of avocados. These two crops of high added value have displaced traditional crops, a change reflected in a clear decrease in the amount of land devoted to traditional crops, and a resultant decrease in the variety of crops planted.<sup>15</sup>

In 2005 the most important crops in Gómez Farías were agave, avocados, green alfalfa, fodder oats, grasses, grain corn, and wheat. The municipality was dedicated mainly to the production of grains and fodder. In 2010 there was a notable increase in the volume and value of grain corn: in the following five years the volume increased by 171% and the value by 371%. The value of the avocado crop in that period rose by 151%. The value of other crops remained steady or decreased as they lost importance relative to corn and avocados. Although grain corn was still the crop with the largest number of hectares planted, the total area devoted to this crop decreased from 2010 to 2019. In 2010-2015, the area planted and volume of avocado production doubled, and the value of the crop increased by 5%; there was even greater growth in 2015-2019, with a doubling of the area planted and a tripling of production. The berries – blueberries, raspberries, and blackberries—, which had not previously been grown, appeared in 2015 with 8 hectares planted, increasing to 95 hectares by 2019. The latter year produced 1032 metric tons of berries, with a value of \$32.71 million pesos. With an area planted and production volume much less than that devoted to grain corn, the value of the berry crop was only \$11.70 million pesos less.

<sup>15</sup> For a complete overview of agricultural development, see Appendices C and D.



**Table 1.11.** Agricultural Production\* of the Major Crops in Gómez Farías, 2010, 2015, and 2019

Crop	2010			2015			2019		
	Area Planted (hectares)	Production (metric tons)	Value of Production (millions of pesos)	Area Planted (hectares)	Production (metric tons)	Value of Production (millions of pesos)	Area Planted (hectares)	Production (metric tons)	Value of Production (millions of pesos)
Agave	226	8,040	13.19	449	8,726.8	44.91	378.63	6,073.2	144.86
Avocados	342	2,886	77.15	735.88	5,689.48	81.08	1,541.33	15,405.5	274.27
Blueberries	-	-	-	8	16.7	0.98	50	662	24.22
Fodder Oats	90	2,201	1.22	276	4,828.4	2.01	8	258.64	0.15
Sugar Cane	4	440.4	0.39	6	600	0.34	-	-	-
Raspberries	-	-	-	-	-	-	25	219.75	4.84
Desi	31.5	62.53	0.27	136	314	0.58	-	-	-
Garbanzos	-	-	-	-	-	-	-	-	-
Fodder Corn	70	1,841	1.38	850	24,463	11.19	700	31,570	18.27
Grain Corn	3,370	19,568.16	78.84	2,436	11,412.85	44.44	2,700	14,765.1	44.41
Grasses	930	11,160	3.35	1,391.12	35,479.3	14.14	1,310	37,413.6	14.63
Grain Sorghum	120	624	2.25	100	200	0.77	-	-	-
Tomatoes	7	850.5	8.69	3.5	402.43	1.65	1	107.88	0.81
Wheat	60	237.5	0.88	70	385	1.45	10	55.3	0.26
Blackberries	-	-	-	-	-	-	20	149.9	3.64
<b>Total</b>	<b>5,250.5</b>	<b>47,911</b>	<b>187.64</b>	<b>6,461.5</b>	<b>92,517.96</b>	<b>203.58</b>	<b>6,778.96</b>	<b>110,171.42</b>	<b>531.79</b>

**Source:** Authors' elaboration with data on agricultural production for 2019 from the SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

These data show that the major crops in Gómez Farías are currently avocados, agave, grain corn, and berries. The predominance of these products has displaced other crops. In the period 2015-2019, the number of agricultural products fell from 24 to 15—considering the three types of berries, blueberries, raspberries, and blackberries, as a single product—. Berry and avocado fields have expanded in the municipality in these last five years. Sugar cane, chickpeas, and sorghum, which were traditional crops in the region, were not planted in 2019. Oats, wheat, and tomatoes continue to be grown, but over a much smaller area.



**Table 1.12.** Agricultural Production\* of the Major Crops in Zapotlán el Grande, 2010, 2015, and 2019

Crop	2010			2015			2019		
	Area Planted (hectares)	Production (metric tons)	Value of Production (millions of pesos)	Area Planted (hectares)	Production (metric tons)	Value of Production (millions of pesos)	Area Planted (hectares)	Production (metric tons)	Value of Production (millions of pesos)
Agave	50	5,180	5.64	165	0	0.00	170.23	1,764	42.30
Avocados	2,300	9,000	122.91	3,402.19	24,241.02	368.60	5,031.9	43,669.16	791.49
Green Alfalfa	405	39,285	30.58	263	23,989.02	14.17	300	29,301	11.75
Blueberries	26	0	-	400	2,205	126.09	669.45	1,0394.37	382.59
Fodder Oats	250	7,690	5.29	373.25	11,635.75	5.92	56	1,898.4	1.19
Sugar Sane	118	12,980	11.55	150	17,250	9.66	-	-	-
Raspberries	-	-	-	500	9,390	202.98	1,970.71	30,353.05	604.15
Strawberries (plants)	140	22,579,200	30.52	350	52,500,000	42.03	75	45,000,000	52.10
Fodder Corn	2,000	30,800	27.34	155	6,975	5.18	370	17,005.9	10.05
Grain Corn	6,449	37,445.36	150.77	3,950	10,673	42.50	150	661.5	2.18
Grasses	4,950	119,250	48.62	995.85	26,576.7	11.10	1,053	30,431.7	11.61
Grain Sorghum	1,320	7,863.2	28.70	958	3,832	14.90	16	92.8	0.35
Tomatoes	315	16,122.6	239.17	248.5	16,465.6	411.63	115	17,250	153.30
Blackberries	-	-	-	-	-	-	120	1,576	38.31
<b>Total</b>	<b>18,323</b>	<b>22,864,816.16</b>	<b>701.14</b>	<b>11,910.79</b>	<b>52,653,233.09</b>	<b>1,254.82</b>	<b>10,097.29</b>	<b>45,184,397.88</b>	<b>2,101.43</b>

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015 and 2019 from the SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

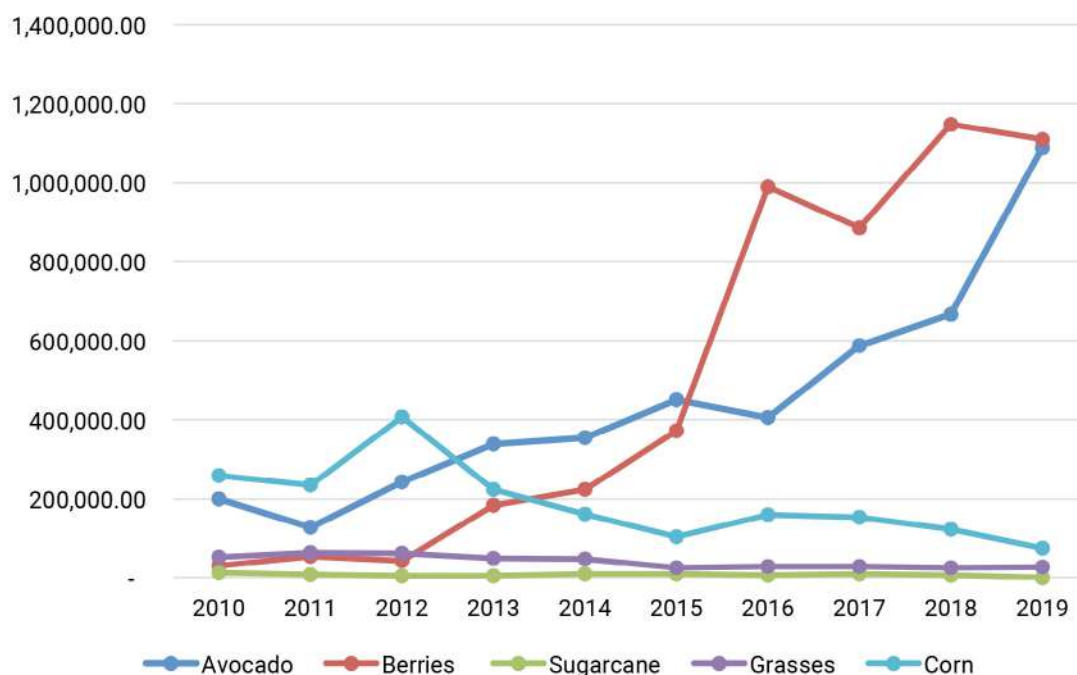
The decrease in the variety of crops is even more dramatic in the municipality of Zapotlán el Grande. From 2015 to 2019 agricultural producers stopped growing 16 crops (again considering the three types of berries as a single product). In 2005, the major crops there were green alfalfa, sugar cane, grain corn, grasses, grain sorghum, and tomatoes. In 2010 there was a slight increase in the production of grasses and tomatoes, but the most significant changes were the increase in avocado production and the introduction of strawberry plants. In those five years the production of avocados went from 240 to 9000 metric tons, and the value of the crop increased by \$120.48 million pesos. This growth continued in 2015, by which time the volume and production had nearly tripled over that of 2010. The cultivation of green alfalfa, grain and fodder corn, grasses, and grain sorghum all declined. That same year there were 900 hectares of land devoted to berry cultivation, with a value of \$329.08 million pesos. By 2019 the area cultivated had tripled, mainly for raspberries, with a value of \$1.025 billion pesos.

No sugar cane or wheat was planted in 2019, and neither were other products that had been cultivated on small fields, such as broccoli, beets, onions, cilantro, beans, limes, cucumbers, and *tejocotes*. The grain corn that had been the characteristic crop of the region was now limited to 150 hectares, with a production of 661.5 metric tons, valued at \$2.18 million pesos. This was an extremely important agricultural transformation. Apart from the change in products, the forms of cultivation had been replaced with a high-technology model of greenhouses and irrigation systems, which increased production. The change is also evident in the landscape,



which in recent years has turned white with the use of the macrotunnel greenhouses where berries are grown. Figure 1.7 shows the decrease in traditional crops, mainly grain and fodder corn, as well as the increase in berries and avocados in the Zapotlán Valley.

**Figure 1.7.** Value\* of the five main crops produced in the Zapotlán Valley, 2010-2019 (millions of pesos)



**Source:** Authors' elaboration with data on agricultural production for 2010-2019 from the SIACON.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

The value of avocado production has grown since 2011, and the value of berries since 2012. The growth of avocados has been constant, with an acceleration in 2018; berries grew dramatically in 2018. The lowest value for corn was the same year in which the production of berries took off. This leads us to believe that corn was the crop most affected by this new value-added product, mainly in Zapotlán el Grande. What were previously cornfields are now rented to large transnational companies that produce berries.<sup>16</sup> This change has been noted by diverse local sources. For example, the parish priest of the Church of San Isidro in Ciudad Guzmán notes a reduction in recent years of the end-of-harvest blessings that corn producers used to request: now "they rent their lands to foreign companies." In addition to the strong incentive to change crops, some producers say that it is more profitable to rent their lands than to keep growing corn.

<sup>16</sup> Information obtained in interviews with *ejidatarios* from Zapotlán el Grande, 14 July 2020.



The change in agriculture has not only increased the value of production, but its great demand for labor has also affected the structure of employment. Large groups of workers arrive in the harvest season to pick berries, and the residents of the Valley join them. Along with the crop's intense demand for workers, these producers also have to comply with practices of social responsibility that include higher wages, benefits, and decent working conditions. This is an important change in agricultural labor in Mexico, which has been characterized by a lack of formal contracts or benefits, and bad working conditions that have been documented by a large number of researchers (Lara-Flores, 2001; Arellano-Gálvez, 2014; RNJJA, 2019). The wages and working conditions offered by the berry industry in southern Jalisco mean that it competes not only within the agricultural sector, but also with secondary and tertiary sector economic activities. It has given rise to a displacement of workers from urban employment to agriculture, as the next section will discuss.





### 1.3. EMPLOYMENT STRUCTURE AND ECONOMIC CHANGE

The urban growth that has characterized Zapotlán el Grande since the 1980s has favored an economy centered on business and services. Although agriculture has been one of the main activities in the Valley, a large part of the economically active population has been employed in the tertiary sector. The transformations in agricultural activity of the last ten years have changed this situation. Although the growth of industrial export agriculture can best be understood in the results of the 2020 Population and Housing Census, data from the 2015 Intercensal survey already show changes in the occupational distribution. In 2010 the rate of economic participation in the Zapotlán Valley was 56%; in Gómez Farías it was 49% and in Zapotlán el Grande it was 57%. In 2015 the rate dropped to 54%; although in Gómez Farías it increased by one percentage point, in Zapotlán el Grande it decreased by two percentage points. Men have the highest participation rate, 70% in both municipalities. The highest rate for women is in Zapotlán el Grande, where it was 41% in 2015. The rate is lower in Gómez Farías, though it is important to note that it increased by five percentage points from 2010 to 2015, while the rate for men fell by three percentage points in the same period.

Apart from the slight decline from 2010 to 2015 in the economic participation rate, the important change is found in the distribution of the employed population. In both of the municipalities under study there was an increase in the number of workers employed in the primary sector. In Gómez Farías the increase was almost 10 percentage points, with a decline in the other sectors. In Zapotlán el Grande there was an increase in the secondary as well as the primary sector. However, the secondary sector increased by only one percentage point, while the primary sector increased by three percentage points. Employment in the tertiary sector decreased, mainly in services.

**Figure 1.8.** Economic Participation Rate by sex in the Zapotlán Valley, 2010 and 2015



**Source:** Authors' elaboration with data from the 2010 Census of Population and Housing and the 2015 Intercensal Survey, INEGI.



**Table 1.13.** Total Employed Population and Percentage Distributions by Economic Sector, 2010 and 2015

	Gómez Farías		Zapotlán el Grande	
	2010	2015	2010	2015
<b>Total Employed Population</b>	5,827	5,461	40,764	44,816
<b>Primary<sup>1</sup></b>	30.89	40.36	8.17	11.13
<b>Secondary<sup>2</sup></b>	30.58	23.18	20.40	21.52
<b>Business</b>	14.54	13.06	24.09	22.74
<b>Services<sup>3</sup></b>	23.43	22.27	46.40	43.88
<b>Not Specified</b>	0.57	1.14	0.93	0.73

**Source:** Authors' elaboration with data from the 2010 Census of Population and Housing, INEGI; and the 2015 Intercensal Survey, INEGI.

<sup>1</sup> It includes: agriculture, livestock, forestry, fishing, and hunting.

<sup>2</sup> It includes: mining, oil and gas extraction, manufacturing, electricity, water, and construction.

<sup>3</sup> It includes: transportation, government, and other services.

In the economic participation by occupational category there was also an increase in the number of agricultural workers, by 91% in Gómez Farías and 30% in Zapotlán el Grande.

**Table 1.14.** Total Employed Population and Percentage Distributions by Occupational Division, 2010\* and 2015\*\*

	Gómez Farías		Zapotlán el Grande	
	2010	2015	2010	2015
<b>Total Employed Population</b>	5,827	5,461	40,764	44,816
<b>Civil Servants, Professionals, Skilled Workers, and Administrators<sup>1</sup></b>	11.21	11.74	31.82	29.04
<b>Agricultural Workers</b>	17.64	33.77	6.58	8.57
<b>Industrial Workers<sup>2</sup></b>	26.05	19.37	20.61	20.00
<b>Merchants and Service Workers<sup>3</sup></b>	44.53	34.35	40.71	41.67
<b>Not Specified</b>	0.57	0.77	0.28	0.72

**Source:** Authors' elaboration with data from the 2010 Census of Population and Housing, INEGI; and the 2015 Intercensal Survey, INEGI.

\* Corresponds to the first level of categories in the CUO, 2010.

\*\* Corresponds to the categories in the SINCO, 2011.

<sup>1</sup> For 2010 and 2015 includes: civil servants, directors and supervisors, professionals and skilled workers, and support staff in administrative activities.

<sup>2</sup> For 2010 includes: mechanics, industrial and artisanal workers, industrial machine operators, assemblers, and drivers. For 2015 includes: artisanal workers, industrial machine operators, assemblers, and drivers.

<sup>3</sup> For 2010 includes: merchants, store clerks, and sales personnel, personal services workers, security and armed forces, and laborers and support workers.



These data show that a greater rate of participation in the agricultural sector is related to a greater supply of jobs in the sector. The growth in cultivation of berries and avocados has created new jobs, especially berries, which require a large number of workers in the high season. The increase in workers employed in this sector is also related to higher wages, formal contracts, and job benefits that are not found in the secondary and tertiary sectors, as described in the following case study:

Montse is a 19-year-old university student who began working in the berry fields when she was 13 years old and berries had just begun to be grown in the region. Since then she has worked in the fields as a casual laborer. She recognizes that work in the fields is very strenuous, and she has looked for jobs outside of agriculture. However, the possibilities she has found have come with lower wages, longer days, and no benefits. For a short time she worked in a shoe store in Ciudad Guzmán at a wage of \$130 pesos for a workday from 10 a.m. to 2 p.m. and 4 to 9 p.m. When she worked in the fields her wages varied between \$200 and \$300 pesos a day. The workday in the fields begins around 7 a.m. and ends between 3 and 4 p.m. when it is not harvest season. For this reason Montse keeps returning to the berry fields as a strategy to contribute to the household and to pay for her studies. (Case study compiled by Elisa Martínez.).

This account explains the reduced participation in the industrial sector, which had offered better benefits and working conditions than agricultural work (Escobar et al., 2019). Among the benefits offered by the berry companies is social security. The possibility of receiving this benefit may be one of the factors behind increased labor participation in the fields. One of the prominent advantages of this benefit is access to health services.



## 1.4. SOCIAL SECURITY AND HEALTH SERVICES

There are 17 health centers in the Zapotlán Valley: 14 in Zapotlán el Grande and three in Gómez Farías (IIEG, 2019a, 2019b). The former is home to the regional hospital of the IMSS that also provides care on a regional level. According to data from the *Instituto de Información Estadística y Geografía de Jalisco*, IIEG [Jalisco Institute of Statistical and Geographic Information] 2019a and 2019b, affiliation with IMSS in the Zapotlán Valley has increased in recent years.<sup>17</sup> In December 2019, Zapotlán el Grande was the southern Jalisco municipality with the largest number of workers enrolled in IMSS: 56%. Gómez Farías was sixth, with 2% (Table 1.15).

**Table 1.15.** Workers With IMSS Social Security in Southern Jalisco

Municipality	2012	2013	2014	2015	2016	2017	2018	2019	% part. 2019
Gómez Farías	665	740	835	915	1,062	1,045	1,146	1,190	1.97%
Jilotlán de los Dolores	20	21	23	21	35	39	98	48	0.08%
Pihuamo	431	541	448	384	382	444	399	411	0.68%
San Gabriel	1,262	1,950	2,600	2,491	3,179	3,105	3,794	4,183	6.93%
Tamazula de Gordiano	7,322	7,397	7,320	6,706	7,304	7,492	7,849	7,593	12.57%
Tecalitlán	541	537	472	521	624	689	718	702	1.16%
Tolimán	321	351	665	725	703	796	907	888	1.47%
Tonila	271	231	347	284	329	334	346	425	0.70%
Tuxpan	2,552	2,473	3,196	3,606	3,395	3,501	3,462	3,593	5.95%
Zapotiltic	4,552	4,927	5,290	5,127	5,445	6,057	6,511	7,439	12.32%
Zapotitlán de Vadillo	45	49	46	44	44	55	41	44	0.07%
Zapotlán el Grande	21,466	23,001	24,692	26,273	27,935	30,141	32,315	33,877	56.09%
<b>Total</b>	<b>39,448</b>	<b>42,218</b>	<b>45,934</b>	<b>47,097</b>	<b>50,437</b>	<b>53,698</b>	<b>57,586</b>	<b>60,393</b>	<b>100%</b>

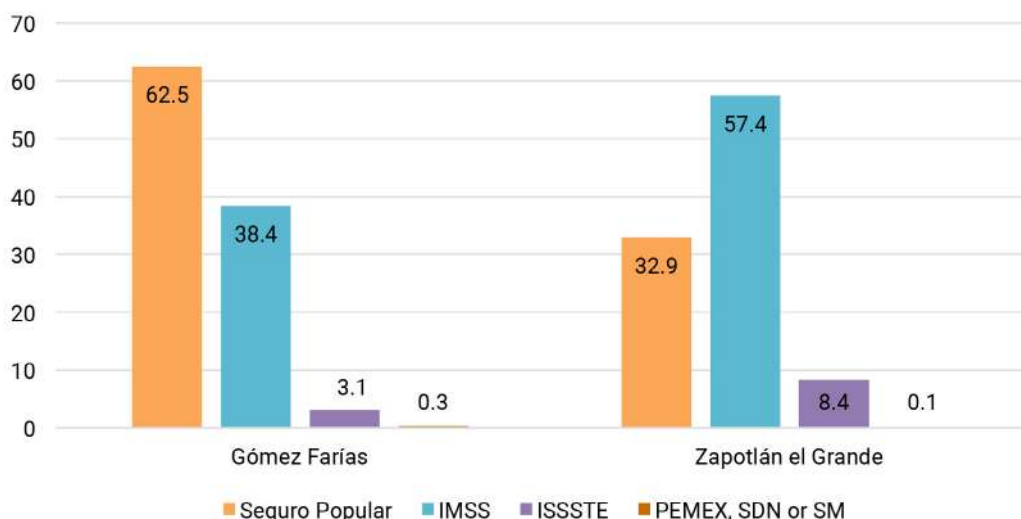
**Source:** Authors' elaboration with data from the municipal analyses for southern Jalisco, IIEG (2019a, 2019b).

<sup>17</sup> The IIEG (2019a and 2019b) considers southern Jalisco to include the municipalities of Gómez Farías, Jilotlán de Dolores, Pihuamo, San Gabriel, Tamazula de Gordiano, Tecalitlán, Tolimán, Tonila, Tuxpan, Zapotiltic, Zapotitlán de Vadillo, and Zapotlán el Grande. By this definition the Sayula basin is not included.



In 2015, 55% of the Valley’s enrollees in health services were affiliated with IMSS, followed by 36% in Seguro Popular.<sup>18</sup> The majority in Zapotlán el Grande were affiliated with IMSS, but in Gómez Farías there were more affiliated with Seguro Popular.

**Figure 1.9.** Percentage\* Distribution of Enrollment in Social Security Health Services in the Zapotlán Valley, 2015



**Source:** Authors’ elaboration with data from the 2015 Intercensal Survey, INEGI.

\* Sum of the percentages may exceed 100% because people may be affiliated with more than one institution.

In general, the number of persons enrolled in health services increased from 2000 to 2015. In Zapotlán el Grande it went from 46,243 to 91,749 enrollees, growing an average of 26% every five years, and in Gómez Farías it increased from 3,830 to 14,278 with an average growth of 50%.

In Zapotlán el Grande the greatest population increase was from 2010 to 2015, which saw a growth of 30%, coinciding with the beginning of industrial export agriculture in the Valley. The largest increase in Gómez Farías was a growth of 65% from 2005 to 2010. Here, given the later development of export agriculture and the greater percentage of affiliates in Seguro Popular, we can infer that the growth was an increase in the number of people enrolled in that program.

Enrollment in health services doubled in the Valley from 2000 to 2015. IMSS had the largest number of affiliates, and Seguro Popular had the greatest growth. In 2015 there were 57,528 people from the Valley enrolled in IMSS, 22% more than in 2005. Data from IIEG (2019a,

18 Seguro Popular was a government social initiative to provide access to health care that was piloted in 2001 and in 2004 became Seguro Popular, or Sistema para Protección Social en Salud. With the change in presidential administration on 1 December 2018, existing social programs were replaced by others that have been implemented without clear regulations and with an emphasis on direct monetary transfers. Seguro Popular was replaced on 1 January 2020 by the Instituto de Salud para el Bienestar (INSABI) [Institute of Health for Well-being]. Although various studies pointed to the deficiencies in Seguro Popular (Escobar-Latapí & González-de la Rocha, 2022), INSABI was initiated without clear guidelines and with numerous problems in coverage and health services.



2019b) show that the number of enrollees in IMSS continued to increase after 2015. This latter increase is mainly a result of the formalization of employment in the agricultural sector, whose workers affiliated with IMSS have increased since 2012.

**Table 1.16.** Enrollment in Social Security Health Services in the Zapotlán Valley by Institution, 2000-2015

	Gómez Farías				Zapotlán el Grande			
	2000	2005	2010	2015	2000	2005	2010	2015
Seguro Popular <sup>1</sup>	-	2,251	5,516	7,926	-	3,220	13,622	30,146
IMSS	3,514	3,394	3,921	4,872	38,979	43,827	47,646	52,656
ISSTE	317	343	355	388	7,537	8,422	8,899	7,730
Pemex, SDN, or SM	8	13	23	41	45	82	58	48
Other institution <sup>2</sup>	0	50	180	314	55	1,249	2,296	3,439
Sum of enrollments <sup>3</sup>	3,839	6,051	9,995	13,541	46,616	56,800	72,521	94,019
Total population enrolled	3,830	6,031	9,950	12,675	46,243	55,581	71,177	91,749

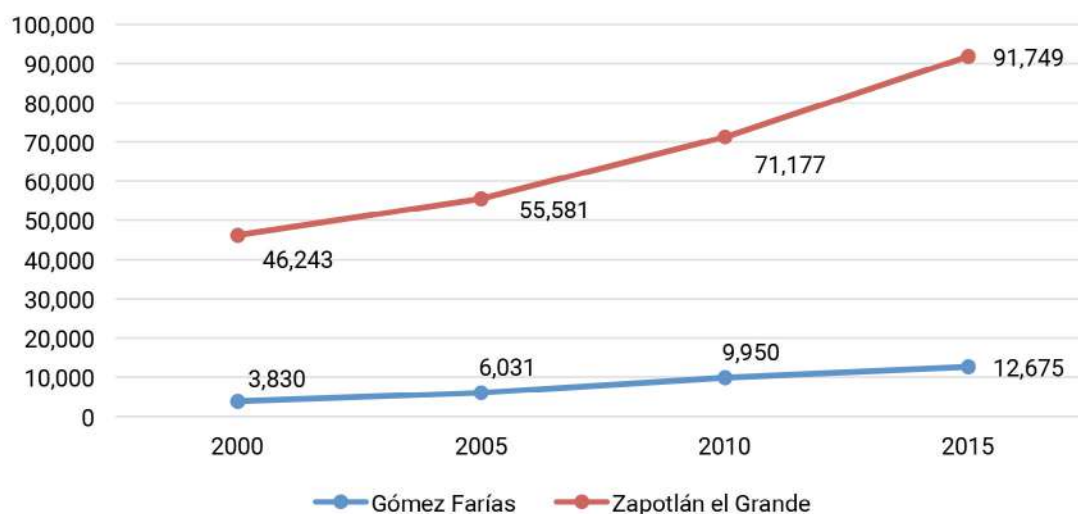
**Source:** Authors' elaboration with data from the 12th General Census of Population and Housing (2000), INEGI; 2005 Population and Housing Count, INEGI; 2010 Census of Population and Housing, INEGI; and 2015 Intercensal Survey, INEGI.

<sup>1</sup> Seguro Popular began as a pilot program in 2001, so there are no data for this program for the year 2000. The figure for 2010 includes the SPSS, coordinated by the SSA.

<sup>2</sup> Includes the state government social security institutions and other types of public and private health care institutions.

<sup>3</sup> The sum of enrollments in different institutions may be greater than the total enrolled population because individuals may receive services in more than one institution.

**Figure 1.10.** Population Enrolled in Health Services in the Zapotlán Valley, 2000-2015



**Source:** Authors' elaboration with data from the 12th General Census of Population and Housing (2000), INEGI; 2005 Population and Housing Count, INEGI; 2010 Census of Population and Housing, and 2015 Intercensal Survey, INEGI.



**Table 1.17.** Agricultural Workers as a Percentage of Total Workers Enrolled in IMSS in the Zapotlán Valley

	2012	2013	2014	2015	2016	2017	2018	2019
<b>Gómez Farías</b>	1.05%	1.62%	1.56%	8.42%	12.52%	11.87%	17.36%	16.97%
<b>Zapotlán el Grande</b>	27.45%	29.33%	33.02%	36.93%	38.08%	38.34%	41.10%	42.32%
<b>Total workers enrolled</b>	<b>28.51%</b>	<b>30.96%</b>	<b>34.58%</b>	<b>45.35%</b>	<b>50.60%</b>	<b>50.21%</b>	<b>58.46%</b>	<b>59.30%</b>

**Source:** Authors' elaboration with data from the municipal analyses for southern Jalisco, IIEG (2019a, 2019b).

In Gómez Farías the enrollment of agricultural workers began to increase in 2015. By 2019, agriculture was the occupation with the second-highest rate of enrollment in IMSS. The highest rate was in activities related to food processing that could be linked to agriculture, such as packing or fruit processing. In other occupational groups the number of enrollees remained constant, and there were even occupations where the number declined, such as the wood and cork products industry —except furniture—, mining and processing of coal, minerals, and graphite, and forestry.

**Table 1.18.** Workers in Gómez Farías Enrolled in IMSS, by Occupational Group

Occupational Group	2012	2013	2014	2015	2016	2017	2018	2019	% Part. 2019
<b>Agriculture</b>	7	12	13	77	133	124	199	202	16.97%
<b>Food Processing</b>	10	53	57	77	112	127	178	254	21.34%
<b>Wood and Cork Products Industry (except furniture)</b>	120	112	146	120	150	164	151	120	10.08%
<b>Manufacture of Rubber and Plastic Products</b>	95	93	92	92	93	101	105	100	8.40%
<b>Mining and Processing of Coal, Minerals, and Graphite</b>	73	82	79	88	69	69	73	40	3.36%
<b>Purchase and Sale of Gases, Fuels, and Lubricants</b>	28	26	24	35	79	62	63	65	5.46%
<b>Public Administration and Social Security Services</b>	70	77	71	75	72	75	58	78	6.55%
<b>Purchase and Sale of Raw Materials, Materials, and Secondary Materials</b>	26	32	66	84	48	45	53	45	3.78%
<b>Ground Transportation</b>	35	35	37	34	39	64	49	68	5.71%
<b>Forestry</b>	10	50	50	55	67	49	46	28	2.35%
<b>Building Construction and Civil Engineering</b>	41	27	50	30	60	38	43	44	3.70%
<b>Livestock</b>	26	23	25	23	28	30	30	27	2.27%
<b>Other</b>	124	118	125	125	112	97	98	119	10.00%
<b>Total</b>	<b>665</b>	<b>740</b>	<b>835</b>	<b>915</b>	<b>1,062</b>	<b>1,045</b>	<b>1,146</b>	<b>1,190</b>	<b>100.00%</b>

**Source:** Authors' elaboration with data from the municipal analyses for southern Jalisco, IIEG (2019a, 2019b).



In Zapotlán el Grande there was also an increase of 250% in the number of agricultural workers enrolled in social security, an increase so large that in 2019 they became the largest group of workers affiliated with IMSS: 42% of the total. The number of affiliates working in public administration and in social security services remained the same.

**Table 1.19.** Workers in Zapotlán el Grande Enrolled in IMSS, by Occupational Group

Occupational Group	2012	2013	2014	2015	2016	2017	2018	2019	% Part. 2019
Agriculture	5,893	6,747	8,154	9,703	10,638	11,556	13,280	14,338	42.32%
Public Administration and Social Security Services	2,801	2,869	2,820	2,644	2,778	2,918	2,967	3,001	8.86%
Purchase and Sale of Food, Drink, and Tobacco Products	1,655	1,781	1,800	1,920	2,031	2,172	2,250	2,233	6.59%
Building Construction and Civil Engineering	1,105	1,175	1,164	1,111	1,267	1,314	1,284	1,400	4.13%
Ground Transportation	621	562	601	683	727	832	1,043	1,218	3.60%
Food Processing	602	617	673	742	762	868	942	963	2.84%
Purchase and Sale of Raw Materials, Materials, and Secondary Materials	756	732	627	634	692	800	844	904	2.67%
Professional and Technical Services	656	888	1,001	822	701	728	748	793	2.34%
Purchase and Sale in Self-Service Stores and Specialized Department Stores	733	738	900	860	708	674	741	839	2.48%
Purchase and Sale of Clothing and Personal Items	743	730	716	682	672	642	666	648	1.91%
Food and Drink Preparation and Service	483	528	518	570	586	610	665	717	2.12%
Personal Services for the Home and Other	529	589	509	626	617	778	665	623	1.84%
Purchase and Sale of Gases, Fuels, and Lubricants	441	473	470	519	508	528	550	599	1.77%
Teaching, Research, and Cultural Promotion Services	432	436	442	466	498	538	560	549	1.62%
Purchase and Sale of Articles for the Home	213	232	275	279	586	586	530	513	1.51%
Other	3,803	3,904	4,022	4,012	4,164	4,597	4,580	4,539	13.40%
<b>Total</b>	<b>21,466</b>	<b>23,001</b>	<b>24,692</b>	<b>26,273</b>	<b>27,935</b>	<b>30,141</b>	<b>32,315</b>	<b>33,877</b>	<b>100.00%</b>

**Source:** Authors' elaboration with data from the municipal analyses for southern Jalisco, IIEG (2019a, 2019b).





The increase in the number of agricultural workers and the number of enrollments in social security are changes that we attribute to the development of the berry export industry. Our fieldwork shows that formal hiring is a constant in the berry fields, an important milestone that is reflected in the number of workers in this sector. However the growth in enrollment brings with it the need to provide better information and health services. In the testimonies collected in fieldwork, workers said they did not use IMSS health services because they did not know what it covered or how to use it. Asked in an interview if he had social security, one worker responded: “Supposedly, they tell us we do, but I don’t know what’s up with that.... They ask us for our social security number, we give them all our papers, but that’s it (Interview with Jesús, August 2nd, 2020). Some families, in spite of having social security, prefer to use Seguro Popular<sup>19</sup> or the private doctor’s offices located in pharmacies. Their main complaint is that the service in IMSS clinics is slow and inefficient, and waiting their turn means missing a day of work. One supervisor, whose responsibilities include taking workers to the doctor when they are sick or have an accident, comments that the care at IMSS is “bad” because it is very slow. With this view, many workers only go to the social security clinic when they have a serious illness or accident. However, they increasingly emphasize its importance, as one worker who has enrolled her mother, her son, and her husband comments:

I tell [my husband]: “If I leave my job, that would be the end of insurance for my mom, that would be the end for the child, that would be the end for me and for you.” I told him, “You’d then be without any insurance. What would we do? In an emergency?” A cold, that’s less serious, but a more serious illness, well yes. He tells me, “Don’t work anymore,” and now that he got sick, I tell him “You see! I didn’t work.” (Interview with Edith, February 10th, 2019).

Workers also use this health benefit when they get pregnant, not only for prenatal care and childbirth, but also so they can get maternity leave. The increase in worker enrollment is clearly an extremely important change in agricultural labor. However, it is necessary to highlight the need to increase the capacity of clinics and hospitals in order to serve the population. Employers also need to provide workers with more information about the procedures and coverage available. Workers know they have access to health services, but very few know that social security also provides a pension, housing, and childcare benefits. Effective access to these services means going beyond the forms and social security numbers; it is fundamental to workers’ social welfare.

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19 The Seguro Popular program still existed during the first period of fieldwork.



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## 1.5. INDUSTRIAL EXPORT AGRICULTURE, POVERTY AND SOCIAL WELFARE

In the Zapotlan Valley, industrial export agriculture is characterized by formal contracts and benefits. This is not only an important change in agricultural labor, but also one for the analysis of the social conditions of the region. A lack of access to social security is one of the indicators of a social deprivation [*rezago social*], according to the CONEVAL, and access to health services and social security are one of CONEVAL's indicators for measuring multidimensional poverty. The indicators for its general social deprivation index<sup>20</sup> include school attendance, housing conditions, and enrollment in social security. In 2010-2015, deprivations decreased in the municipalities of the Valley. The greatest declines were reflected in the percentage of persons without social security and the number of households without electricity or running water. In Zapotlán el Grande the number of households without plumbing declined by 72%. The decline in the number of persons without access to health was also significant: it fell from 28% to 11% in Gómez Farías and from 28% to 13% in Zapotlán el Grande.

Indicators related to education showed less of a reduction. However, they are still important, because they show a clear decline in the population 15 years of age or older that cannot read or write or that has not finished junior high school, and in the population 6-14 years of age not attending school. This decline is the result of various factors, among them access to schools at different levels. The Zapotlán Valley has educational institutions ranging from primary schools to universities. According to the IIEG, Zapotlán el Grande has 94 schools and Gómez Farías has 20 (2019a, 2019b).<sup>21</sup> The highest illiteracy rates are found in people aged 65 and older; illiteracy has decreased less in this age group than in the rest, especially in Gómez Farías. The groups with the lowest illiteracy rates are 15-24 and 25-34 years of age.

It should be emphasized that in 2000 and 2010 the illiteracy rate in Gómez Farías was higher among women, but in 2015 it was higher among men, in all age groups, but especially aged 15-24 years. These figures attest to the narrowing of the gender gap in education, the result of greater access to education and a transformation in traditional gender roles that limited women to the domestic sphere. The development of social policy to keep women and girls in school by providing gender-specific support has also played an important role in closing the gender gap (González-de la Rocha & Escobar-Latapí, 2016). In Zapotlán el Grande, however, the highest illiteracy rates are among women. In 2010, women had greater illiteracy only in the 45-54 and 55-64 age groups. In 2015, women in all age groups except 25-34 have greater illiteracy than men.

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20 See Appendix E.

21 These figures include only places with more than 2500 inhabitants.



**Table 1.20.** Illiteracy Rates by Sex and Age Group in Gómez Farías, 2000-2015

Age Groups	2000			2010			2015		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
15-24 Years	3.60	53.61	46.39	1.69	55.32	44.68	1.16	73.39	26.61
25-34 Years	6.82	47.32	52.68	4.02	50.59	49.41	2.81	60.94	39.06
35-44 Years	13.83	48.86	51.14	6.19	47.12	52.88	4.22	56.79	43.21
45-54 Years	20.68	44.62	55.38	12.28	47.02	52.98	7.09	52.17	47.83
55-64 Years	32.45	38.18	61.82	24.35	44.25	55.75	17.33	50.89	49.11
65 Years and Older	47.69	41.88	58.12	42.05	43.28	56.72	36.34	44.47	55.53

Source: 12th General Census of Population and Housing 2000, INEGI; 2010 Census of Population and Housing, INEGI; 2015 Intercensal Survey, INEGI.

**Table 1.21.** Illiteracy Rates by Sex and Age Group in Zapotlán el Grande, 2000-2015

Age Groups	2000			2010			2015		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
15-24 Years	1.38	59.60	40.40	0.60	57.76	42.24	0.47	49.46	50.54
25-34 Years	2.37	51.94	48.06	1.30	55.88	44.12	1.26	53.05	46.95
35-44 Years	4.81	40.19	59.81	2.09	60.71	39.29	1.48	49.25	50.75
45-54 Years	9.57	39.01	60.99	4.10	41.78	58.22	1.84	39.05	60.95
55-64 Years	15.50	37.21	62.79	9.39	41.27	58.73	5.09	18.27	81.73
65 Years and Older	29.66	40.00	60.00	20.31	38.43	61.57	14.48	35.60	64.40

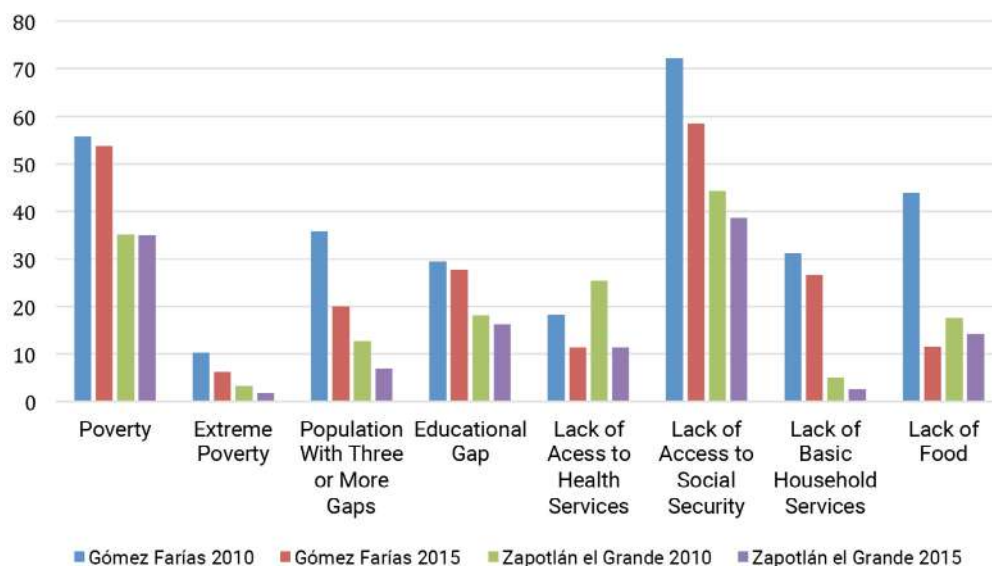
Source: 12th General Census of Population and Housing 2000, INEGI; 2010 Census of Population and Housing, INEGI; 2015 Intercensal Survey, INEGI.



The average educational level of the population aged 15 and older has also increased. In the period from 2010 to 2015, it rose in Gómez Farías from 5.7 to 7.8 years and in Zapotlán el Grande from 8.2 to 9.9 years. This increase helps to explain the decline in the factor of education in the measurement of general social deprivation in social support. There are various contributing factors, the most important of which are access to educational institutions, financial support for staying in school, and the social transformations that place a higher value on education. The decrease in recent decades in the use of child labor has also played an important role, particularly in rural areas where household survival depends on family labor. One of the policies implemented by the berry companies has been the eradication of child labor. Although this policy creates challenges for households and women workers (González-de la Rocha & Martínez-Rubio, forthcoming), it is clearly a factor that contributes to children and adolescents staying in school.

The multidimensional poverty indicators of deprivations also show decreases in the period from 2010 to 2015.<sup>22</sup> The most important decrease in Gómez Farías is in extreme poverty, in the most vulnerable population. Moderate poverty, however, showed an increase of almost two percentage points, and although the population vulnerable to deprivations fell by 20%, those with income poverty increased by 5.7 percentage points. It is worth noting the overall decrease in gaps and in gaps in social services, but the population earning below the poverty line increased by 6%. There is also a clear decline in the indicators of deprivations. Those with the greatest decreases are food and access to health services, while those with the smallest decreases are education and the quality and size of housing.

**Figure 1.11.** Poverty in the Zapotlán Valley, 2010 and 2015  
Selected indicators (%)



**Source:** Authors' elaboration based on a dynamic search of results from the 2010 and 2015 Municipal-Level Assessment of Poverty, CONEVAL, 2017.



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In Zapotlán el Grande there was also a decrease in extreme poverty and deprivations. Moderate poverty increased by 1.3 percentage points and income poverty by 4.3 percentage points. Overall gaps declined, except for access to basic household services, which showed a slight increase. The population with at least one social deprivation decreased by 10% and those with at least three gaps decreased by 45%. Lack of social security showed the most significant decline in percentage points. The improvement in indicators for access to social security, health care, and food is an important sign of social welfare in the region. Although there are various factors that affect the decline in deprivations and multidimensional poverty, among them growing urbanization and a national increase in social security coverage, it is possible to conclude that industrial export agriculture, with its practice of formal contracts, benefits required by law, and above-minimum wages also has an effect.

These factors have clearly contributed to the reductions in deprivations, but at the same time they demonstrate the need to create more infrastructure and services for the population that comes to work in the fields of southern Jalisco. Among these needs is decent housing for workers coming from other states. Employers provide temporary housing for workers who come for the harvest, but various interviewees have described problems of crowding and hygiene that describe an urgent need to improve the conditions there. It is also necessary to establish a dialogue among companies, government, and communities to address the challenges posed by the growth of this new economic activity. The transformations and problems are part of the social change that has been generated by the expansion and development of industrial export agriculture in the region.



## FINAL REMARKS

This report has presented an analysis of the major social, demographic, and economic indicators in recent decades in the Zapotlán Valley. The changes found have come in response to various factors, among them the transformation in agricultural activity. In the last ten years the Zapotlán Valley has gone from being a region producing corn to one dedicated to the cultivation of high added-value produce for export. The economic and social transformations unleashed by this agricultural activity have turned it into a project that has organized the area into a microregion. This project is developing in a geographic area that for several decades has been experiencing a growing process of urbanization and of economic and commercial development. These characteristics are precisely what allows the flourishing of industrial export agriculture. The space can supply the needs for products and services demanded by this new agricultural activity, which has generated important changes in the socioeconomic structure of the region. The most obvious of these changes is its population growth: not only has the population increased in recent decades, but the greatest growth in the municipalities of the Zapotlán Valley in the last ten years has been in economically active age groups.

The growth in the economically active population is related to the phenomenon of migration. It is here that the labor market for the cultivation of berries and avocados is relevant. This is a region where employment options were limited to traditional crops or to the industries surrounding the Valley, to such an extent that migration to the U.S. became one of its major sources of household income. The expansion of berry cultivation has generated a new employment niche not only for people from the region, but also for those coming from other states. It is in this sense that agricultural activity has affected migration and the increase in the economically productive population. People who traditionally would have left for the U.S. now have an option in the region. In addition, large numbers of workers arrive at harvest time to work in the berry greenhouses.

The demographic dynamics of the Zapotlán Valley are part of the change in agricultural activity and the structure of employment. The urbanization process in recent years has concentrated the participation of the economically active population into sectors like business and industry, and since the development of industrial export agriculture there has been an increase in this participation. In the past ten years, the traditional agricultural model of the Valley, which produced sorghum, corn, and sugar cane, moved to the production of berries and avocados. This has increased the volume and value of agricultural production, even though there has been little change in the area planted. The relationship between the area planted and the value of the product is a reflection of the change in crops and the technological development of the fields. Labor demand has also increased: in recent years the population employed in the secondary and tertiary sectors has moved to the primary sector. Although in the municipality of Zapotlán el Grande a large part of the population is still in the tertiary sector, the increase in the number of workers in agricultural activities is clear. This transition is the result, in part, of



the working conditions offered by these companies: work with these new crops offers better wages and working conditions than those in traditional agriculture or even industry.

These factors have led to reductions in deprivations and in various dimensions of poverty. For example, the elimination of child labor may be contributing to increased educational levels and a reduction in the economic activity of 12- to 19-year-olds. High school and college curricula have also been diversified to adapt to the new demands of this labor market. There has also been an increase in social security enrollment. From 2000 to 2015 the largest number of affiliations were with Seguro Popular and IMSS, and the number of enrollments has steadily increased. Zapotlán el Grande has the greatest participation in social security of any municipality in the region, with just over 50% of workers enrolled. The largest part of the increase in IMSS enrollments has come from the agricultural sector.

Access to social security and health services is one of the factors in measuring a gap in social support. In the Zapotlán Valley, the population lacking social security has declined, and access to social security is the factor where this gap has been reduced the most. In this change lies the regional importance of formalizing agricultural labor and of the policies of social responsibility. However, as we have argued, it is essential to study the effectiveness of access to health services. Along the same lines, the improvement in the working conditions of agricultural workers and making their employment less seasonal has allowed migrant workers and their families to settle for periods of time or permanently in the Zapotlán Valley. For families coming from states with higher poverty levels, this migration represents an opportunity to increase their household income and improve their standard of living. However, these changes are accompanied by important challenges in the provision of services and the development of infrastructure. There are particularly clear needs in housing and in effective access to health care, and these issues should be more fully examined. The impact of the agricultural sector on the economy, the population, urban development, and regional politics shows how the cultivation of berries and avocados has increasingly become fundamental to the geographical organization of the region.







# II. SINALOYA

## **REGIONAL STUDY**

**The Culiacán Valley: A Divided Workforce**





Map 2.1. Municipalities of Navolato and Culiacán, Sinaloa



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## 2.1. AGRICULTURE IN THE CULIACÁN VALLEY: A HISTORY

Mexico's farm export boom, which has been particularly exponential since 2007, is often attributed to external factors, such as the North American Free Trade Agreement (NAFTA) or foreign investment. However, Mexican export agriculture has deep roots, extending back over a century as farms grew, agriculture changed, and migrant workers settled in the Culiacán Valley, Sinaloa's most important region in terms of commercial and export agriculture. The Culiacán Valley lies at the heart of one of Mexico's most prominent and most productive agricultural regions.<sup>1</sup> Sinaloa's foothills and coastal plains are long and fertile, having attracted foreign investment since the late 19th century when the major crops were sugar cane, cotton and chickpeas (Lara-Flores, 2012; Maya-Ambía, 2011; Revilla-López & Ortiz-Marín, 2013).<sup>2</sup> In 1905, Sinaloa's first tomatoes made the journey by boat from Culiacán and Ahome to San Francisco (Frías-Sarmiento, 2008). That effort failed. The journey was too long, and the tomatoes were not refrigerated. In 1907, however, Sinaloa's first railroad link to the US was completed, and tomato shipments started almost immediately (Frías-Sarmiento, 2008). In Culiacán Valley, we focus on Culiacán, a municipality hosting the state capital, and Navolato. Culiacán is a large, dynamic city. It owes its dynamics to agriculture, but its economy is highly diversified. Navolato, on the contrary, is mostly rural. In Navolato, the influence of agriculture is clear and direct. Other regional analyses define the Culiacán Valley as comprising eight municipalities. We focus on the core two only.

Despite various ups and downs, the region has progressively added more resources to its strengths, and has become a fresh produce —tomato, mostly—<sup>3</sup> powerhouse. While there were a few dams by the end of the 19th century, it wasn't until the 1940s that the first large dams started to be built, followed by larger and larger dams all along the coastal plains until the 1970s.<sup>4</sup> Dams are indispensable for winter crops. Since there is practically no snow on the Sierra Madre Occidental, rivers swell during the rainy season —May through September— and dry up by November. Year-round agriculture, and winter harvests especially, are dependent on irrigation water from these dams.

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1 The other region is the avocado exporting region in and around Uruapan, whose exports have surpassed Sinaloa's in value in recent years. The Sinaloa export region comprises the following municipalities: Salvador Alvarado, Angostura, Mocorito, Badiraguato, Navolato, Culiacán, Elota and Cosalá (Leyva-Morales et al. 2014, p. 248).

2 A large sugar mill gave birth to Los Mochis, one of Sinaloa's largest cities today.

3 The valley makes a very significant contribution to Mexico's total maize harvest. Other crops in the valley include bell peppers and cucumbers.

4 Irrigation canals were the main water works built before the end of the 19th century. The main large infrastructure that allowed a significant expansion of the agricultural frontier were carried out from the 1940s onwards (Rodríguez-Pérez, 2005). The first dam was Sanalona, finished in 1948, the second was called Miguel Hidalgo y Costilla, and it was finished in 1956. Then came the Adolfo López Mateos or El Humaya dam, the Josefa Ortiz de Domínguez and Eustaquio Balbuena; they began operation in 1964, 1968 and 1972 (Urrea-Salazar, 2004). Today, the state of Sinaloa has 11 major dams (Sistema Nacional de Información del Agua, 2020). According to Sandoval-Cabrera (2012), growers' associations were the main beneficiaries. The author states that associations were founded as soon as the news of a new dam arrived in Sinaloa, in order to allow members to negotiate a better water supply (2012, p. 246).



Foreign investment was a major factor affecting the region at the turn of the 20th century. The region's first production and export boom took place in the 1920s. The main crops at the time were tomatoes, bell peppers, zucchinis, cucumber and eggplants. Foreign investment and the new railroad were crucial,<sup>5</sup> as were the first large-scale dams and irrigation canals. At the end of the 19th century, the construction of a network of canals and pumps began to provide a push for winter harvests: "Construction of the Cañedo canal starts in 1899, and the Rosales canal is begun in 1922" (Rodríguez-Pérez, 2005, p. 60). The latter allowed for the construction of Mexico's 10th irrigation district (Urrea-Salazar, 2004, p. 30; Aguilar-Aguilar, 2006, p. 148). In spite of the advantages brought by these initiatives, growers still faced obstacles entering the U.S. market because of the protections in place, and standards set by the U.S. Department of Agriculture (USDA).

U.S. regulations and trade barriers were intended to protect growers in Florida, where peak production seasons coincided with those in Sinaloa. (Lara-Flores-Flores, 1998; Rodríguez-Pérez-Pérez, 2005; Frías-Sarmiento, 2008). The Culiacán Valley's irrigation systems became increasingly important, because they allowed Mexican exporters to complement rather than compete with Florida production. They also had to develop new tomato varieties that could meet U.S. standards (Frías-Sarmiento, 2008)<sup>6</sup> and made improvements in the picking, handling and packing processes (Rodríguez-Pérez, 2005).<sup>7</sup> These changes allowed Culiacán Valley's agriculture to boom. The boom required –and incentivized– producers to get organized. Starting in 1932, growers began formalizing their organizations. That same year, they founded the CAADES, a confederation intended to unite them all<sup>8</sup> (Urrea-Salazar, 2004; Sandoval-Cabrera, 2012).

CAADES became a key instrument in the growers' strength for a number of reasons. It presented a united front when confronting the Mexican government to avoid or minimize the impact of agrarian reform; it allowed formal, independent funding to growers; it facilitated the purchase of inputs –seeds, fertilizers, etc.– and modern machinery. Through the powerful Confederación Nacional de Productores de Hortalizas, CNPH [National Confederation of Horticultural Producers], affiliated to the official party, it controlled who planted what for two decades. Finally, it coordinated sales (Sandoval-Cabrera, 2012, p. 243). This, in turn, allowed regional growers to become independent from U.S. investors who had fostered development but controlled exports. Sinaloa growers' autonomy allowed them to operate exports directly through commissions and organizations set up by them.<sup>9</sup> Starting in 1930, capital accumulation

5 Railroad cars were first refrigerated at this time (Sandoval-Cabrera, 2012).

6 According to Frías-Sarmiento, there were two major categories for tomato quality depending on their size, color, form and texture (2008): "fancy" and second-rate.

7 Rodríguez-Pérez-Pérez (2005) points out that new packing techniques in 1932 were a key factor in the increased employment of skilled women. She shows packing installations are mostly staffed by women.

8 CAADES was created as a syndicate bringing together the vast majority of growers in Sinaloa, through the grower associations that had already been founded at the time (Urrea-Salazar, 2004, p. 47). The associations in question are: Río Fuerte Horticultural Growers' Association, Río Sinaloa Horticultural Growers' Association, Horticultural Growers of the Río Culiacán agricultural region, and Río Elota Vegetable Growers' Association (Urrea-Salazar, 2004).

9 They include a regulation committee for the sale of fresh vegetables, a commission for research and defense



allowed for the creation of regional banks specializing in export agriculture (Sandoval-Cabrera, 2012, p.243). According to Frías-Sarmiento, CAADES functioned as a safeguard against foreign control of Sinaloa's agriculture (2008, p.19). Today, CAADES is based in Culiacán, the state capital, and works closely with all 11 regional growers' associations and the state government.

Exports slumped in 1933. According to Frías-Sarmiento (2008), this was due to two main factors: The Great Recession is one. Secondly, the Mexican government focused its attention on agrarian reform. Agrarian reform led large growers to panic. Many sold their properties before the government announced its stance on the issue of land tenure in the region (Frías-Sarmiento, 2008, p. 81). In addition, the birth of farm worker unions supported by the government led foreign investors to divest from their land in favor of providing finance to Mexican growers (Rodríguez-Pérez, 2005, p. 61).

Although irrigation systems allowed Sinaloa production to avoid competing with Florida, the relationship with Florida has been confrontational. With the water from the dams, Sinaloa can produce year-round. However, Florida can also now produce year-round thanks to technological advances. The tomato market has not grown as much as others —such as avocado—, meaning competition is fierce, with lawsuits and dumping accusations a constant issue. Sinaloa towns in the coastal plains grew from the late 19th century onwards, and agricultural growth and farm exports were key to urban growth. Mazatlán, Los Mochis, Culiacán, and other smaller towns expanded along with agriculture.

Agricultural modernization proceeded in stages. Analysts identify a series of technological development phases marked by mechanization —1940s—, fertilizers, greenhouses and the separation of seedlings and fruit cultivation, staking tomatoes, introducing conveyor belts in packing houses, improved seeds and pest control substances —recently, biological pest control—, drip irrigation and nutrition, among others (Lara-Flores, 1998; Rodríguez-Pérez, 2005; Sandoval-Cabrera, 2012). Simultaneously, the agricultural frontier also kept expanding thanks to more and larger dams. Planted acreage grew, as did demand for labor (Revilla-López & Ortiz-Marín, 2013)

While production and exports stagnated during the Great Depression, by 1940 growth had resumed as the U.S. entered the Second World War and farm labor became scarce in the United States (Frías-Sarmiento, 2008). Production and employment growth continued apace during the 1950s and 1960s, partly because the Cuban embargo provided another push.

A further watershed occurred in the late 1980s and early 1990s. Analysts blame these events for a downgrading of labor conditions. When Mexico joined the General Agreement on Trade and Tariffs (GATT), it was forced to abandon its farm subsidy structure, and growers started competing more keenly for lower profits. According to Becerra-Pedraza et al. (2008) saving on labor costs became paramount when prices and profits fell due to lower subsidies. Until 1990, the CNPH had the right to authorize planting, harvesting and transportation of vegetables. They lost that authority with the reforms of the early 1990s (Avendaño-Ruiz & Schwentesius-Rindermann, 2004). These authors view the rise of a highly segmented labor market, including significant indigenous and child labor, as a consequence of dismantling the old protected structure that included a closed market, subsidies, allowing growers to decide

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of vegetables, and the services for fresh tomato certification (Urrea-Salazar, 2004).



who could grow tomatoes and in what quantities, and finally, low-cost credit. By 1993, the changes had taken place, and growers had to find new sources of profits. These authors believe lowering labor costs was part of the answer.

We bring this overview of Culiacán’s agricultural history to a close with an analysis of the most recent trends in production and value. The Culiacán Valley produces 1/3 of the total farm production in Sinaloa.<sup>10</sup> Although the land surface devoted to agriculture has diminished slightly, value has risen by 59% in ten years. This is due both to crop changes –moving away from sugar cane and maize– and to the rise, and increasing productivity, of high-value crops. Productivity by volume has risen by 17% in 10 years, while value per hectare has risen by 64%. Maize still absorbs the majority of all farmland, but vegetables have expanded. Vegetables require large amounts of labor during the picking season. The total value of crops such as tomatoes, cucumbers and green chili has risen significantly. This is mostly because these crops are aimed at an export market that demands high quality and is willing to pay for it. In addition to high quality standards for the vegetables themselves, growers have adopted international certifications asserting that they abide by Mexican labor law and comply with major international agreements on the treatment of workers. These certificates should be reflected in workers’ labor and living standards.

**Table 2.1.** Value of Agricultural Production in Millions of Pesos,\* and Participation of Culiacan Valley in the State of Sinaloa (%), 2010, 2015, and 2020

Indicator	2010	2015	2020 <sup>1</sup>
<b>Value of Production in Sinaloa</b>	39,897.54	45,551.06	56,794.40
<b>Value of Production in Culiacán Valley</b>	11,622.42	15,834.56	18,531.97
<b>% Participation of Culiacán Valley in Sinaloa.</b>	29%	35%	33%

**Source:** Authors’ elaboration with data on agricultural production for 2010, 2015, and 2020 from the SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

<sup>1</sup> The data provided by the SIAP for 2020 are preliminary and are subject to revision.

<sup>10</sup> By “The Culiacán Valley” we refer to the municipalities of Culiacán and Navolato only. Other administrative divisions in the state of Sinaloa comprise as many as eight municipalities.



**Table 2.2.** Agricultural Production\* in the Culiacán Valley in the State of Sinaloa, 2010, 2015, and 2020\*\*

		Planting Area (hectare)	Production in Thousands of Tons	Production Value (millions of pesos)	Value per Planting Hectare (thousands of pesos)
<b>Culiacán Valley</b>	2010	278,012	3,769.95	11,622.42	91.68
	2015	298,100.53	3,907.63	16,058.26	115.01
	2020	247,666.41	3,883.79	18,531.97	153.54

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015, and 2020 from the SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

\*\* The data provided by the SIAP for 2020 are preliminary and are subject to revision.

**Table 2.3.** Agricultural Production\* of the Major Crops in Culiacán Valley, Sinaloa, 2010, 2015, and 2020\*\*

Crops	2010			2015			2020		
	Planting Area (hectare)	Production in Thousands of Tons	Production Value (millions of pesos)	Planting Area (hectare)	Production in Thousands of Tons	Production Value (millions of pesos)	Planting Area (hectare)	Production in Thousands of Tons	Production Value (millions of pesos)
<b>Eggplant</b>	886	56.83	479.96	2,040.75	148.1	1,071.00	1,237	96.84	994.48
<b>Green Chile</b>	3,005	178.85	694.04	3,332	195.79	1,526.05	2,065	178.21	2,212.27
<b>Corn Grain</b>	156,360	1,616.47	5,079.91	182,359	1,822.02	7,308.84	178,709.24	1,877.57	6,556.50
<b>Cucumber</b>	1,949	122.6	416.26	4,027.5	330.96	1,886.11	2,317	304.31	2,296.93
<b>Tomato</b>	4,629	400.9	2,777.99	6,233	534.32	2,450.64	4,676	417.67	5,317.44
<b>Total</b>	<b>166,829</b>	<b>2,375.65</b>	<b>9,448.16</b>	<b>197,992.25</b>	<b>3,031.19</b>	<b>14,242.64</b>	<b>189,004.24</b>	<b>2,874.6</b>	<b>17,377.63</b>

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015, and 2020 from the SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

\*\* The data provided by the SIAP for 2020 are preliminary and are subject to revision.

In summary, the Culiacán Valley's agricultural progression towards higher total output has continued during the most recent past. Maize and sugar cane are retreating, and high-value added and labor-intensive horticultural products are increasing both in productivity and in acreage. This would seem to point at more demand for workers. The next section shows this is not necessarily the case. If both statements are correct, and value is increasing faster than employment, then it would follow that labor productivity is increasing also.





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## 2.2. POPULATION DYNAMICS

The literature on labor market segmentation dates from the 1960s. Authors like Reich et al. (1973), Edwards (1979), Gordon et al. (1982) and others state that labor markets are divided into tiers, with specific subclasses of workers in each one of them. Workers have fought to gain rights and higher wages for centuries. As new products and services are produced, and workers try to organize themselves, some kinds of work are performed in spaces where some of these rights and better earnings have been secured, while others are left to the rest of the workers who compete for the rest of the jobs, where these advantages are absent. There is no technical reason why jobs are segmented. It is a matter of defining spaces where more or fewer rights are granted, as work is negotiated in different sectors and companies. What does happen is that workers belonging to the upper tiers of the working class secure the better jobs. Thus, in the U.S. white workers in the Midwest occupy most of the job positions guaranteeing a middle-class life –or close to it– while African Americans, Latinos and various other immigrant populations compete for the rest of the jobs. In the 1970s, migrant workers were recognized as occupying the bottommost tier of the labor market in industrial countries (Piore, 1979). Although Mexico is not an industrial country, migrant farm workers have also traditionally been at the bottom of the occupational structure.

In the Culiacán Valley, the reforms referred to in the previous section have prompted employers to embark on a struggle for labor flexibility, according to Lara-Flores (2001), Revilla-López & Ortiz-Marín (2013), and others. These authors consider flexibility in a double sense. Firstly, employers have become able to employ and dis-employ large numbers of workers as the season or the market dictates. In doing so, they shift some of the market risks on to the workers. For this kind of flexibility, it is extremely convenient to have workers living in proximity to the farms. Transporting them from Mexico's South East would be costly and inefficient. Secondly, employers now rotate workers between different occupations as required. They label this as "qualitative" flexibility, which means multitasking, the exact opposite of Taylorism, where workers specialized in one task. At the same time, employers allocate the better jobs to some workers, and leave the rest to those with lower social standing (whether by sex, ethnicity, age or schooling). This hierarchical classification defines some jobs as skilled and others as unskilled (Lara-Flores 1995; Rodríguez-Pérez, 2005; Becerra-Pedraza et al., 2007; Becerra-Pedraza et al., 2008; Revilla-López & Ortiz-Marín, 2013).

According to the literature assessing the quality of jobs one or two decades ago, in the Culiacán Valley, the better jobs tend to go to the local non-indigenous or white males, while the hardest jobs –picking and tending to the plants in the sun, or during the evening and early morning hours in the winter– are left to indigenous workers, a large number of women, and children. A key aspect of this kind of segmentation, according to these authors, lies in the devaluation of the work carried out by women, children, teenagers and indigenous groups. We will test this hypothesis in this section.



First, however, we will examine the impact of agricultural development –already analyzed– on immigration and population structure. By 1974, farming in the Culiacán Valley had expanded and employed 100,000 migrant farm workers, according to CAADES (Posadas-Segura, 2009). Fifty-five thousand came from the mountains of Sinaloa itself, and 45,000 from central and southern Mexican states. By 1985, CAADES and the same author estimated migrant employment to be 150,000, tracing workers' origins to Michoacán, Zacatecas and Southern Mexico. The INEGI Population Census shows a fall in total agricultural employment between 2000 and 2010, with a modest rise for 2020. Total jobs expanded by about 1% per year during the latest decade. However, there is a significant change in the percentage of women. It more than doubles. In fact, in the final section, we will see that women make up more than 50% of the labor force for this area's export agriculture.

**Table 2.4.** Total Jobs in Agricultural Work in Sinaloa 2000-2020

	Total	%	Men	%	Women	%
<b>2000</b> <sup>1</sup>	184,365	100	144,372	78	39,993	22
<b>2010</b> <sup>2</sup>	110,413	100	99,286	90	11,127	10
<b>2020</b> <sup>3</sup>	122,158	100	94,938	78	27,220	22

**Source:** Estimated by Elisa Martínez and Diana Haidé López, with INEGI data.

<sup>1</sup> Economic sector, as per the SCIAN. It includes agriculture, cattle, forestry, fishing and hunting. Includes only employees, workers, farm workers and unskilled helpers.

<sup>2</sup> Economic sector, as per the SCIAN. It includes agriculture, cattle, forestry, fishing and hunting. Includes only employees, workers, farm workers and unskilled helpers.

<sup>3</sup> Economic sector, as per the SINCO (2019). It only includes employees, workers, farmworkers and paid helpers.

**Table 2.5.** Total Jobs in Agricultural Work in the Culiacán Valley 2000-2020

	2000 <sup>1</sup>			2010 <sup>2</sup>			2020 <sup>3</sup>		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
<b>Culiacán</b>	36,230	26,592	9,638	13,716	12,505	1,211	16,103	12,480	3,623
<b>Navolato</b>	27,364	19,038	8,326	13,359	10,656	2,703	16,921	11,146	5,775
<b>Total</b>	63,594	45,630	17,964	27,075	23,161	3,914	33,024	23,626	9,398

**Source:** Estimated by Elisa Martínez and Diana Haidé López, with Instituto Nacional de Estadística y Geografía, INEGI [National Institute of Statistics and Geography] data.

<sup>1</sup> Economic sector, as per the SCIAN. It includes agriculture, cattle, forestry, fishing and hunting. Includes only employees, workers, farm workers and unskilled helpers.

<sup>2</sup> Economic sector, as per the SCIAN. It includes agriculture, cattle, forestry, fishing and hunting. Includes only employees, workers, farm workers and unskilled helpers.

<sup>3</sup> Economic sector, as per the SINCO (2019). It only includes employees, workers, farmworkers and paid helpers.



In 2020, AARC<sup>11</sup> estimated there were 142,000 farm workers in the Culiacán Valley, most of them migrants. It would certainly seem that the census is undercounting farm workers in the valley, since the database of the Instituto Mexicano del Seguro Social (IMSS) [Mexican Social Security Institute], records over 28,000 farm workers affiliated to the IMSS in Culiacán alone. In any case, increased production comes from productivity improvements: mechanization, technological advances in greenhouse management, and by extending the growing season. In other words, employment for farm workers has become less seasonal and more permanent, but the labor force has not expanded. Immigration from other states fell markedly from 2000 to 2010, and only rose modestly in 2020. Conversely, return migration from the U.S. rose in 2010 –after the Great Recession– and dropped markedly in 2020. Workers are not flowing to Sinaloa as they once did.

**Table 2.6.** Immigration: Population Five Years Old and Over Living Elsewhere Five Years Prior to Census

Municipality	2000	2000	2000	2010	2010	2010	2020	2020	2020
	Residence in the Same State 5 Years Before	Residence in Another State 5 Years Before	Residence in Another Country 5 Years Before	Residence in the Same State 5 Years Before	Residence in Another State 5 Years Before	Residence in Another Country 5 Years Before	Residence in the Same State 5 Years Before	Residence in Another State 5 Years Before	Residence in Another Country 5 Years Before
<b>Culiacán</b>	622,330	30,118	2,413	740,252	20,329	6,997 <sup>1</sup>	894,955	23,561	3,055 <sup>3</sup>
<b>Navolato</b>	110,993	15,463	174	117,259	3,288	686 <sup>2</sup>	128,725	7,386	235 <sup>4</sup>
<b>Total</b>	<b>733,323</b>	<b>45,581</b>	<b>2,587</b>	<b>857,511</b>	<b>23,617</b>	<b>7,683</b>	<b>1,023,680</b>	<b>30,947</b>	<b>3,290</b>

**Source:** Authors' elaboration with data from the 12th General Census of Population and Housing (2000), INEGI; the 2010 Census of Population Housing, INEGI and the the 2020 Census of Population Housing, INEGI.

<sup>1</sup> Of the total number of residents living in another country, 6,752 lived in the United States.

<sup>2</sup> Of the total number of residents living in another country, 645 lived in the United States.

<sup>3</sup> Of the total number of residents living in another country, 2,411 lived in the United States.

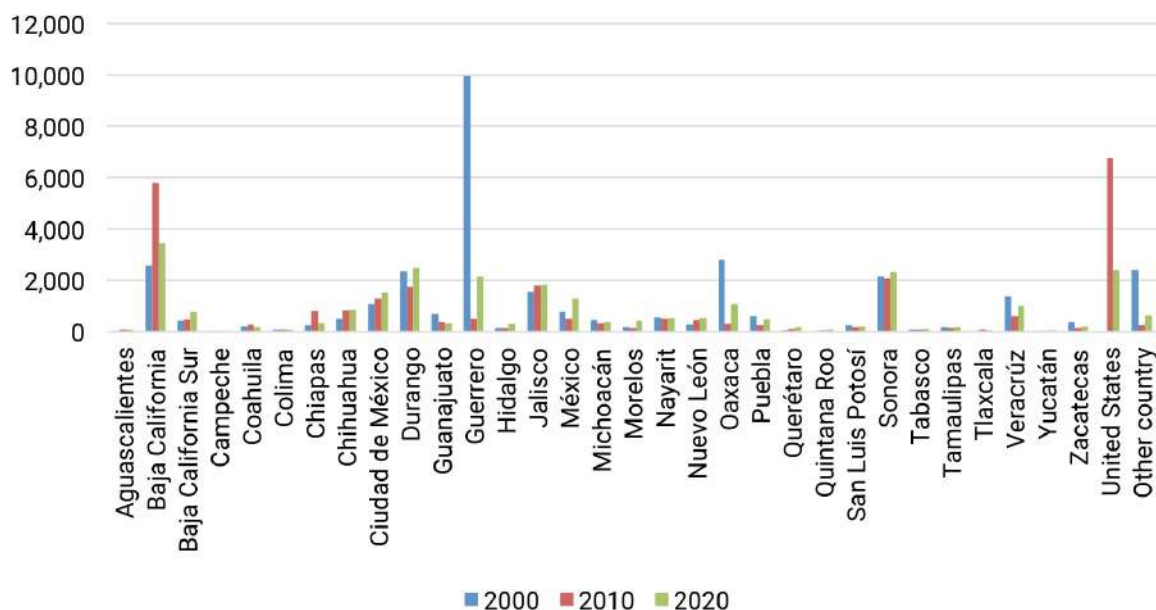
<sup>4</sup> Of the total number of residents living in another country, 203 lived in the United States.

Immigration, especially from Guerrero, Oaxaca and other states in Mexico's South East, played a key role in the growth of both Culiacán and Navolato in the year 2000. By 2010, immigration had fallen very markedly, although there was a significant number of migrants returning from the U.S. Finally, in 2020, immigration maintained a relatively low profile. It would seem that the recent increase in production and total value has not produced a large inflow of workers.

11 Interview with AARC executive, January 29th, 2020.

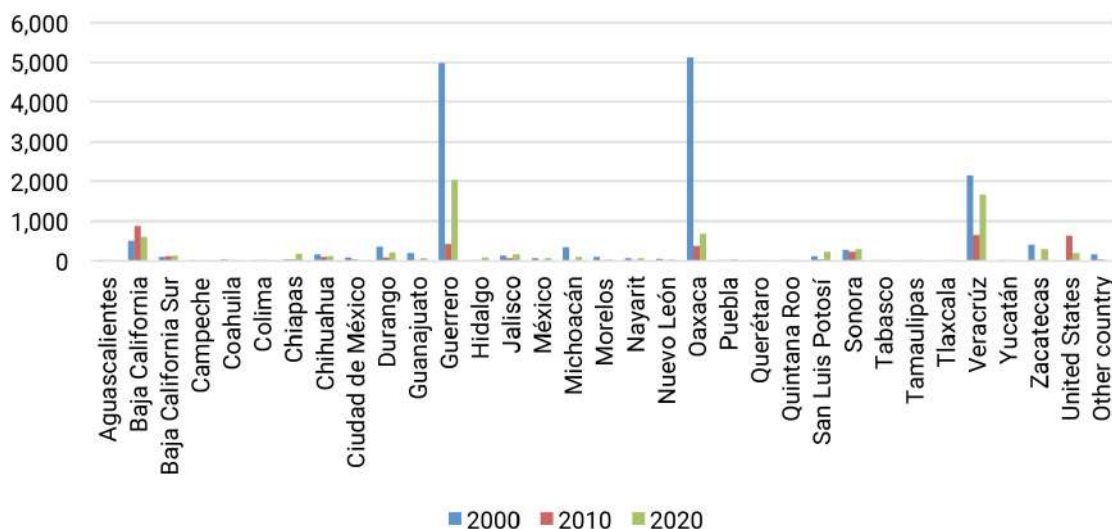


**Figure 2.1.** Main Places of Residence Five Years Prior to Census in Culiacán Years Prior to Census



**Source:** Authors' elaboration with data from the 12th General Census of Population and Housing (2000), INEGI; the 2010 Census of Population Housing, INEGI and the the 2020 Census of Population Housing, INEGI.

**Figure 2.2.** Main Places of Residence Five Years Prior to Census in Culiacán Years Prior to Census



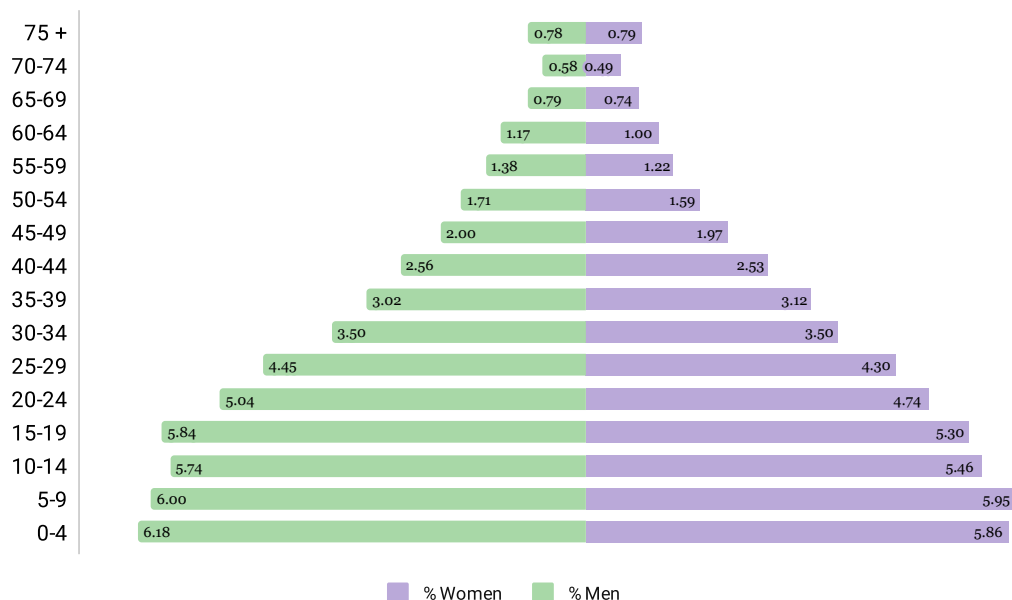
**Source:** Authors' elaboration with data from the 12th General Census of Population and Housing (2000), INEGI; the 2010 Census of Population Housing, INEGI and the the 2020 Census of Population Housing, INEGI.



At the same time, we independently explored the valley's largest farm worker city, Villa Juárez, where the population oscillates between 20,000 and 60,000, depending on the season.<sup>12</sup> While some workers in Villa Juárez have steady jobs and enjoy job benefits, many do not. They are called “*saliendo y pagando*” [pay as you leave] workers, who can be hired for one day only, similar to street corner laborers in the U.S. These workers congregate in specific spots in Villa Juárez at 5 am, where they are hired and returned at about 5 p.m. In order to better understand the farmworker labor market in Culiacán, we focused on these workers in Villa Juárez. Villa Juárez is in Navolato, the mostly rural municipality bordering Culiacán. We interviewed two contrasting types of workers in Villa Juárez: formal workers sampled from various associations' rosters and employer payrolls, and mostly informal workers we detected through snowball techniques.

The following figures show the age structure of Navolato's population.

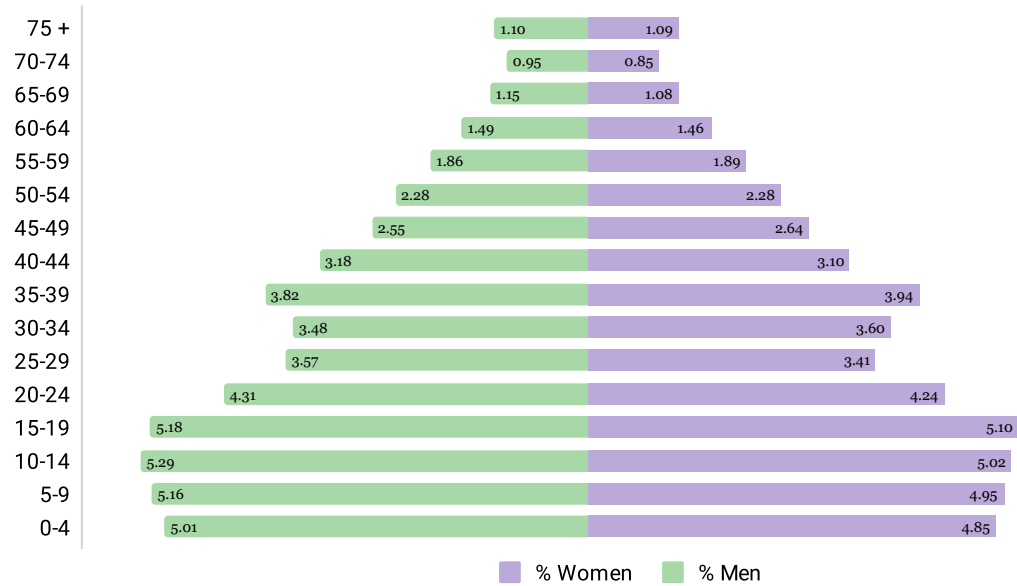
**Figure 2.3.** Population Pyramid by Percentage for the Municipality of Navolato, 2000



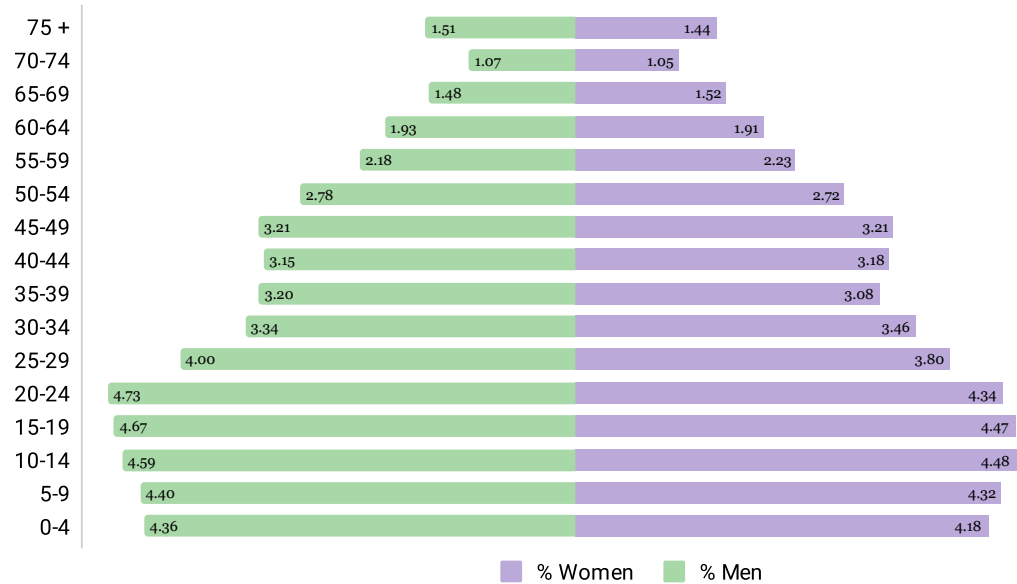
**Source:** Authors' elaboration with data from the 12th General Census of Population and Housing (2000), INEGI.

<sup>12</sup> Villa Juárez population figures are derived from social workers and labor rights from NGOs we interviewed in the city itself. We are very grateful to the Universidad Autónoma de Sinaloa and to the Social Service School in particular for their support for our survey, in both the association-based random sample and the analytical sample in Villa Juárez. And we are also very grateful to the Abogados Indígenas del Noroeste [Indigenous Lawyers of Northwestern Mexico], an NGO specializing in the defense of indigenous workers, for their help in our first visit in Villa Juárez.



**Figure 2.4.** Population Population Pyramid by Percentage for the Municipality of Navolato, 2010

**Source:** Authors' elaboration with data from the 2010 Census of Population and Housing, INEGI.

**Figure 2.5.** Population Pyramid by Percentage for the Municipality of Navolato, 2020

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



Since the population of Culiacán is overwhelmingly urban and its economy is highly diversified, we focus on Navolato, whose demographic and economic dynamics are unquestionably due to large-scale agriculture. The three pyramids above show that in 2000 the population was quite young and there were a number of new families and children under the age of 10. This was due to the large number of new arrivals from Mexico's Southeast settling in the area at that time. By 2010, when, as we saw earlier, immigration decreased substantially, there were fewer young children as a proportion of the total. This trend is confirmed by the data for 2020. In other words, it would seem that families are either having fewer children or there is greater seasonal migration of workers whose families remain elsewhere. According to our sources, both of these interpretations are accurate. Finally, the population that began settling 20 years ago is aging very rapidly. In 2000, only 3.3% of the men, and 2.9% of the women, were over 60 years old. By 2020, these percentages had doubled to 6% and 5.9% respectively. While this is the tendency nationwide, the change is happening in Navolato faster than in other places in Mexico. Although a number of these older persons still work, they require pensions. In the Culiacán Valley, sixteen percent of all informal farm workers, and twelve percent of all formal workers, are over the age of 50. In the absence of pensions, older persons who don't work exacerbate poverty in their households. Since social security registration is a relatively new phenomenon, access to contributive pensions among them is quite low. Evidently, a major operation is required to provide non-contributive pensions to these older adults from the programs expanded under President López Obrador's administration.

In fact, the relative proportion of the population considered to be in the prime age for farm work —20-39 years old— has fallen slightly in spite of the fact that there are fewer young children. This is due to the increase in older persons. The demographic —and economic— dependency rate is larger now than in the year 2000, due to aging.



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## 2.3. URBAN DEVELOPMENT AND HOUSING

Increasing demand for workers did not only trigger labor migration flows, it spurred the creation of large farm worker settlements for those who decided to stay in Sinaloa instead of returning to Mexico's Southeast every year.<sup>13</sup>

This is the case for Villa Juárez, a large town that began to develop during the 1980s as a community of workers arriving from Oaxaca and Guerrero mostly (Ortiz-Marín, 2013). Farm work explains its history. Farm workers' family dwellings, company lodging and government-managed worker housing comprise most of the town. Commerce is geared towards them, and social services have begun to be offered in the town. This has put stress on both Navolato's municipal government and the state government. Living conditions have improved in Villa Juárez over the past few years, but they should still be of concern to anyone involved in agriculture or in public welfare, including the Government and growers' associations.

Ortiz-Marín (2013) provides an account of the life of Juan López, a Triqui<sup>14</sup> who founded the Frente de Unificación de Lucha Triqui [Front for Triqui United Struggle]. In the account, Ortiz-Marín explains how workers founded Villa Juárez as they sought a place where they could build their own houses. Juan López founded the Front in 2002 in order to secure land for Triquis who came every year to Sinaloa. Today, Villa Juárez comprises 50 neighborhoods or colonias inhabited by workers from many different Mexican states and indigenous groups. Besides their own family homes, these neighborhoods host what is locally known as "*cuarterías*" ["roomeries" or tenements], concrete buildings divided into small rooms, which are rented out by private landlords to families or groups of workers. Farm workers arriving from Mexico's Southeast have the option of living in company housing in the fields, or of renting a room in Villa Juárez. Although tenements vary in terms of their infrastructure and quality, they are all quite similar.

The following four photos depict workers' housing on one large formal firm farm and in Villa Juárez. Housing in both settings has been developed over time, with some improvised solutions, though in both cases it has been upgraded. In both scenarios, one family sleeps in a room averaging about 12 by 10 feet. In Villa Juárez, our researchers Omar Stabridis and Elisa A. Martínez talked to farm workers cooking outside with bits of wood collected from piles of waste wood from fences. In the last photo, large blankets cover the entrance to workers' sleeping quarters. Families use these blankets to gain privacy in a corridor in front of their room, thus enlarging their home.

On the formal firm farm, the area in front of the workers' housing is clean. In some of the housing in Villa Juárez there is a considerable amount of trash. Nevertheless, there is

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13 Velasco et al., (2014) show that independent settlements allowed workers to acquire a degree of autonomy, since they were no longer subject to the controls imposed upon them in company housing. In addition, settlers organized themselves to successfully push for urban and social services.

14 Triquis are an ethnic group originally from Oaxaca. There are large numbers of Triqui Indians working in Sinaloa and in Baja California. They used to migrate seasonally first to Sinaloa and then to Baja, to return to Oaxaca at the end of the peak season in June, in order to plant their plots during the rainy season—which starts in June—. This migration circuit is no longer as significant as it once was, although there are still thousands of indigenous Mexicans moving from Mexico's Southeast to the Northwest, and back, every year.





sanitation in both Villa Juárez and the formal firm housing. The formal firm secured several subsidies from the ex-Secretariat of Social Development to improve workers' housing and used this funding to place cement roofs over rooms, to improve sanitation and to build a childcare center, a school, and a health clinic. On this farm, housing is provided free of charge, in spite of the fact that some workers now live there year-round. In Villa Juárez, most workers pay for their housing. The ones we interviewed pay 150 pesos per week, or 30 dollars per month.

**Photograph 2.1.** Workers' Housing at a Large Grower's Headquarters



**Author:** Agustín Escobar Latapí. Photograph taken on 01/30/2020 of formal firm housing, Sinaloa, México. All rights reserved.



**Photograph 2.2.** Workers' Housing at a Large Grower's Headquarters



**Author:** Elisa Martínez Rubio. Photograph taken on 03/18/2020 of a formal firm's housing, Sinaloa, México. All rights reserved.

**Photograph 2.3.** Workers' Housing in Villa Juárez, Sinaloa.



**Author:** Elisa Martínez Rubio. Photograph taken on 03/19/2020 of a tenement in Las Amapas neighborhood in Villa Juárez, Sinaloa, México. All rights reserved.



**Photograph 2.4.** Workers' Housing in Villa Juárez, Sinaloa.



**Author:** Elisa Martínez Rubio. Photograph taken on 03/19/2020 of a tenement belonging to the municipality in Villa Juárez, Sinaloa. All rights reserved.

Overall, in material terms, the differences between workers' housing in Villa Juárez and in company housing are apparent in cooking arrangements. Workers in company housing own their furniture and their quarters are clean, fully furnished and cared for, while worker housing in Villa Juárez tends to be less clean, more crowded, and in worse conditions overall. Conditions vary, however. In one housing complex, there was a basketball court and an elementary school at the back of the housing unit.

Housing for most workers in the Culiacán Valley has evolved from being very unsatisfactory temporary worker housing, whether provided by the growers or built by the workers themselves. Employers are required by law to provide housing and one meal per day to temporary migrant workers. Casual laborers, on the other hand, pay for their own housing in Villa Juárez, and there is no labor law requirement in that kind of arrangement. Therefore, we expect formal workers to enjoy significantly better conditions than workers in Villa Juárez.

Both according to the literature describing housing conditions in the valley and to workers' testimonies, housing has improved markedly. In 2010, they had deplorable living quarters, with walls and roofs made of corrugated metal sheets or tarred cardboard (Ortiz-Marín, 2013). There were no adequate spaces for mealtimes, nor any recreational areas, both of which have now become common both in company housing in the fields and in Villa Juárez.



**Table 2.7.** Type of Housing, Villa Juárez and Formal Firm Workers

<b>Villa Juárez Workers</b>			
Type of Housing	<b>Local</b>	<b>Settled Immigrant</b>	<b>Temporary Migrant</b>
<b>Own House</b>	39	24	11
<b>Warehouse</b>	2	3	7
<b>Ranch</b>	0	0	0
<b>Worker Housing / Inn</b>	18	32	144
<b>Other</b>	0	0	0
<i>Total</i>	<b>59</b>	<b>59</b>	<b>162</b>
<b>Formal Firm Workers <sup>1</sup></b>			
Type of Housing	<b>Local</b>	<b>Settled Immigrant</b>	<b>Temporary Migrant</b>
<b>Own House</b>	3,273	820	888
<b>Warehouse</b>	6	0	120
<b>Ranch</b>	92	0	0
<b>Worker Housing / Inn</b>	8,411	5,487	18,636
<b>Other</b>	184	0	0
<i>Total</i>	<b>11,966</b>	<b>6,307</b>	<b>19,644</b>

**Source:** ENJOREX, survey of farm workers in Mexico's export agriculture, 2020.

<sup>1</sup> The Formal Worker Sample has been expanded to include total workforce for the firm in question. Authors' elaboration with data from the 12th General Census of Population and Housing (2000), INEGI; the 2010 Census of Population Housing, INEGI and the the 2020 Census of Population Housing, INEGI.

Unlike other states in Central and Western Mexico, even among "locals", living in one's own house is a rare occurrence. Both among formal and informal Villa Juárez workers, worker housing is the most common dwelling for workers. The difference lies in how workers access housing. For formal-sector workers, housing is provided by the firms. On the contrary, in Villa Juárez, workers pay to rent a room where they live, sometimes with their children. Some of this housing in Villa Juárez was built by the municipality and was highly subsidized.

One of these "roomeries" or tenements is the one managed by the municipality. Unlike private tenements, it includes a ball court and a childcare unit. Nevertheless, it looks worn and seems to lack maintenance and supervision. Workers complain that if they skip a month's rent their lavatory keys are taken away. Also, the lavatories break, and it often takes managers weeks to fix them. Conditions in company housing are normally better. The social worker in charge of housing at one of them explained how they have a full-time person to take care of maintenance and repairs. She also explained that they are constantly updating their training to comply with government and buyers' increasingly demanding standards. This tenement includes daycare, and elementary-age schoolchildren are transported by the company to the closest elementary school.



The quality of housing varies significantly. Company housing imposes strict rules on workers, and they are relatively isolated. It is quite impractical for them to go to town to shop. However, large exporters, the Mexican government and U.S. retailers demand that housing meets certain conditions. On the other hand, housing operated privately by landlords lacks adequate infrastructure, and supervision is minimal. In the case of the municipality's tenement, as mentioned earlier, for some reason maintenance has fallen behind recently.

**Table 2.8.** Housing Services for Villa Juárez and Formal Workers

N Stats	<i>Villa Juárez Workers</i> 247		<i>Formal Firm Workers</i> <sup>1</sup> 38,029	
	Mean	Standard Dev.	Mean	Standard Dev.
Running Water	0.93	0.26	0.90	0.30
Concrete or Tile Floor	0.98	0.13	0.99	0.11
Concrete Roof	0.97	0.18	0.90	0.31
Concrete or Brick Walls	0.99	0.10	0.97	0.17
Electricity	0.99	0.08	0.99	0.08
Sewage or Septic Tank	0.91	0.28	0.95	0.22
Land Line	0.10	0.31	0.04	0.19
Gas Stove	0.87	0.34	0.96	0.20
Wood Stove	0.27	0.44	0.06	0.24
Refrigerator	0.31	0.46	0.49	0.50
Washing Machine	0.14	0.35	0.19	0.39
Blender	0.57	0.50	0.63	0.48
Television	0.64	0.48	0.65	0.48

**Source:** ENJOREX, survey of farm workers in Mexico's export agriculture, 2020.

<sup>1</sup> The Formal Worker Sample has been expanded to include total workforce in the firm in question.



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## 2.4. THE WORKFORCE

In this final section, we begin by explaining what the controversy has been regarding the benefits farm workers should enjoy. Farm workers were long considered “atypical” workers, and therefore employers were not required to provide the benefits enjoyed by urban or manufacturing workers. Nevertheless, today they are considered equal to other workers, and employers are required to provide all benefits, although a few exceptions have been made when it comes to farm employers hiring casual workers. Next, we analyze the current working conditions experienced by farm workers in the Culiacán Valley to ascertain the quality of their jobs, and to explore the idea that this is a highly segmented labor market, as previous analyses assert. Finally, we analyze recent changes in poverty levels in both municipalities.

By law, Mexican workers must have social security. The IMSS<sup>15</sup> was founded in 1943 and its benefits include protection from risks at work, illnesses and maternity, disability and life insurance, retirement and old age, and childcare and social services. In the past, farm workers did not have access to social security in any form. In 1990, growers and the IMSS agreed to provide workers with a special program, intended to provide healthcare only –no retirement or other benefits– to farm workers, through auxiliary health units in company lodging. Companies built basic clinics, and IMSS provided the doctors.

In 1995, the social security law was modified to mandate full coverage for farm workers. Growers argued that social security contributions were too high and the services provided were lacking or deficient. By 1998, the government decreed farm workers’ social security contributions would be subsidized for six years, until 2004. In 2005, growers again complained that services for farm workers were still insufficient and they received a subsidy for the construction of childcare facilities and healthcare clinics.

IMSS contributions are supposed to cover various funds and insurance packages. Without subsidies, contributions amount to at least 20% of wages, though they come closer to 23% for farm workers.<sup>16</sup> They are set to increase gradually between 2021-2029. Growers have been unhappy with IMSS for a long time, arguing that the services it provides are either non-existent or not worth what employers and workers pay. However, IMSS has refused to enter into new agreements like the one they had in Sinaloa, where the doctors were paid for by IMSS and employers built and maintained the clinics.

Currently, growers and their workers can benefit from the provisions of a 2018 presidential decree declaring that farm employers and their workers should only pay IMSS contributions up to a maximum daily wage equivalent to just under US\$10 nationwide, or US\$12.50 along the

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15 Public sector workers are mostly affiliated to the Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE) [Social Security Institute for State and Civil Service Workers], a Social Security institute for public servants only. An increasing share of public sector workers, however, is hired through outsourcing, thus limiting social security among public sector workers, and increasing coverage of public sector workers through private social security.

16 We discussed social security with an expert who said that after looking at social security contributions in Mexican agriculture, growers seem to pay social security on the basis of the minimum wage to minimize their cost.



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U.S. border. This decree effectively lowers the contributions of higher-paying employers during the peak season. It also benefits those legally defined as casual workers —those employed a maximum of 27 weeks per year—. Smaller employers paying lower wages, and the fees for all workers working continually for over 27 weeks, do not enjoy the same treatment. Furthermore, the decree does nothing to improve services to the workers, which is the main problem as of time of writing.

The Consejo Coordinador Empresarial (CCE) [Mexico’s Employer’s Coordination Council] and the Confederación Patronal de la República Mexicana (COPARMEX) [Mexican Employers’ Council] lobbied for a reform of the retirement system. Congress approved the reform in July 2020. The reform increases employers’ retirement contributions gradually, from 5.15% to 13.87% of wages over a period of eight years. This increase will substantially diminish the time required to arrive at the amount necessary for retirement, from 1,250 weeks of effective contributions, to 750 weeks —or just under 15 years—. Most farm workers in general still lack access to social security, but those in the export sector are affiliated. Provided they continue to be enrolled in social security, this reform will make it much easier for them to retire. The minimum social security pension would then be topped up by Mexico’s universal, non-contributive pension, roughly equal to 65 dollars per month.

Although Culiacán is a large city, Table 2.9 shows that farming is the largest single contributor to the valley’s social security institute. Navolato, on the contrary, is essentially a rural municipality. Total social security employment in agriculture multiplied by a factor of 8 in 20 years; that is a 700% increase. The data for Navolato shows that arguments stating the reason for social security facilities being scarce in rural areas is because formal employment is urban, are not true. In Navolato, agriculture is by far the most important reason to have IMSS facilities (Table 2.10).



**Table 2.9.** Workers Affiliated to Social Security by Economic Activity in Culiacán, 2000, 2010, and 2020

Economic Activities	N and % of total					
	2000	%	2010	%	2020	%
<b>Agriculture</b>	5,867	4.9%	11,277	6.5%	28,630	11%
<b>Food Manufacturing</b>	7,954	6.6%	9,199	5.3%	19,854	7.6%
<b>Construction of Buildings and Civil Engineering Works</b>	10,524	8.7%	14,093	8.2%	14,251	5.5%
<b>Trading of Food, Beverages and Tobacco Products</b>	5,651	4.7%	8,913	5.2%	14,630	5.6%
<b>Sale of Clothing and Other Articles for Personal Use</b>	5,430	4.5%	6,900	4.0%	9,102	3.5%
<b>Self-Service Stores and Specialized Department Stores</b>	10,365	8.6%	17,717	10.2%	27,162	10.4%
<b>Trading of Commodities, Materials and Auxiliaries</b>	4,715	3.9%	6,507	3.8%	9,446	3.6%
<b>Ground Transportation</b>	3,135	2.6%	3,470	2.0%	5,088	2%
<b>Financial and insurance Services (banks, finance companies, insurance companies, etc.)</b>	1,096	0.9%	3,023	1.7%	6,972	2.7%
<b>Professional and Technical Services</b>	7,903	6.6%	16,902	9.8%	24,520	9.4%
<b>Preparation and Service of Food and Beverages</b>	3,961	3.3%	5,735	3.3%	7,427	2.9%
<b>Personal Home and Miscellaneous Services</b>	4,980	4.1%	5,969	3.5%	9,096	3.5%
<b>Teaching, Scientific Research and Cultural Promotion Services</b>	7,171	5.9%	11,825	6.8%	16,785	6.5%
<b>Public Administration and Social Security Services</b>	9,264	7.7%	11,520	6.7%	14,462	5.6%
<b>Other Economic Activities</b>	32,537	27%	39,860	23%	52,640	20.2%
<b>Total</b>	<b>120,553</b>	<b>100%</b>	<b>172,910</b>	<b>100%</b>	<b>260,065</b>	<b>100%</b>

**Source:** Authors' elaboration with data from the IMSS open databases for December 2000, 2010, and 2020.

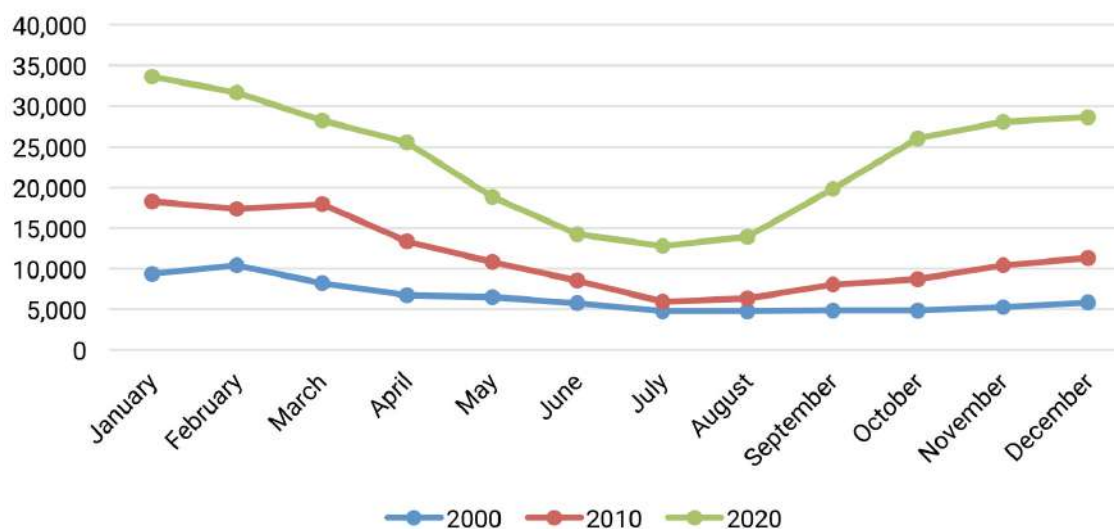




**Table 2.10.** Workers Affiliated to Social Security by Economic Activity in Navolato, 2000, 2010 and 2020

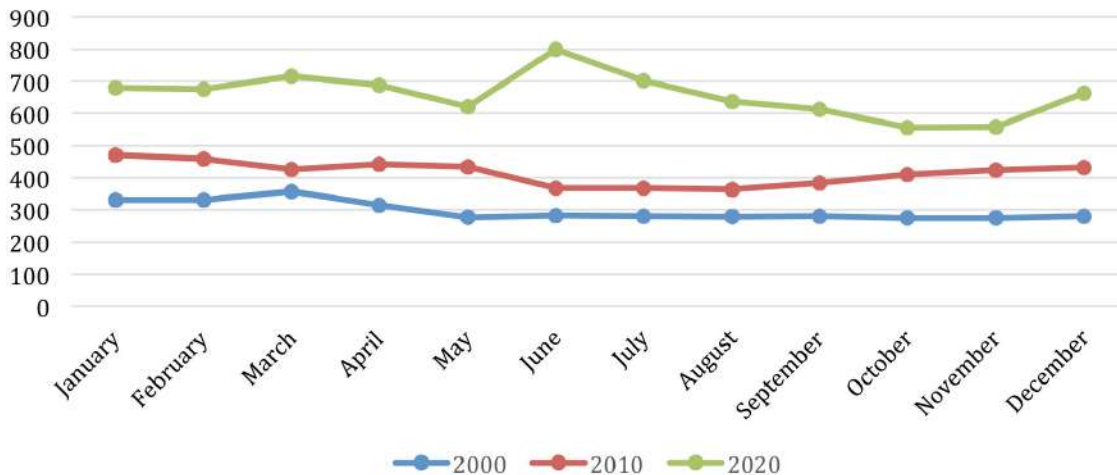
Economic Activities	N and % of total					
	2000	%	2010	%	2020	%
<b>Agriculture</b>	1,524	21.1%	5,467	47.4%	12,964	65.1%
<b>Fishing</b>	1,311	18.1%	122	1.1%	332	1.7%
<b>Food Manufacturing</b>	585	8.1%	509	4.4%	369	1.9%
<b>Construction of Buildings and Civil Engineering Works</b>	469	6.5%	583	5.1%	466	2.3%
<b>Trading of Food, Beverages and Tobacco Products</b>	403	5.6%	575	5%	661	3.3%
<b>Trading of Commodities, Materials and Auxiliaries</b>	294	4.1%	382	3.3%	385	1.9%
<b>Public Administration and Social Security Services</b>	862	11.9%	1,051	9.1%	1,423	7.1%
<b>Other Economic Activities</b>	1,786	24.6%	2,833	24.6%	3,316	16.7%
<b>Total</b>	<b>7,234</b>	<b>100%</b>	<b>11,522</b>	<b>100%</b>	<b>19,916</b>	<b>100%</b>

**Source:** Authors' elaboration with data from the IMSS open databases for December 2000, 2010, and 2020.

**Figure 2.6.** Agricultural Workers With Access to Social Security in Culiacán, 2000, 2010, and 2020

**Source:** Authors' elaboration with data from the IMSS open databases for December 2000, 2010, and 2020.



**Figure 2.7.** Agricultural Workers With Access to Social Security in Navolato, 2000, 2010, and 2020

**Source:** Authors' elaboration with data from the IMSS open databases for December 2000, 2010, and 2020.

In spite of contradictions between the INEGI Population Census and the IMSS's own administrative records, our analysis and the above tables and figures show that worker affiliation is growing rapidly. If the total number of farm workers is falling, as would seem clear from the census, then the obvious conclusion is that social security coverage has been rising significantly. This analysis also shows that seasonal variations are much more marked in Culiacán than in Navolato. Either only permanent workers are affiliated in Navolato, or casual and seasonal workers are bussed in from Culiacán. In any case, an increasing number of farm workers are affiliated to IMSS.

The other significant job benefit package is the housing fund INFONAVIT, which is another 5% contribution from the employer and a much smaller one from the worker. Even more than with IMSS, farm workers stand very little chance of accessing these funds because contributions are made only as long as they are employed, they have only recently started to contribute, and because there are no purchase or house improvement plans suited to their income levels in the towns and villages close to export farms. Altogether, IMSS and the housing fund should provide a fairly comprehensive benefit package. The problem is that workers who are not employed formally year-round may never make enough contributions to arrive at a well-funded retirement or a house facilitated by INFONAVIT. An effort was made to design low-income housing at the turn of the millennium, but that initiative was not successful. A welcome change in INFONAVIT's bylaws in 2020 mandated that workers be allowed to access their savings and loans balance with INFONAVIT to buy any kind of housing they choose. Nevertheless, an employer in Baja California complains that workers at his company are automatically refused access to their savings or a housing loan at INFONAVIT. Housing fund officials have told him



farm workers don't qualify for loans because INFONAVIT cannot be guaranteed that farm workers will continue to contribute, and therefore defaulting on payments is very likely.

Other services provided to workers also have a long history. Growers fund a series of mobile clinics through an associated healthcare foundation managed by the growers' association, a series of mobile clinics. While services in these clinics are restricted, they do regular check-ups, consultations, and work on prevention programs (Rodríguez-Pérez, 2005). Growers arrived at specific agreements with the federal government. The PAJA made significant contributions to infrastructure. The government also helped fund private foundations, such as Profamilia de Jornaleros. In turn, they funded education, health, nutrition and sports infrastructure. They included healthcare, co-funding for childcare centers and schools, and the construction, maintenance and expansion of worker housing. These schemes meant living conditions and services for workers improved over time. In 2020, however, there was a significant impasse. The government has decided to stop funding infrastructure and other improvements, and the future of improvements for workers is uncertain. No one could have predicted the pandemic and how sales slumped from March until May, for example. Large losses could mean some of these services might not be funded. In the Culiacán Valley, services for farm workers and their families were supported in 2018 by the state government's family welfare office Sistema Nacional para el Desarrollo Integral de las Familias (DIF) [System for the Comprehensive Development of Families], or by organizations such as Asociación Pro Formación y Orientación de la Mujer (AFOMAC) [Association for the Education and Counseling of Women] and the aforementioned Profamilia de Jornaleros. The DIF also sponsored a program to attract children into school and away from farm work. This program consisted of a supply of dry goods, canned fish and oil, and school meals to farm worker families whose children aged six to 14 years old attended school.<sup>17</sup> The state government's adult literacy program of the Instituto Sonorense de Educación para los Adultos, ISEA [Sonora Government's Adult Literacy Institute] also implemented a program fostering literacy and basic education among adults, and among children who have quit school.<sup>18</sup> Substantive cuts in the federal contributions to state and municipal expenditures mean the entire system, which was subject to improvement but provided a number of valuable services, is in jeopardy since 2020.

There were a number of labor studies in Sinaloa between 1995 and 2013 (Lara-Flores, 1995; Rodríguez-Pérez, 2005; Becerra-Pedraza et al., 2007; Becerra-Pedraza et al., 2008; Revilla-López & Ortiz-Marín, 2013). They agreed that the farm labor market in Sinaloa was precarious and highly segmented. Some specialists argued that segmentation took place according to ethnicity, others that gender and age were the crucial markers dividing workers by earnings and working conditions. These authors also address the practice of hiring entire families and paying one wage; that is, one adult in a family is hired but his spouse and children are expected to work for no additional pay. According to these authors, 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. All of these studies were carried

17 <http://dif.sinaloa.gob.mx/p/sgc-direccion-de-asistencia-alimentaria-y-social>

18 <https://www.iseasinaloa.gob.mx/jornaleros-agricolas>



out before the Mexican government, the Human Rights Commission, and buyers, insisted that working and living conditions had to comply with the law.

According to our analysis of official employment surveys from 2005 onwards, farm worker pay and working conditions have improved noticeably in Sinaloa and in Mexico. We now turn to a detailed analysis of the working conditions of farmworkers in the Culiacán valley, including workers employed by large, registered export growers and workers living in Valle de Juárez where, as explained above, we found many people working precariously. In 2019 and 2020 we conducted a random, stratified survey designed to interview workers in companies employing over 38,000 workers in Sinaloa, and over 83,000 workers nationally. In Sinaloa these workers worked for growers affiliated to AARC and CAADES.

The questions in our survey, which follow closely the questions asked in Mexico's census and in the National Household Income and Expenditure Survey, found no stark contrast in social terms between formal and mostly informal workers living in Villa Juárez. Over 90% of the housing includes a reasonably robust construction and essential services. The questionnaire did not register overcrowding, but by Mexican standards overcrowding is common for both kinds of workers because they live in worker housing where, before the COVID-19 pandemic, we sometimes found bunk beds for 8 persons in one large room. Some workers spoke about having even more workers per room. Again, before the pandemic, we found a large trailer with 12 beds and little ventilation in one field in Jalisco. The protocols in place since the pandemic established there should be fewer workers per room.

Perhaps the only notable difference between company housing on company land and the tenements workers rent on their own has to do with the presence of a wood stove, or a "*comal*" as it is called in Mexico. Although Mexicans in general prefer the taste of food prepared on a wood stove, the smoke is very toxic, particularly for women who are most exposed, when it is located inside living quarters. We saw a number of people preparing their food on small fires outside their dwelling in Villa Juárez, but not in company housing—the pictures above show colorful tanks containing cooking gas—. More than a quarter of the informal workers report having a wood stove. This is significant not only for the aforementioned health risk, but also because they tend to be used by the very poor who can't afford a gas stove or, even if they bought a stove, they wouldn't spend on gas and would instead send their children to collect wood for cooking.

Housing for workers is a salient feature of the Sinaloa worker landscape because most of the workers are migrants. Both among Villa Juárez workers and among those in our formal firm sample, over 50% of the workers report they are seasonal migrants; another 20% report being settled or permanent migrants, and a minority say they were born locally. Since commercial agriculture in the Culiacán Valley is quite old, and workers have been migrating here for about 70 years, a number of the locals descend from immigrants from the South.

Both the workers in Villa Juárez and those in company housing report acceptable housing conditions. Nevertheless, there are significant differences among the various kinds of housing. From the point of view of segmentation, workers in private short-term tenements in Villa Juárez are worst-off because they have to pay for their rooms and the services are much worse. However, settled workers who have successfully bought a plot of land and built a house

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are gradually better off and free to choose employers, which is impossible for those in company housing —unless they agree to move out—. All of this is in addition to the segmentation arising from the work and pay conditions themselves.

**Table 2.11.** Migration Status for Workers in the Culiacán Valley

Migration Status	Villa Juárez sample	Formal Firm Farmworkers <sup>1</sup>
<b>Local</b>	59	11,966
<b>Settled Immigrant</b>	59	6,307
<b>Temporary Migrant</b>	162	19,644
<i>Total</i>	<b>280</b>	<b>37,917</b>

**Source:** ENJOREX, survey of farm workers in Mexico's export agriculture, 2020.

<sup>1</sup> The Formal Worker Sample has been expanded to total workforce in the firm in question.

When visiting firms in the Culiacán Valley, the contrast with other export agriculture regions in the states of Jalisco, Michoacán and Guanajuato is remarkable. The settlement pattern is very specific to this valley. Perhaps because there were no significant local settlements before export agriculture took off in the late 1940s, the housing was custom-built to house migrant workers. However, as is evident in Villa Juárez, migrant workers have also built their own towns. These towns are now sizable —like Villa Juárez—, and the relationship with the municipal government has evolved towards normalization —with the provision of municipal services—. Nevertheless, Villa Juárez is still noticeably a town that is not populated by locals. In one firm, the human relations manager told us they were proud some families have been living in housing provided by the company for 40 years. Perhaps, the other Mexican region where this settlement pattern is prevalent is Baja California, where agriculture developed far away from pre-existing towns.

Therefore, there are differences in the type of settlement according to the migration status of workers. Differences between formal and informal workers become substantial gaps when comparing working conditions. The following tables examine these differences. “Firm workers” are workers chosen at random from associations’ rosters first, and then by our interviewers. We chose firms at random, and the association in question then contacted the firm for authorization to interview their workers. Once in the field, our interviewers, not the employers, chose workers for interviews. Our sample represents 38,000 formal firm workers, or approximately 30% of all farm workers in the Culiacán Valley. In other words, this is a random stratified sample of formal firm workers.

The other sample includes Villa Juárez workers, who are mostly casual workers or day laborers. They are mostly, but not entirely, informal. They were located using residential criteria: we knew the farm workers living in Villa Juárez suffered much worse working conditions, and



we looked for them, with the help of a local labor law NGO.<sup>19</sup> Although a few have contracts and work for a single employer, most do not. This sample is not expanded because there is no sampling frame to provide an expansion number. We believe they account for about 10% of Mexico's entire export agriculture work force, but there is no reliable expansion factor. If the casual workers are added, we believe the sample accounts for about 40% of the total workers in the Culiacán Valley.

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19 Abogados Indígenas del Noroeste.



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## 2.5. WORKING CONDITIONS

The first question is whether or not formal “firm workers” represent a socially less vulnerable group, as opposed to casual, “pay as you leave” day laborers. Table 12 shows that the differences between these two groups, in social terms, are not marked. The percentage of women is the same, age is the same, the percentage speaking an indigenous language is the same. The two groups differ in two respects. Among the day laborers, there are more workers at age extremes: below 18—a very small group—and over 50. In spite of a reasonably large number of interviews with informal workers, we found no evidence of the aforementioned “family employment”, where one member gets hired and all the family works. All our workers were hired individually, even if they were underage. It is well known that formal firms do not hire underage workers, and that they tend to layoff older workers. Underage workers are banned by law and their presence has been diminishing consistently over the past ten years. Unlike what researchers found 10 or more years ago, child labor has almost disappeared at formal firms, though we did find a few cases:

Among the workers we interviewed, some stated their underage children also worked in the fields. Berenice, a 37-year-old woman who arrived from Guerrero 3 years prior to the interview, lives with her three offspring in one of the rooms rented from the municipality. The room costs them US\$7.50 per week. Two of her three children, aged 17 and 16, also work in one of the fields in the valley. They quit school. One finished seventh grade, the other sixth grade only. When they arrived from Guerrero, they had to work because their mother’s wages were not sufficient to support the entire family. All three now work as “pay as you leave” workers. Nevertheless, they work in the same firm every day. They were recruited by a contractor. None of them has a contract or any job benefits. The contractor pays them. He deducts their daily transport to and from the fields, and pays each one approximately US\$12.00 per working day, from 7 am to 2 p.m. They get no food breaks. In order to eat, they have to wait till they leave the job and arrive back home. (Elisa Martínez, field diary, March 26th, 2020).

There is no inequality in terms of education, but the distribution among formal and informal workers is different: among formal workers there is a higher percentage of workers with no schooling, but also more workers with schooling beyond ninth grade. There are no grounds in this table to assert that formal firm workers are drawn from a relatively privileged stratum. This contradicts the notion that the labor market is segmented along the lines of gender, age, schooling, or ethnicity. Both kinds of workers are socially and ethnically similar.



**Table 2.12.** Worker Characteristics According to Type of Labor Relationship, Culiacán Valley, 2019 and 2020 (%)

	Number (unexpanded)	% Women	Age	% Under 16 Years Old	% Under 18 Years Old	% 50 Years Old or More	% Never Attended School	% Attended Grade 10 or Higher	% Speaking Indigenous Language	% Married / United
"Pay as You Leave" Workers										
%	247	48	34.36	1	4	16	12	27	27	70
Std. Dev		0.50	13.88	0.11	0.19	0.37	0.33	0.45	0.45	0.44
Firm Workers <sup>1</sup>	Number (expanded)									
%	38,029	48	33.9	0	1	12	17	37	28	77
Std. Dev		0.50	11.92	0.06	0.07	0.32	0.38	0.48	0.45	0.42

Source: ENJOREX, survey of farm workers in Mexico's export agriculture, 2020.

**Table 2.13.** Villa Juárez: Worker Characteristics According to Migration Category Culiacán, 2019 and 2020 (%)

Migration category	Workers N (%)	Stats	% Women	Age	Under 16	Under 18	Over 50	No Schooling	Ninth Grade or More	Speaks Indigenous Language	Married / United
Local	59 (21.07)	Mean	0.49	34.4 9	0.02	0.03	0.19	0.12	0.37	0.03	0.61
Settled Immigrant	59 (21.07)	Mean	0.46	42.2 7	0.00	0.00	0.32	0.15	0.20	0.32	0.78
Temporary Migrant	162 (57.88)	Mean	0.48	31.4 3	0.01	0.05	0.09	0.11	0.26	0.33	0.70
<b>Total</b>	<b>280 (100)</b>	<b>Mean</b>	<b>0.48</b>	<b>34. 36</b>	<b>0.01</b>	<b>0.04</b>	<b>0.16</b>	<b>0.12</b>	<b>0.27</b>	<b>0.27</b>	<b>0.70</b>

Source: ENJOREX, survey of farm workers in Mexico's export agriculture.





**Table 2.14.** Villa Juárez: Worker Characteristics According to Migration Category Culiacán, 2019 and 2020 (%)

Migration category	Workers N (%) <sup>1</sup>	Stats	% Women	Age	Under 16	Under 18	Over 50	No Schooling	Ninth Grade or More	Speaks Indigenous Language	Married / United
<b>Local</b>	11,966 (31.5)	Mean	0.42	35.55	0.01	0.01	0.16	0.07	0.47	0.00	0.70
<b>Settled Immigrant</b>	6,307 (16.7)	Mean	0.50	35.19	0.00	0.00	0.13	0.18	0.38	0.25	0.84
<b>Temporary Migrant</b>	19,644 (51.8)	Mean	0.51	32.42	0.00	0.00	0.09	0.23	0.31	0.45	0.79
<b>Total</b>	<b>37,917 (100)</b>	<b>Mean</b>	<b>0.48</b>	<b>33.87</b>	<b>0.00</b>	<b>0.01</b>	<b>0.12</b>	<b>0.17</b>	<b>0.37</b>	<b>0.28</b>	<b>0.77</b>

**Source:** ENJOREX, survey of farm workers in Mexico's export agriculture.

<sup>1</sup> With weights

As the older literature states, formal firms tend to draw more heavily from local populations, and casual employers rely more on temporary migrants, although the proportions are not too different. Formal firm workers show higher percentages at the extremes of school attainment. Settled immigrants are much older than average among day laborers, which corresponds neatly with our findings relating to the age structure in Navolato, and this category is more heavily indigenous. The proportion of indigenous language speakers is much larger among formal firm, temporary migrant workers. In some respects, it would seem formal firm workers are drawn from a slightly higher social stratum, but not in others.

An altogether different story arises when we address working conditions. Day laborers and formal firm workers show a stark contrast in terms of job benefits. The following tables separate workers according to their migration category.

**Table 2.15.** Villa Juárez Workers: Access to Job Benefits Culiacán, 2019 and 2020

Migration Category	N	Stats	Year-End Bonus	Social Security Health	Private Health	Social Security Child Care	Other Federal Child Care	Other Public Child Care	Private Child Care	Signed Contract	Paid Sick Leave
<b>Local</b>	58	Mean	0.09	0.07	0.00	0.00	0.00	0.00	0.00	0.10	0.21
<b>Settled Immigrant</b>	59	Mean	0.08	0.12	0.02	0.00	0.02	0.00	0.00	0.24	0.18
<b>Temporary Migrant</b>	162	Mean	0.06	0.05	0.01	0.01	0.00	0.01	0.00	0.17	0.27
<b>Total</b>	<b>279</b>	<b>Mean</b>	<b>0.07</b>	<b>0.07</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.17</b>	<b>0.24</b>

**Source:** ENJOREX, survey of farm workers in Mexico's export agriculture.



**Table 2.16.** Formal Firm Workers: Access to Job Benefits. Culiacán, 2019 and 2020

Migration Category	N <sup>1</sup>	Stats	Year-End Bonus	Social Security Health	Private Health	Social Security Child Care	Other Federal Child Care	Other Public Child Care	Private Child Care	Signed Contract	Paid Sick Leave
Local	11,620	Mean	0.84	0.91	0.03	0.10	0.01	0.00	0.47	0.71	0.33
Settled Immigrant	6,170	Mean	0.97	0.94	0.04	0.12	0.02	0.00	0.61	0.67	0.40
Temporary Migrant	18,559	Mean	0.79	0.91	0.05	0.11	0.01	0.01	0.58	0.66	0.27
<b>Total</b>	<b>36,349</b>	<b>Mean</b>	<b>0.84</b>	<b>0.91</b>	<b>0.04</b>	<b>0.11</b>	<b>0.01</b>	<b>0.00</b>	<b>0.55</b>	<b>0.68</b>	<b>0.31</b>

**Source:** ENJOREX, survey of farm workers in Mexico's export agriculture.

<sup>1</sup> Expanded

“Pay as you leave” workers enjoy extremely few job benefits. At best, a minority have a signed job contract and paid sick leave, but most have no benefits. These conditions are worse than those we found among casual workers in 2019 in Jalisco, San Luis Potosí and Michoacán. Among these other workers, there were just under half with job benefits.

Segmentation can easily divide a family, further strengthening the notion that we are not dealing with separate social strata among farm workers. Alondra is an 18-year-old girl from Veracruz. She arrived in Sinaloa when she was five years old with her mother who worked in the tomato fields. Today, mother and daughter work on tomato fields, in different firms. Both were hired by contractors, but the mother is formally hired, has a contract and social security, while Alondra does not have a contract in spite of the fact that she has worked at the same firm for over five months as a “pay as you leave” worker. She has no benefits and her wages are lower than her mother's. The week before the interview, the mother was paid 48 dollars, and the daughter only received between 15 and 20.<sup>20</sup> In addition, the mother gets a full meal for one dollar per day. Alondra has to take her meal to work and heat it up herself. Both live in one of the rooms in the tenement managed by the municipality, together with Alondra's two sisters and daughter. The room costs them US\$7.50 per week. They bought a gas stove top because the tenement provides no cooking facilities. They placed it just outside their room's door, a space they have covered with a large blanket to afford them some privacy while they cook, eat or meet with neighbors. The enclosed room measures approximately 10 by 13 feet, and is shared by the five women. The space covered by the blanket is slightly smaller (Elisa Martínez, field diary, March 26th, 2020).

<sup>20</sup> Both Alondra and her mother's wages are lower than average for the random sample of formal workers and the analytical sample of informal workers. Alondra did not work a full week. Unfortunately, we don't know if they worked full days or a full week. In any case, this is precisely the point: “pay as you leave” workers are treated flexibly, as explained before, so that, even if they don't change employers, they can be called to work for only some days, and not others. This lowers their earnings.



Formal firm workers report almost universal social security coverage in terms of health services. Temporary migrants have the lowest benefits, but even they report over 90% Social Security coverage in health services. As in other Mexican states, the coverage of social security childcare is very low, in spite of the fact that social security contributions include it. What sets the Culiacán Valley apart from other Mexican regions is the high percentage of workers reporting access to private childcare. This is typically provided directly by large employers or by charities working with support from employer associations. It explains at least in part why women's participation in paid work rose markedly from 2010 to 2020.

In this sense, Sinaloa is remarkable among all the various regions we studied because of the significant gap between these two kinds of workers in terms of working conditions. In other regions, work conditions could be aligned along various continuums. In Sinaloa, they are opposites.

It is worth exploring whether these differences are echoed in wage levels. These tables show wages for workers according to their labor relationship and their migration category.

**Table 2.17.** Formal Firm Workers: Access to Job Benefits. Culiacán, 2019 and 2020  
Pesos (dollars)

Migration Category	Stats	Villa Juárez		Formal Firm Workers	
		N	Monthly Wages	N <sup>1</sup>	Monthly Wages
<b>Local</b>	Mean	57	5,299.08	11,848	6,729.46
	Standard Dev.		(265) 1,898.27		(337) 3,409.50
<b>Permanent Immigrant</b>	Mean	58	5,072.15	6,342	6,243.50
	Standard Dev.		(254) 1,797.10		(312) 2,167.93
<b>Temporary Migrant</b>	Mean	158	5,869.92	19,677	6,075.61
	Standard Dev.		(294) 2,002.78		(303.8) 1,908.32
<i>Total</i>	<b>Mean</b>	<b>273</b>	<b>5,581.25</b>	<b>37,867</b>	<b>6,308.48</b>
	<b>Standard Dev.</b>		<b>(279)</b> <b>1,963.23</b>		<b>(315)</b> <b>2,530.46</b>

**Source:** ENJOREX, survey of farm workers in Mexico's export agriculture.

<sup>1</sup> With weights



As could be expected, formal workers earn considerably more (12%) than day laborers. Wage hierarchies, however, are different for each type of labor relationship. Locals are the top earners among formal workers, but they are close to the bottom of earnings among day laborers. Their wages in formal firms vary widely. Among the Villa Juárez group, temporary migrants are the top earners, but they are at the bottom in formal firms. This could mean they work very long hours as day laborers. Some day laborers in Villa Juárez told our interviewers that they were not granted time for lunch, and had to hide behind plants to get a bite or else they didn't eat anything from 7 a.m. to 4 p.m. This suggests their work is very intensive, and therefore their earnings are not too far below those in formal firms because day laborers work much harder. This poses a significant health risk for them. Put differently, it would seem from their testimony that they work much harder than formal firm workers, and that their hourly earnings are far below formal workers.



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## 2.6. POVERTY

Mexico's official poverty measurement was designed by an independent body, the CONEVAL.<sup>21</sup> CONEVAL estimates poverty at a municipal level every five years. Poverty estimates for 2010 and 2015 should shed light on the relationship between recent trends in agriculture and municipal poverty levels. The relationship should be particularly clear in the municipality of Navolato, where agriculture is by far the largest economic activity and the largest employment sector. Although the relationship is less direct in Culiacán, agriculture has an impact on the urban economy, as said earlier, since a large portion of the banks, transport, commerce, business tourism and other sectors are dependent on it.

Extreme poverty has fallen both in Culiacán and in Navolato. Both extreme and total poverty levels fell in Culiacán by a great amount. In Navolato, only extreme poverty fell. Total poverty is stagnant, but the number of poor persons increased due to population growth. In Jalisco, we also found that extreme poverty has fallen very significantly —by more than 50%— with the growth of agricultural employment, and thanks also to wage raises since 2015. This is a positive finding.

Incomes have improved in both municipalities: the share of the “income-vulnerable population” —that fraction of the population with an income below the well-being line, but with no deprivations—, and the population with poverty-level income has fallen in both municipalities. However, other dimensions of Mexico's poverty measurement, such as those relating to substantive deprivations, have worsened. Housing quality and overcrowding, lack of basic services in dwellings, school attendance, social security and food insecurity were worse in 2015 than in 2010.

The following indicators have worsened modestly —by one to three percentage points— in Culiacán: quality of construction and overcrowding, access to basic services, and access to food. The same deprivations have worsened in Navolato, but by greater amounts —between two and eight percentage points—. Access to social security, in particular, should be of concern, since agriculture is the main employer in that municipality.

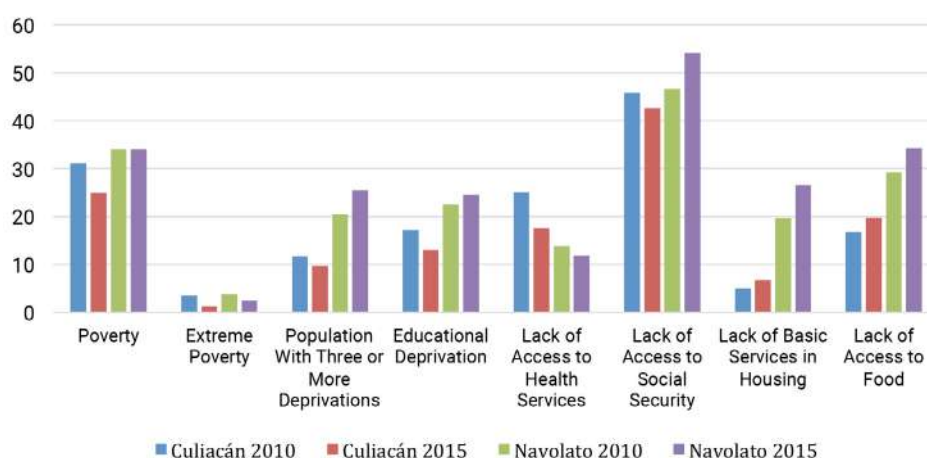
The contrast between income poverty, which has fallen, and rising qualitative deprivations shows that although job options and incomes have risen, the general population's living conditions have not improved. We find a contradiction between this finding and our analysis of both census data and social security administrative records. Both show significant increases in social security affiliation from 2010 to 2020. Poverty rates for 2020 will be released later in July 2021. They should match the administrative records we analyzed previously, and show an increase in social security registration. Still, general access to urban and social services are issues requiring attention.

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21 CONEVAL is a “constitutionally autonomous” government body.



**Figure 2.8.** Poverty in the Culiacan Valley, Sinaloa, México, 2010-2015  
Selected Indicators %



**Source:** Authors' elaboration based on CONEVAL's dynamic outcome public use data from the municipal measurement for 2010 and 2015.

**Table 2.18.** Multidimensional Poverty in Culiacán, Sinaloa, 2010 and 2015

Indicators	%		Number of people		Average social deprivation	
	2010	2015	2010	2015	2010	2015
<b>Multidimensional Poverty</b>						
Population in Multidimensional Poverty Situation	31.2	24.9	272,524	236,469	2.0	1.8
Population in Moderate Multidimensional Poverty	27.8	23.6	242,296	224,780	1.8	1.8
Population in Extreme Multidimensional Poverty	3.5	1.2	30,228	11,689	3.5	3.4
Vulnerable Population due to Social Deprivation	29.9	35.4	260,784	336,774	1.7	1.7
Vulnerable Population by Income	9.1	5.7	79,049	54,667	-	-
Non-poor and Non-vulnerable Population	29.8	34.0	259,870	323,545	-	-
<b>Social Deprivation</b>						
Population With at Least One Social Deprivation	61.1	60.2	533,309	573,243	1.9	1.8
Population With at Least Three Social Deprivations	11.7	9.6	101,798	91,811	3.4	3.4
<b>Indicators of Social Deprivation</b>						
Educational Gap	17.1	13.0	149,348	123,240	2.2	2.2
Access to Health Services	25.0	17.6	218,184	167,767	2.4	2.4
Access to Social Security	45.9	42.6	399,975	405,741	2.1	2.0
Quality and Space in Housing	5.1	6.0	44,508	56,875	3.2	2.7
Access to Basic Services in Housing	4.9	6.8	42,454	64,416	3.3	2.9
Access to Food	16.8	19.8	146,936	188,433	2.6	2.1
<b>Welfare</b>						
Population Below the Well-being Line	40.3	30.6	351,573	291,136	1.6	1.5
Population Below the Minimum Well-being Line	12.0	5.0	104,957	47,357	1.9	1.8

**Source:** Authors' elaboration based on CONEVAL's dynamic outcome public use data from the municipal measurement for 2010 and 2015.



**Table 2.19.** Multidimensional Poverty in Navolato, Sinaloa, 2010 and 2015

Indicators	%		Number of people		Average social deprivation	
	2010	2015	2010	2015	2010	2015
<b>Multidimensional Poverty</b>						
Population in Multidimensional Poverty Situation	34.0	34.0	47,697	58,694	2.1	2.2
Population in Moderate Multidimensional Poverty	30.2	31.6	42,307	54,594	1.9	2.1
Population in Extreme Multidimensional Poverty	3.8	2.4	5,390	4,101	3.6	3.6
Vulnerable Population due to Social Deprivation	38.2	45.2	53,645	78,154	1.8	2.1
Vulnerable Population by Income	7.2	4.7	10,146	8,145	-	-
Non-poor and Non-vulnerable Population	20.5	16.1	28,778	27,775	-	-
<b>Social Deprivation</b>						
Population With at Least One Social Deprivation	72.3	79.2	101,342	136,848	2.0	2.1
Population With at Least Three Social Deprivations	20.5	25.5	28,753	44,050	3.5	3.5
<b>Indicators of Social Deprivation</b>						
Educational Gap	22.5	24.6	31,537	42,518	2.4	2.8
Access to Health Services	13.8	11.8	19,331	20,466	3.1	3.2
Access to Social Security	46.7	54.1	65,486	93,455	2.2	2.4
Quality and Space in Housing	11.3	16.7	15,780	28,866	3.3	3.3
Access to Basic Services in Housing	19.7	26.5	27,648	45,725	2.8	3.0
Access to Food	29.2	34.3	40,976	59,306	2.7	2.5
<b>Welfare</b>						
Population With Risk Below the Well-being Line	41.2	38.7	57,843	66,839	1.8	1.9
Population with an Income Below the Minimum Welfare Line	10.8	6.8	15,148	11,748	2.0	2.1

**Source:** Authors' elaboration based on CONEVAL's dynamic outcome public use data from the municipal measurement for 2010 and 2015.



## FINAL REMARKS

We undertook the case study and the survey in the Culiacán Valley just before the pandemic led growers to intensify their preventive measures and to close their firms and their workers' lodgings to outsiders. It confirms and further elaborates on what we found in our stratified random survey in 2019. The vast majority of formal workers enjoy wages at least twice as high as the new –and much higher– minimum wage, and they have been affiliated to all legal benefits because both employers and workers are paying social security and housing contributions, in addition to those benefits coming directly from the employer, such as a yearly bonus.

Significant uncertainty surrounds the future of their benefits, from housing to childcare to on-site medical care. The subsidies provided by the federal government in the past for the construction, improvement and staffing of these services have been cancelled, and at this time it is unclear if and how these services will continue to be provided. Two positive changes that should help improve workers' living standards in their old age are: the 2020 retirement reform, which should provide pensions to workers not employed full time in formal jobs, and the rise in non-contributive pensions decreed by President López Obrador. This should add a formal pension to older persons' non-contributive pension scheme, which has been substantially increased by Mexico's federal government. Nevertheless, a viable solution to the provision of other services has to be found. We fear employers may shift to informal labor relations if there is no solution.

Finally, we confirm that there is a segmented labor market in the valley. Villa Juárez workers normally access jobs that are much worse than those of the formal firm workers we interviewed in the valley's largest firms. The net wage gap doesn't seem like much (12%) but, when that is combined with longer hours and no benefits, it is clear the gap is very large in terms of the quality of working conditions. This kind of segmentation accounts for the wage gaps according to ethnicity and gender, which we confirmed in our study. However, we did not find the kind of stark contrasts that previous authors have depicted in their studies. It could be that "standard" –higher tier– jobs have become more important, or that inspections have lowered the number of labor violations.

Although the jobs are segmented, the worker population is not. In other words, we found similar compositions in the formal and informal samples we interviewed. In other words, and contrary to what previous studies had found, we did not find that white non-indigenous natives of Sinaloa were systematically employed in the better jobs. For example, while it is true that there is a larger proportion of formal workers with high school education or higher, it is also true the proportion of workers with no schooling is larger among the same group. Even so, Villa Juárez is clearly a town that was founded by indigenous Mexicans from the Southeast, and these workers are mostly informal, meaning the social segmentation of the workforce can still be seen in some respects.





Conditions in the “formal” worker sample are quite comparable with those of other formal workers in Mexico, whether in export agriculture or in export manufacturing. In this sense, the gap between rural and urban jobs has closed to a very significant extent.

The place and role of informal workers in Mexico’s commercial and export agriculture is a major topic, and one that needs to be tackled for Mexico to improve the working and living conditions of farm workers in general. In these regional studies we explore how and why growers resort to informal labor

Worker settlements like Villa Juárez also demand urgent attention. These settlements will continue to expand because export agriculture is growing. However, rural municipalities are ill-equipped to plan these settlements and to implement actions that ensure they offer satisfactory services and living conditions. They have fallen in between the cracks of Mexican urban development law because, on the one hand, growers are not responsible for the living conditions of non-migrant workers, while on the other, municipalities cannot supply what is required. Access to work for their inhabitants also needs reform. Recruitment can’t be left in the hands of contractors who don’t comply with the law.

Finally, extreme poverty is falling in the Culiacán Valley, and this seems to be closely related to rising wages, since the workforce itself is not growing substantially. When full poverty measurements are released for 2020, we will be able to assess if the positive findings relating to social security coverage are replicated in a falling number of substantive deprivations.

A medium-term solution has been proposed by the federal government, as it strongly stated that export farm jobs must “go to the workers” in the Southeast. This is a good idea in principle, but even in such cases, the locations favored by export growers in the Southeast will witness a rapid increase in the need for new housing and infrastructure: the problem may be lessened but not solved altogether.

A major improvement in the system providing services to workers must be devised and implemented. Because of recent changes, workers are receiving less and less benefits, even when they are paid for. Mexico’s poorest and most vulnerable workers deserve effective access to labor rights.





# III. BAJA CALIFORNIA

## **REGIONAL STUDY**

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





### 3.1. FROM DESERT TO AGRICULTURAL VALLEY

What was previously a semi-arid,<sup>1</sup> 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,<sup>2</sup> 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.,<sup>3</sup> June 24th, 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, June 9th, 2021). With this new possibility for marketing fresh produce, companies arrived from Sinaloa, bringing vegetables, mainly tomatoes.<sup>4</sup> 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.

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

1 The average precipitation in this part of Baja California ranges from 80 to 250 mm per year, somewhere 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/americas-del-norte/estados-unidos-de-america/misuri/mexico-16890/>).

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

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

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



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., June 24th, 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, June 9th, 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.



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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 desalinated 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.<sup>5</sup>

The agricultural transformation can be clearly seen in the production data from the 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.<sup>6</sup>

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).

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5 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, November 29th, 2018).

6 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 3.1.** Agricultural Production\* in the San Quintín Valley, 2005-2019

Year	Area Planted (hectares)	Area Harvested (hectares)	Production (metric tons) <sup>1</sup>	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

**Source:** Authors' elaboration with data from the SIAP.

\*Value of production expressed in real pesos based on the INPC, base year 2018.

<sup>1</sup> 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.





**Table 3.2.** 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 <sup>1</sup> )	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
<b>TOTAL</b>	<b>19,441.65</b>	<b>377,150.92</b>	<b>5,541.99</b>	<b>11,806.75</b>	<b>382,773.96</b>	<b>7,298.51</b>	<b>10,608.7</b>	<b>383,529.27</b>	<b>11,373.66</b>

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015, and 2019 from SIAP.

\* Value of production in millions of pesos, expressed in real pesos based on the INPC, base year 2018.

<sup>1</sup> *Achicalada*, in Mexican Spanish, meaning sun-dried. This is the term used by the 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.

### *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



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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, June 25th, 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 cents of peso 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, June 25th, 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<sup>7</sup> 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." "O.K., 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, June 13th, 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 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, June 13th, 2021).

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<sup>7</sup> 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).



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, June 13th, 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.<sup>8</sup> I get to four pesos and say, "The price has come down in the 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, June 13th, 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,

<sup>8</sup> The verb he uses for "plowing under" is *disquear*, which refers to using a tractor to pull a disk harrow. The crop is 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., August 20th, 2021).



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, June 13th, 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.



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## 3.2. 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 et al. (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 Encuesta Nacional de Ocupación y Empleo (ENOE) [National Occupation and Employment Survey] was begun in 2005—. <sup>9</sup> 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 3.3).

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-19 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.

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<sup>9</sup> 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 3.3.** 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:** Authors' elaboration with data from the 2020 Census of Population and Housing, INEGI.

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%.<sup>10</sup> 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, 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

<sup>10</sup> 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.





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.



### 3.3. PAST AND PRESENT WORKING CONDITIONS AND CHILD LABOR

In 2021, the workers for companies affiliated with the CABC and the AHIFORES have the highest wages in the country, and their benefits are close to the national average for workers in export agriculture.

**Table 3.4.** 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 <sup>1</sup>
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.

<sup>1</sup> 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,<sup>11</sup> and their advantage with respect to women in other crops and working conditions is similar or better (Table 3.4). 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.

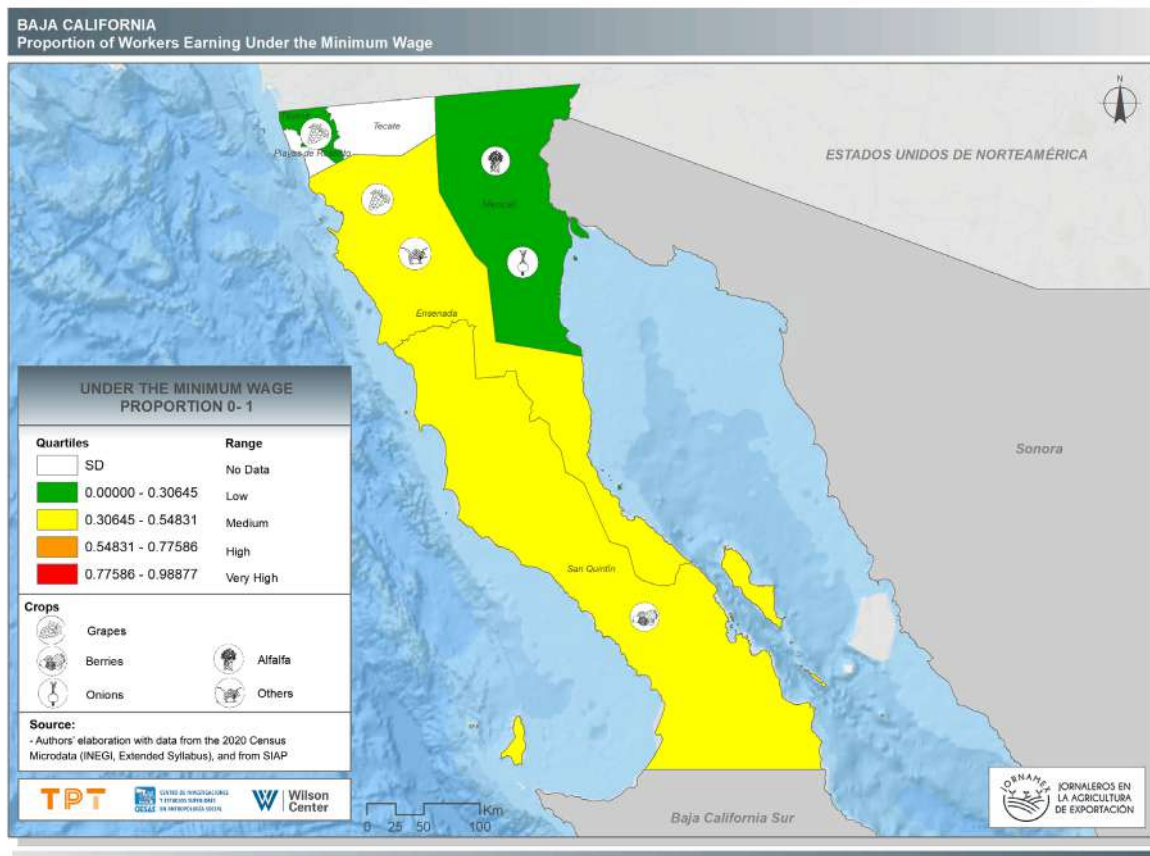
The Sistema de Información de Violaciones Laborales (SIVIL) [Labor Violations Information System] developed by the project on farm workers in Mexican export agriculture identifies the relative incidence of three types of labor violations, according to municipality and to the main crops in each one. The frequency of these three labor violations was standardized

<sup>11</sup> 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.



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 3.1.** 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.<sup>12</sup> 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 CABC 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 3.5.

**Table 3.5.** Percentage of Workers With Formal Employment Benefits of Agricultural Workers, ENJOREX Baja California 2021 and ENJOREX 2019-20

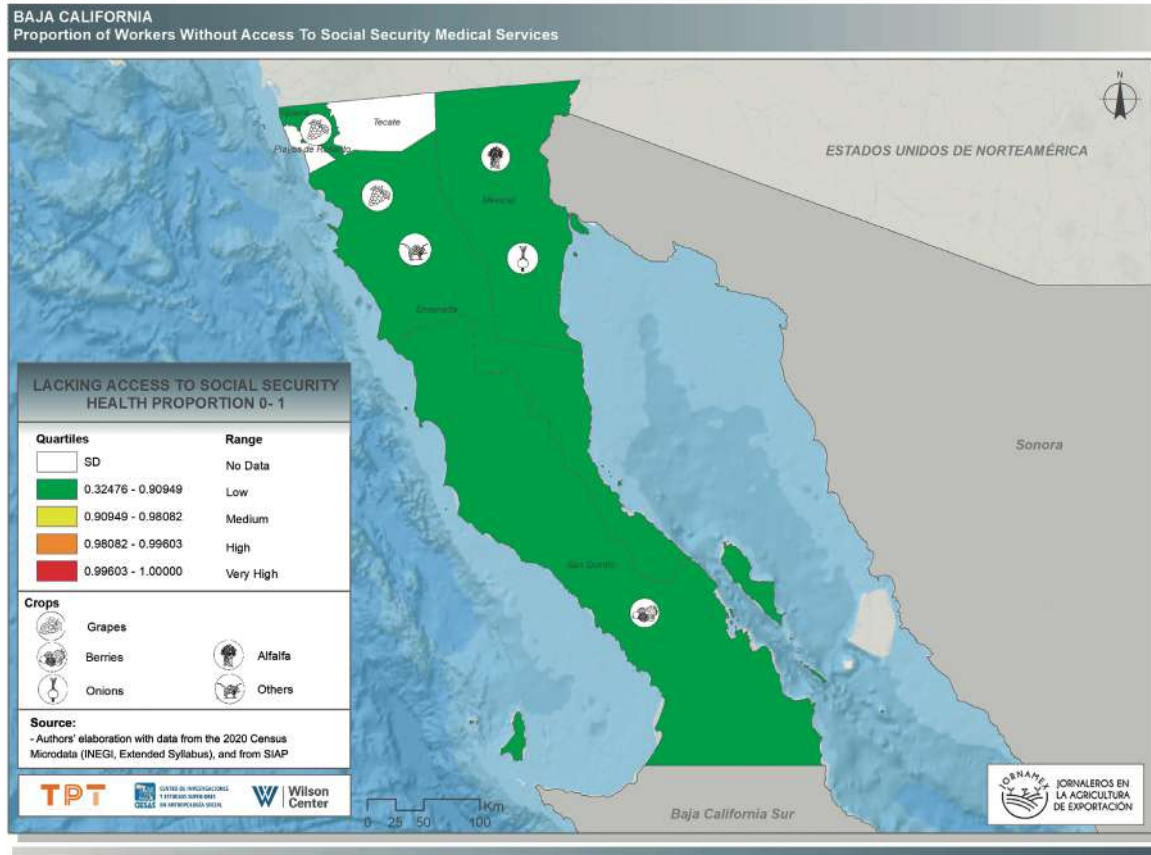
ENJOREX Baja California 2021							
Sex	Aginaldo (end-of- year bonus)	Vacation	IMSS Health Services	Infonavit Mortgage Benefit	Funeral Expenses	IMSS Childcare	Company Childcare
Women	80	36	98	26	12	2	3
Men	81	46	97	30	13	2	2
ENJOREX 2019-20 Random Sample							
Women	82	47	96	32	4	11	30
Men	80	54	94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

<sup>12</sup> 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 3.2.** 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 3.6 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 3.6.** Percentage of Workers With Effective Employment Benefits of Agricultural Workers, ENJOEX Baja California 2021 and ENJOEX 2019-20

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

Source: ENJOEX Baja California 2021; ENJOEX 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.<sup>13</sup> 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 [Childcare Program]–, 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 child 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

13 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.



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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-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 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., June 19th, 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., November 29th, 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-Saldaña, 2000; López-Limón, 2002; Becerra-Pedraza 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 12th, 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 *Distintivo Empresa Agrícola Libre de Trabajo Infantil (DEALTI)* [Agricultural Company Free of Child Labor Distinction] that they are free of its use. However, until a few years ago, it was common to see boys and girls working in the fields. The diminution

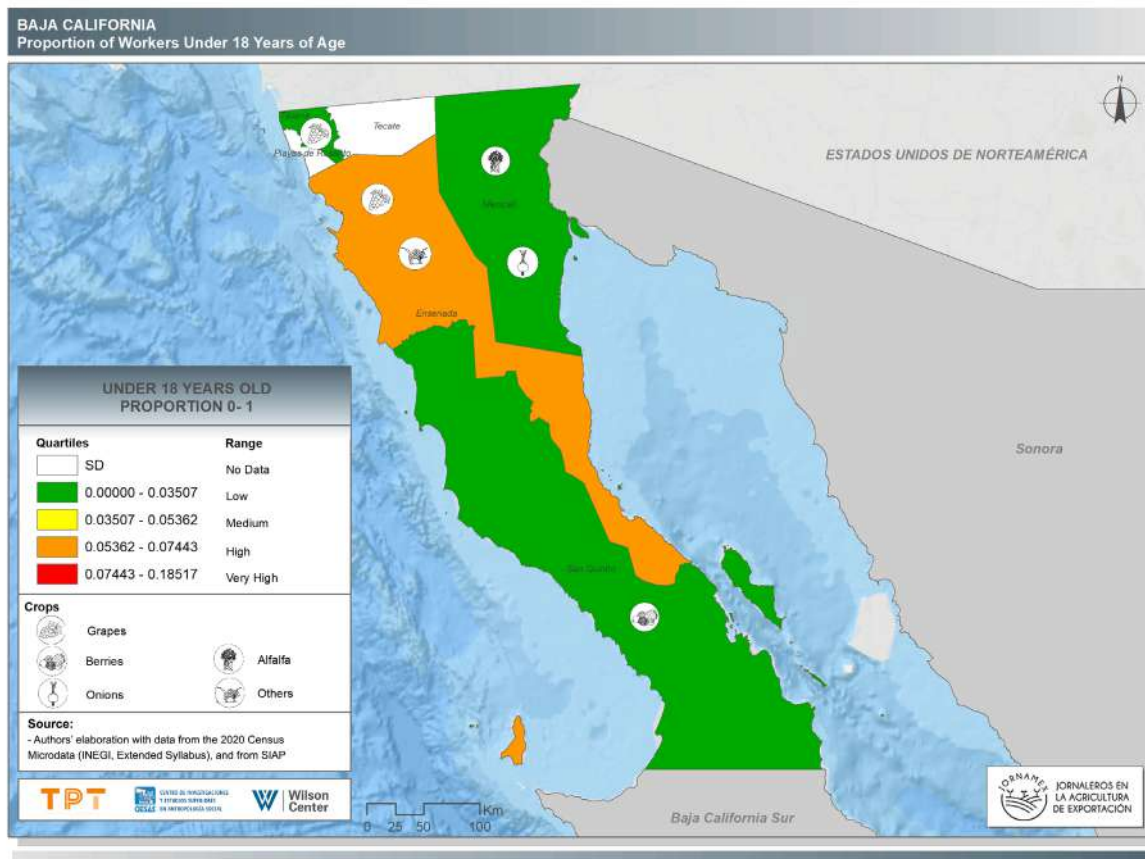
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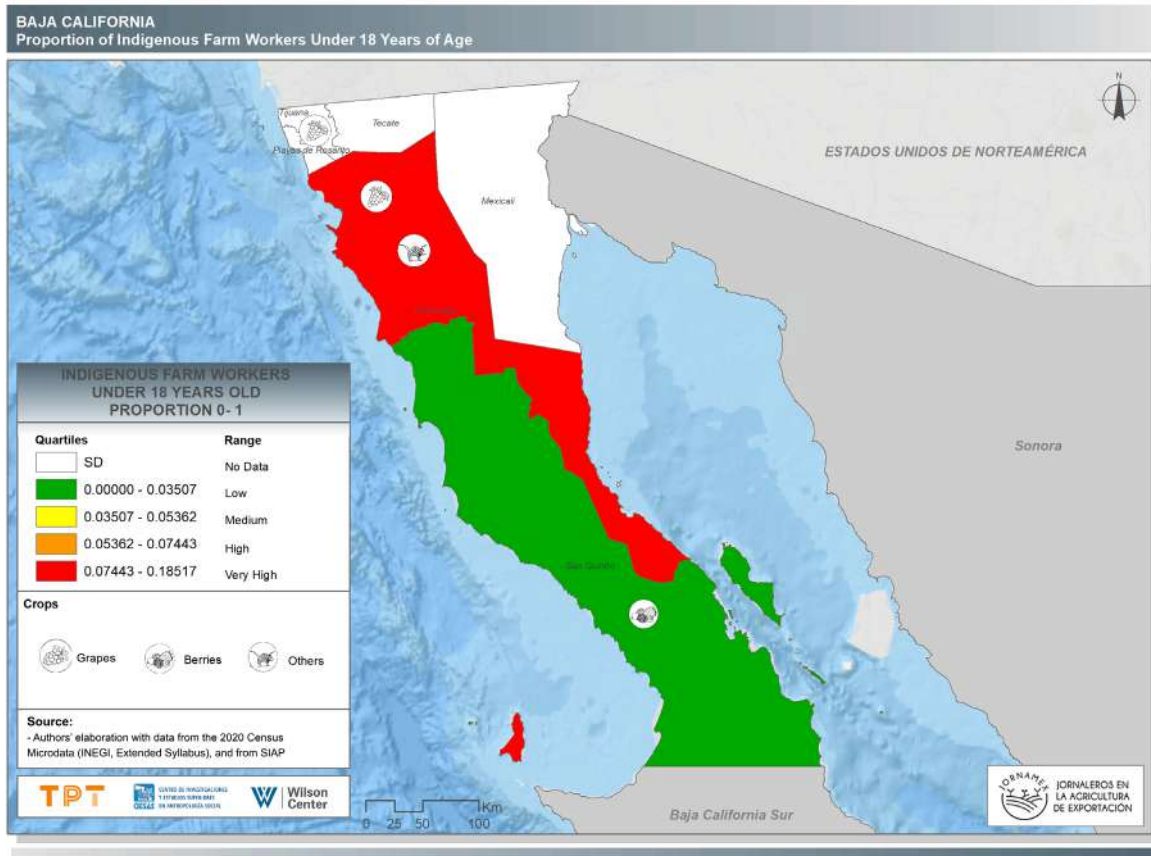




of child labor has taken place statewide, with the exception of Ensenada. According to SIVIL, there is a relatively high percentage of underage workers in Ensenada. This is even higher for the percentage of indigenous workers who are underage. In this respect, the percentage is within Mexico’s highest quartile. In San Quintín, on the contrary, the proportion of child workers is among the lowest in Mexico.

**Map 3.3.** Proportion of Underage Workers per Municipality



**Map 3.4.** Proportion of Underage Indigenous Workers per Municipality

López-Limón (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-Saldaña (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.



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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, June 24th, 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, June 23rd, 2021).

Francisco's and Martín'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,<sup>14</sup> 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, June 13th, 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 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, June 18th, 2021).

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14 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.



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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” (Zlozniski, 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, June 12th, 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, June 13th, 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, June 12th, 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, June 13th, 2021). The work done under this payment system includes weeding, removing leaves, removing the first fruits,<sup>15</sup> and tying and staking plants.<sup>16</sup> 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.<sup>17</sup> At that time he worked as an *apuntador*<sup>18</sup> 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 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

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

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

17 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](http://www.conasami.gob.mx/pdf/salario_minimo/sal_min_gral_prom.pdf)

18 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.



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<sup>19</sup> 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., June 19th, 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 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 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—.

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



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., June 19th, 2021). Another activist explains that every year wages increased only 50 cents of a peso or a peso, “so we went practically 10 years with the same wage” (Interview with O.Z., June 19th, 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., June 19th, 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 pesos 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., June 19th, 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 27th, 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 17th [2015] (Field Notes, June 15th, 2021).

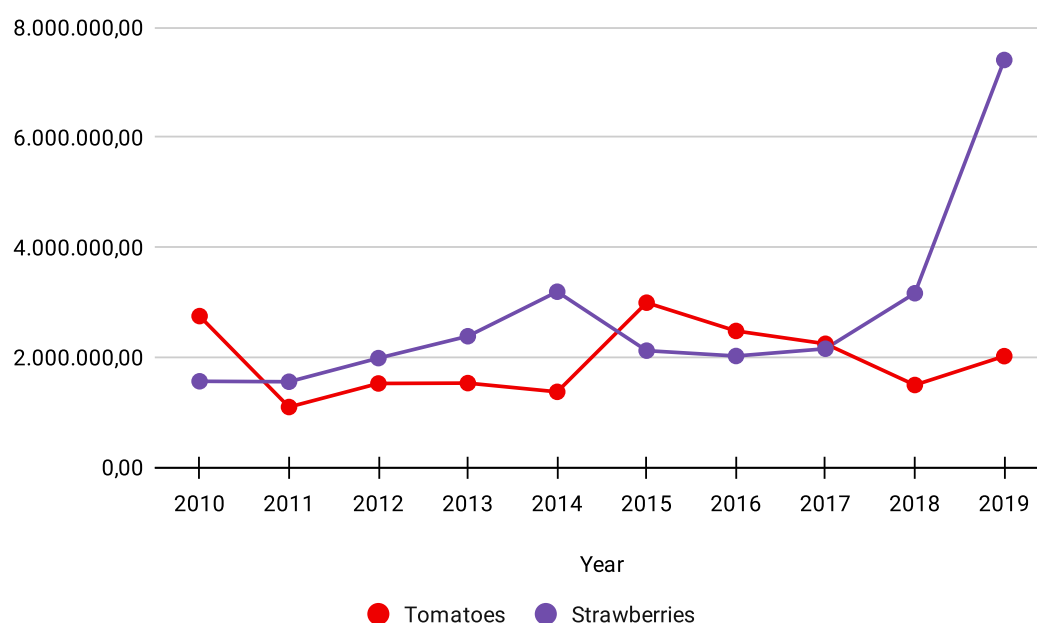
Previous decades had already seen strikes and labor actions that demanded improved conditions, among them a 1988 strike in the San Simón field, supported by the Central Independiente de Obreros Agrícolas y Campesinos (CIOAC) [Independent Central Organization





of Agricultural Workers and Peasants],<sup>20</sup> 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.<sup>21</sup> This situation has changed, and nowadays there are thermoses and tanks with drinking water for workers in the fields, and also in the bathrooms.<sup>22</sup> 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.<sup>23</sup> The greatest impact was to the strawberry crop, which did not begin to recover until 2017, as seen in Figure 3.1.

**Figure 3.1.** Value\* of the Strawberry and Tomato Crops in the San Quintín Valley, Baja California, 2010-19 (thousands of pesos)



**Source:** Authors' elaboration with data from the SIAP via SIACON.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

20 Interview with N.A., June 15th, 2021.

21 (Velasco, 2018).

22 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.

23 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.



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, June 25th, 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-Damián 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 27th, 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



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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-Ramírez, 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, June 16th, 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, June 25th, 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, June 19th, 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, June 19th, 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, June 19th, 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, June 16th, 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.



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### 3.4. 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-Latapí & Martínez-Rubio, 2021). Authors including Lara-Flores (1995), Becerra-Pedraza et al. (2007), and Revilla-López and Ortiz-Marín (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-Pérez (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, June 24th, 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-Damián 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 3.7.** Employed Population and Distribution by Economic Sector\* in the San Quintín Valley, Baja California, 2020

Economic Sector	%
<b>Employed Population Aged 12 or Older</b>	51,193
<b>Agriculture, Livestock, Forestry, Fishing, Hunting</b>	56.40
<b>Mining, Industry, Manufacturing, Electricity, Water</b>	4.81
<b>Construction</b>	5.08
<b>Commerce</b>	13.91
<b>Transportation, Communication, Professional, Financial, Social, Government, and Other Services</b>	18.75
<b>Not specified</b>	1.04
<b>TOTAL</b>	<b>99.99</b>

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

\*Estimated data with low to moderate accuracy. The estimated data for Mining, industry, manufacturing, electricity, water; Construction and; Not specified are 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 3.8.** Employed Population and Distribution by Occupational Division\* in Agricultural Valley Municipalities in Baja California, 2020

Occupational Division	Mexicali	Ensenada	San Quintín <sup>1</sup>
<b>Employed Population Aged 12 or Over</b>	<b>475,210</b>	<b>200,548</b>	<b>51,193</b>
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.

\* Corresponding to the first level in the SINCO (2019).

<sup>1</sup> 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 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 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” 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

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“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, June 13th, 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., June 15th, 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, June 25th, 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, June 19th, 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, June 29th, 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, June 18th, 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, June 18th, 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., June 19th, 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



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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, June 16th, 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 Instituto Nacional para la Educación de los Adultos (INEA) [National Institute for Adult Education] 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,<sup>24</sup> 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, November 29th, 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

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24 <https://www.fairtradecertified.org/es>



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.<sup>25</sup>

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,<sup>26</sup> 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 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.

#### *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,

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

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



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 o.k here?” (Interview with E.O., June 11th, 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, June 19th, 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 was created. However, since 2021, only 36% is undocumented; more than 50% are U.S. natives of Mexican descent.<sup>27</sup> 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.

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27 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.



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-Ramírez, 2014; Lara-Flores & Sánchez-Saldaña, 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, 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, June 24th, 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, June 24th, 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, June 28th, 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, June 16th, 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.

### *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, June 28th, 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, June 28th, 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.

### *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.<sup>28</sup> 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

28 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.



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).<sup>29</sup> 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 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.<sup>30</sup> 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 people. 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 people. 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

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29 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).

30 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.



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Social Worker for a Large Company, June 29th, 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, November 30th, 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. 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, June 29th, 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.



*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,”<sup>31</sup> 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

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31 As previously noted, the “champions” are workers who excel in speed and efficiency at piecework.



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, June 18th, 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 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*<sup>32</sup> 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 *rancherlando* 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, June 25th, 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

32 *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.



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 3.9).

**Table 3.9.** 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
<b>Population 12 Years and Older</b>	<b>866,472</b>	<b>436,317</b>	<b>430,155</b>	<b>361,229</b>	<b>179,396</b>	<b>181,833</b>	<b>88,002</b>	<b>44,962</b>	<b>43,040</b>
12-14 Years	<b>6.00</b>	6.99	4.98	<b>8.04</b>	9.29	6.76	<b>10.09</b>	11.80	8.28
15-19 Years	<b>29.43</b>	35.87	22.70	<b>34.48</b>	41.27	27.44	<b>43.36</b>	53.02	33.28
20-24 Years	<b>65.51</b>	75.05	55.47	<b>67.51</b>	77.60	57.29	<b>75.42</b>	90.88	58.44
25-29 Years	<b>81.10</b>	91.45	70.32	<b>81.60</b>	92.30	71.02	<b>80.30</b>	96.60	63.30
30-34 Years	<b>83.74</b>	94.30	72.78	<b>83.93</b>	94.36	73.58	<b>82.94</b>	96.61	68.82
35-39 Years	<b>85.15</b>	95.15	74.40	<b>84.98</b>	95.25	74.65	<b>84.29</b>	96.95	71.59
40-44 Years	<b>84.46</b>	95.12	73.40	<b>84.00</b>	94.86	73.12	<b>83.86</b>	96.71	70.47
45-49 Years	<b>83.10</b>	94.98	70.63	<b>82.26</b>	93.88	70.28	<b>82.54</b>	95.67	68.70
50-54 Years	<b>78.78</b>	92.40	64.86	<b>77.36</b>	91.26	63.91	<b>77.56</b>	93.18	60.90
55-59 Years	<b>70.82</b>	86.67	55.04	<b>70.17</b>	86.66	54.65	<b>70.89</b>	88.63	54.36
60-64 Years	<b>50.57</b>	66.61	35.81	<b>52.94</b>	69.67	37.29	<b>62.33</b>	79.80	42.97
65-69 Years	<b>36.31</b>	49.70	24.24	<b>39.64</b>	52.76	27.65	<b>53.52</b>	71.04	35.95
70-74 Years	<b>25.02</b>	35.84	15.89	<b>28.40</b>	39.15	18.39	<b>40.49</b>	54.43	25.90
75 Years and More	<b>13.45</b>	20.50	8.02	<b>15.31</b>	22.74	9.15%	<b>25.01</b>	34.68	14.83
<b>Labor Force Participation Rate</b>	<b>63.34</b>	<b>74.10</b>	<b>52.42</b>	<b>64.10</b>	<b>74.78</b>	<b>53.57</b>	<b>67.28</b>	<b>80.29</b>	<b>53.69</b>

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

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 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





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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.

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.



### 3.5. 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.

#### *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-Pérez (1993) and Velasco et al. (2014) described these as structures made of sheet metal or even plastic and cardboard refuse materials,<sup>33</sup> where the workers lived in crowded conditions, without access to basic services.<sup>34</sup> 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 to the lack of potable water, they had no electricity: they

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33 Barrón-Pérez (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).

34 Velasco et al. (2014) describe this period as 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.



used candles for light, which caused several fires. A small number had stoves with small tanks of gas.<sup>35</sup> 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, June 23rd, 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, June 12th, 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 PAJA:

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, July 14th, 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, June 18th, 2021). Today, Teresa lives in a solidly-constructed house.

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

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



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.<sup>36</sup> 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, June 25th, 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*,<sup>37</sup> 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*,<sup>38</sup> rebar, stone, with every *cundina* we went to make a payment” (Interview with Ernestina, June 25th, 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 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.

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

37 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.

38 *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.”



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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, June 11th, 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 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.<sup>39</sup>

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) [Federal Electricity Commission]. In the end, this investment was not necessary; the plant is currently operating with electricity from the CFE (personal communication, T.A., September 8th, 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 (North American Development Bank, 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 Development Bank (NADB, 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 (NADB, 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.

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39 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.



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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 Comisión Estatal de Servicios Públicos de Ensenada (CESPE) [State Commission for Public Services in Ensenada], 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., June 24th, 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., June 9th, 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 3.10, taken from the 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.

**Table 3.10.** 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							
<b>Total</b>	91	95	75	90	99	90	N.D.	N.D.
	ENJOREX Baja California 2021							
<b>Native</b>	83	76	23	56	95	59	93	79
<b>Immigrant</b>	71	76	21	52	94	59	91	63
<b>Temporary</b>	87	69	28	58	97	55	80	33
<b>Migrant Total</b>	79	74	24	55	95	58	88	56

**Source:** ENJOREX 2019 (Escobar et al., 2019, p. 145) and ENJOREX Baja California 2021.

### *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,<sup>40</sup> but it was postponed when the funding was sent instead to Chiapas:

. . . 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).

40 Now called IMSS-Bienestar.





This decision generated various conflicts and the organization of the workers settled in the area.<sup>41</sup> 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 (IMSS, 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” (DOF, 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 (UMF) [Family Medical Unit] No. 13 of the IMSS, the UMF No. 03 of the ISSSTE, the Clínica del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Gobierno y Municipios del Estado de Baja California (ISSSTECALI) [Institute for Security and Social Services of Government Workers in the State Government of Baja California] 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., June 9th, 2021).

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 1st, 2018, many existing social programs were replaced, and as of January 1st, 2020, Seguro Popular was replaced with the Instituto de Salud para el Bienestar (INSABI)

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41 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.



[Institute of Health for Well-being]. 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.<sup>42</sup> The cost of these services is divided among the employer, the worker, and the government.<sup>43</sup> 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 3.11).

**Table 3.11.** Percent Distribution of Social Security Affiliations in the Municipality of San Quintín, 2020\*

Municipality	IMSS	ISSSTE <sup>1</sup>	Pemex, Defensa or Marina	Instituto de Salud para el Bienestar <sup>2</sup>	IMSS Bienestar	Private Institution	Other Institution <sup>3</sup>	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.

<sup>1</sup> Includes those registered with ISSSTE or the state ISSSTE.

<sup>2</sup> Includes those responding that they are registered with Seguro Popular.

<sup>3</sup> 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 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 & Niño-Contreras, 2004). A 1995 change

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

43 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](http://pensionissste.gob.mx)).



in the social security law established required enrollment<sup>44</sup> for agricultural workers (Aranda-Gallegos & Castro-Vásquez, 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-Pimentel, 2011, p. 21). In 2004, using the same argument about cost and quality, business leaders filed a legal challenge.<sup>45</sup> Finally, in 2005, a new reform allowed for employers to be compensated for expenditures on infrastructure for health care and childcare (Marañón-Pimentel, 2011).<sup>46</sup> 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 3.12).

**Table 3.12.** Number of Workers Registered With IMSS by Municipality and Percentage of Statewide Participation\*

Municipality	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% Participation 2020
<b>Ensenada</b>	68,281	68,790	72,426	75,577	76,878	82,408	84,195	90,396	99,856	99,289	99,998	10.89
<b>Mexicali</b>	180,972	195,405	200,768	196,473	209,240	216,194	219,867	222,768	226,969	231,715	234,822	25.58
<b>Tecate</b>	18,419	18,679	19,634	20,390	20,818	21,132	22,394	23,711	25,315	25,483	25,965	2.83
<b>Tijuana</b>	326,724	336,810	353,349	364,916	401,118	424,713	456,125	481,984	510,325	518,898	542,286	59.08
<b>Playas de Rosarito</b>	8,841	8,781	9,291	9,387	9,744	10,605	11,906	11,611	14,479	13,563	14,036	1.53
<b>Isla de Cedros<sup>1</sup></b>	566	558	552	553	543	527	514	506	501	948	741	0.08
<b>TOTAL</b>	603,803	629,023	656,020	667,296	718,341	755,579	795,001	830,976	877,445	889,896	917,848	100.00

**Source:** Authors' elaboration using IMSS data for the years 2010 to 2020.

\* Data shown are the number of affiliated workers at the end of December in each year.

<sup>1</sup> 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.

44 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-Gallegos & Castro-Vásquez, 2016, p. 66).

45 Aranda-Gallegos and Castro-Vásquez 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).

46 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-Pimentel, 2011, 163).



The analysis by economic sector in Table 3.13 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 3.13.** Number of Workers Registered With IMSS by Economic Sector in the Municipality of Ensenada\*

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%
<b>Total</b>	<b>70,916</b>	<b>69,410</b>	<b>71,417</b>	<b>75,300</b>	<b>76,421</b>	<b>87,176</b>	<b>86,852</b>	<b>90,931</b>	<b>95,571</b>	<b>106,006</b>	<b>112,967</b>	<b>100.00%</b>

**Source:** Authors' elaboration based on IMSS public data for the years 2010 to 2020.

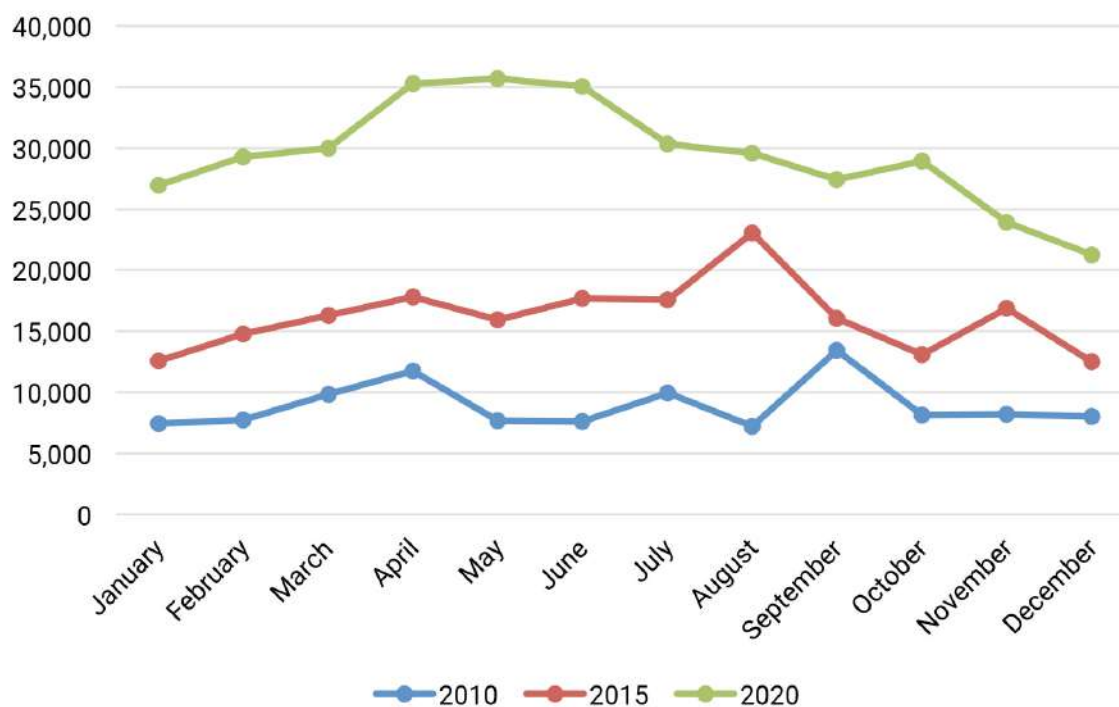
\* Data shown are for the month of April in each year. April is one of the months in which strawberries are picked; it was chosen because it allowed a year-by-year comparison of a season in which there is a major hiring of workers.

Figure 3.2 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 3.2.** 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-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) [Unique Population Registration Code]. 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.”

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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;<sup>47</sup> 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, June 13th, 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 it was only an infected molar, and the hospital dentist told them “there’s nothing

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



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 Instituto Nacional de los Pueblos Indígenas (INPI) [National Institute of Indigenous Peoples] 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 Centros de Rehabilitación e Inclusión Infantil de la Fundación Teletón (CRIT) [Centers for Children’s Physical Rehabilitation and Inclusion of the Teletón Foundation, 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.





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### *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 & Aranda, 1981; Lara-Flores, 1995; Arias, 2013; González-de la Rocha & Martínez-Rubio, forthcoming), and this is certainly true for San Quintín, as can be seen in the figures for women's labor force participation (Table 3.14), 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 (Figueira & Martínez-Franzoni, 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 & 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 Secretaría de Desarrollo Social (SEDESOL) [Secretariat of Social Development] 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 3.14.** Labor Force Participation Rate by Sex, 2020

Indicator	Mexicali			Ensenada			San Quintín		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
<b>Population 12 Years and Older</b>	<b>866,472</b>	<b>436,317</b>	<b>430,155</b>	<b>361,229</b>	<b>179,396</b>	<b>181,833</b>	<b>88,002</b>	<b>44,962</b>	<b>43,040</b>
<b>Labor Force Participation Rate</b>	<b>63.34</b>	74.10	52.42	<b>64.10</b>	74.78	53.57	<b>67.28</b>	80.29	53.69
<i>Percent of Population Employed</i>	<b>98.55</b>	98.32	98.89	<b>98.66</b>	98.42	98.98	<b>98.95</b>	98.70	99.34
<i>Percent of Population Unemployed</i>	<b>1.45</b>	1.68	1.11	<b>1.34</b>	1.58	1.02	<b>1.05</b>	1.30	0.66
<b>Percent of Population Not Economically Active</b>	<b>35.93</b>	24.70	47.31	<b>35.31</b>	24.32	46.16	<b>32.42</b>	19.35	46.07
<b>Not Specified</b>	<b>0.74</b>	1.20	0.27	<b>0.58</b>	0.90	0.27	<b>0.31</b>	0.36	0.24

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

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 Sistema Nacional para el Desarrollo Integral de la Familia (DIF) [System for the Comprehensive Development of Families], 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



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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., June 9th, 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, June 19th, 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, June 21st, 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 knows 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, June 21st, 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., June 21st, 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, June 22nd, 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

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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*,<sup>48</sup> all by herself” (Interview with Dalila, June 12th, 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.

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



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## 3.6. 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 9th, 2020, the Secretaría del Trabajo y Previsión Social (STPS) [Secretariat of Labor and Social Prevision] and the SSA 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*,<sup>49</sup> 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.

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

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



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.<sup>50</sup> 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, June 23rd, 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

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50 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, 2021).



COVID-19 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-19 in workers' homes and another about cases among workers themselves. The results, seen in Tables 3.15 and 3.16 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 3.15.** 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: ENJOREX Baja California 2021.

**Table 3.16.** 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-19 contagion among migrant workers. In both cases, workers with symptoms were sent to the company's doctor, who tested them for COVID-19. 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-19 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, June 24th, 2021).

We have COVID-19 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, June 29th, 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-Latapí & Stabridis-Arana, 2021). But in spite of these data, testimony from producers and workers in the valley show that COVID-19 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, June 13th, 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, June 29th, 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.



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## FINAL REMARKS

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 U.S. 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

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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.





# IV. GUANAJUATO

## **REGIONAL STUDY**

**Working and Living Conditions in Mexico's Export Agriculture  
Guanajuato's Bajío, 2020-2022**







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## 4.1. AGRO-INDUSTRIAL CONFIGURATION OF BAJÍO FARMLAND

Since colonial times, Bajío Guanajuatense has been a prosperous agricultural region (Avella-Alaminos, 1997; Ramírez-Velázquez & Tapia-Blanco, 2000). During the colonial period, agriculture was essential to supply food to mine workers (Avella-Alaminos, 1997; Ramírez-Velázquez & Tapia-Blanco, 2000; Gómez-García, 2018). Over time, food production surpassed the need to feed the area's inhabitants and products were planted to be marketed both within the region as well as beyond its limits (Avella-Alaminos, 1997; Ramírez-Velázquez & Tapia-Blanco, 2000; Gómez-García, 2018). Since then, Bajío Guanajuatense has been fundamental to feed the rest of the country and an important producer for the international market.

In the 19th century, the cultivation of basic grains such as beans, corn, and wheat was one of the most representative activities in the region, which earned this area the nickname "*el granero de México*" [Mexico's breadbasket] (Briseño-Roa, 2008). However, despite its importance, it was not until the middle of the 20th century when agro-industrial development began that agriculture in the region assumed another role (Aguilar-Sánchez, 1989).

According to Avella-Alaminos (1997), from this moment on, two phases of agricultural development in the region can be identified. The first of these occurred in 1940 with the adoption of the import substitution model of development. The second began in 1960 with the establishment of the Green Revolution paradigm. A third phase can be added to the two stages that Avella-Alaminos (1997) identifies, which is just as essential for understanding the current configuration of agricultural activity in Bajío Guanajuatense. This stage began in the 1980s with the advent of market liberalization policies. Each of these stages is part of a transformation process that has structured the agriculture of Bajío Guanajuatense.

This segment presents the main characteristics of these phases in order to provide an overview of the current configuration of the agricultural structure in this area. To this end, we analyze data from the SIAP and the data collected during the field work in March, April and May 2022. It is important to emphasize that the way in which agricultural activity is configured and structured is fundamental to understanding the conditions that farm workers face.

### *From farm to freezer in Mexico*

The import substitution policy of 1940, which provided support for development within the industry, led to the growth of the agri-food industry throughout the Bajío region. Based on this economic model, industrial capital was injected into the food sector in the region. For example, in 1946 "the company Carnation de México was established in the city of Querétaro and a year later Anderson & Clayton began vegetable processing activities in León" (Avella-Alaminos, 1997, p. 58). The arrival of the food processing industry caused the region's farmlands to begin a transformation aimed at modernization and specialization.



Traditionally, Bajío Guanajuatense was dedicated to planting basic grains and some vegetables (Avella-Alaminos, 1997; Marañón-Pimentel, 2002). However, grain production was affected in the 1950s by widespread development of infrastructure and subsidies for basic grain producers in the northwest of the country, which had negative consequences for farmers in Bajío (Avella-Alaminos, 1997). In short, at the beginning of the 1960s, the guaranteed prices of basic grains fell, forcing producers to look for alternatives (Avella-Alaminos, 1997). The growth of the agri-food industry, trends towards modernization of farmland and the disadvantages associated with continuing to plant grains were the main factors that led to the introduction of other types of crops. As a result, extensive commercial crops such as sorghum, barley, wheat, and alfalfa gained ground, as well as some fruit and vegetable crops that had not been grown traditionally in the region (Avella-Alaminos, 1997; Marañón-Pimentel, 2002; Martínez-Borrogo, 2015).

A clear example of the relationship between modernization and crop changes that took place in this stage is the case of Don José, a 92-year-old *ejidatario*<sup>1</sup> from the municipality of Valle de Santiago, who says that more than 50 years ago his family planted wheat and rainfed chickpea. The introduction of irrigation systems that used water from the Lerma River allowed them to switch to higher value crops. It was then that Don José's family began to grow tomato, peanut, sweet potato, and alfalfa. He mentions that this change brought about an improvement in their lives. The modernization of farmland and the change in cultivation patterns mark the beginning of the second phase of agricultural development, a time that is characterized by the consolidation of Bajío Guanajuatense as an agro-industrial complex (Avella-Alaminos, 1997). For some time, its geographical location and its communication routes had made Bajío Guanajuatense ideal territory for the production and commercialization of different products. Furthermore, the transformations in agricultural activity that occurred during the previous stage –among which, the arrival of some industrial companies, the construction of agricultural infrastructure and the change in crop patterns stand out– laid the foundations for the strengthening of the agro-industry in this period.

During this phase, the specific conditions of the territory were accompanied by a combination of political, economic, and social factors at the national and international level. Among them, the deficit presented by the United States of America (U.S) horticultural production, the end of the Bracero Program<sup>2</sup>, the end of the trade agreement between Cuba and the United States and the agri-food crisis in Mexico (Avella-Alaminos, 1998; Marañón-Pimentel, 2002). Together, all these factors motivated large foreign and national companies to consider the Bajío as ideal territory for agricultural production. The main consequence of this change was the increase in private owners and the participation of foreign and transnational capital (Avella-Alaminos, 1997). At this time, agro-industrial companies such as International

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1 In the aftermath of Mexico's Revolution, the government carried out large-scale land reform that re-created a social form of ownership called *ejido*. *Ejidatarios* is the name of small landowners within this social property system.

2 From 1942 and until 1964, over 3.5 million work permits were granted to Mexican farmers to migrate to work temporarily in the U.S. Collectively, this is called the Bracero Program.



Minerals and Chemicals, Campbell Soup, Del Monte, Heinz, Gerber, Marbran<sup>3</sup> and Bird's Eye<sup>4</sup> were established (Avella-Alaminos, 1997; Echánove-Huacuja, 2000), which were focused on freezing and processing fruit and vegetables.

The arrival of these companies caused rising demand for certain crops such as peas, carrots, sweet corn, asparagus, green beans, strawberries, broccoli, cauliflower, and okra (Avella-Alaminos, 1997; Echánove-Huacuja, 2000). The consequence was that the downward trend in basic grains and the increase in this type of vegetables continued. However, Avella-Alaminos (1997) points out that this change was gradual and one of its characteristics was that as some varieties were no longer planted, as other crops began to increase production. According to the data analyzed by Avella-Alaminos (1997) from 1960 to 1970, there was an increase in the variety of fruit and vegetable crops and in the municipalities dedicated to planting them.

In summary, all these elements contributed to the consolidation of Bajío Guanajuatense as an agro-industrial complex made up of four types of production: "agro-industrial plants for the preservation of fruits and vegetables through dehydration; preparation, freezing and canning processes; processes involved in making pastes and jellies; and those for making sauces, soups and strained foods" (Avella-Alaminos, 1997, pp. 73-74). The consolidation of this complex implied that multinational companies acquired control of production and marketing (Aguilar-Sánchez, 1989).

However, even with the growth of horticulture, cereals such as sorghum and wheat retained their importance in the region, as observed in the fourth segment of this study, which is mainly devoted to the relationship that these types of crops have with livestock activity and the agri-food industry. As Avella-Alaminos (1997) mentions, in Bajío Guanajuatense, agricultural and agro-industrial growth have mutually reinforced each other: "in the beginning, agricultural growth attracted agro-industry because it had the potential capacity to ensure the supply of the raw materials that it required, but then the agro-industry promoted the growth of agricultural production by demanding greater amounts of raw material" (p. 60).

In addition, raw materials were used in the production of animal feed and for the preparation of alcohols, starches, and flours (Aguilar-Sánchez, 1989). The wheat and milling industries were directly related to the production of bread, especially the sale of flour for the Bimbo company and for regional bakeries in Guadalajara and central Mexico (Aguilar-Sánchez, 1989). At that time, the state of Guanajuato was the second largest producer of sorghum in the country (Aguilar-Sánchez, 1989).

This phase of Guanajuato's agricultural development lasted until the 1980s, at which time market liberalization policies marked a turning point in the country's economic dynamics. Among the effects of these policies, subsidies, price guarantees and support for farmland were withdrawn. The consequence of this was the impoverishment of the *ejidatarios* and small

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3 According to Avella-Alaminos (1997), the Marbran company was established in the region in 1963, focused on freezing strawberries. Marañón-Pimentel (2002) points out that in 1980 this company changed its focus to vegetable processing thanks to previously established contracts with the Bird's Eye company that allowed it to capitalize on this activity. The same situation happened in 1978 with Covemex, a company formed from national capital (Marañón-Pimentel, 2002).

4 Echánove-Huacuja (2000) points out that this company was the first vegetable freezer in Mexico. It was after their arrival that broccoli, cauliflower, and okra began to be planted.



producers. On the contrary, large companies and export-focused production benefited. These modifications brought about a restructuring of the agricultural supply, betting to a greater extent on non-traditional fruit and vegetable agro-exports. Marañón-Pimentel (2002) refers to this stage as “outward” modernization, with the emergence of non-traditional agricultural exports.

According to Martínez-Borrego (2015), this paradigm once again generated a change in the crop pattern. The author points out that there was a shift from “modern intensive agriculture” fostered by the Green Revolution, where extensive crops were the main product, to a “non-traditional agro-export model” whereby horticultural products acquire even greater relevance. It is important to remember that Bajío was already an important producer of fruits and vegetables in the previous stage, both for freezing and processing as well as for selling fresh. However, trade opening policies and increased demand from the United States benefited fresh and frozen fruit and vegetable products, to the detriment of grains and fodder (Echánove-Huacuja, 2000; Marañón-Pimentel, 2002). As the agro-export industry took off, new companies arrived in the region at the same time that existing companies expanded and strengthened (Echánove-Huacuja, 2000). In the 1980s, the companies Green Giant, Expohort, Congelados Vegetales de Irapuato and Export San Antonio were established in the region (Marañón-Pimentel, 2002).

Furthermore, Marañón-Pimentel (2002) points out that in the 1980s there was a canned products crisis. Therefore, some producers decided to opt for fresh products, as was the case with asparagus. This change is clearly shown when analyzing the production value data from 1990 to 2020. From 1995 there is a decrease in the value of grain and forage production in the state. The most affected crop during this period is corn, which decreased by 59%. As can be seen in figure 3, during this five-year period, the production value decreased for the five main grain and fodder crops. After the year 2000, wheat, corn, and barley began to recover, although in 2020, of these three crops, only corn exceeds the production value it had in 1990.

Sorghum and corn are the crops with the fastest growth in the five-year period from 2005 to 2010. Sorghum grew by 81% and corn by 91%. For its part, wheat remains relatively stable. Barley is the one with the lowest production value, but from the year 2000 to date it has been growing constantly. The crop that has lost the most is alfalfa, since it is the only one that continues to decline. However, it is important to emphasize that despite decreases in production value, all these crops continue to be grown in the region; the decrease in their value reflects the fall in prices and the change in crop patterns. The difficulties involved in continuing to plant these types of crops and the lower profitability compared to fruit and vegetables is expressed by the same producers in the region. They claim that the cost of technological packages is increasing faster than the price of crops.

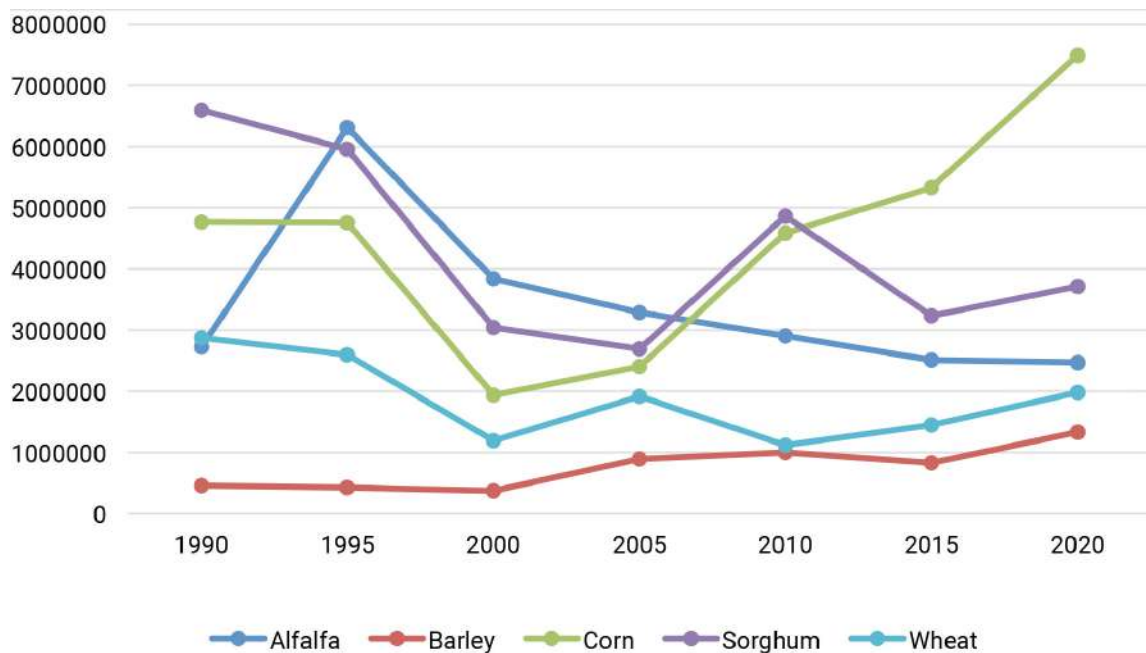
For example, Pedro, a producer who grows wheat, barley, chickpea, and husk tomato in the fall-winter cycle and corn and sorghum in the spring-summer cycle, broke down the current costs of the wheat technology package with a calculator in hand. Costs are around 44,000 pesos per hectare. To break even, he must produce around 6 tons per hectare, each with a value of 8,000 pesos. If he does this, he can recover the cost of the package and make a profit of about 4,000 pesos per hectare during the season. Corn has higher yields than wheat, although the technological package costs around 56,000 pesos per hectare. Ten tons per hectare can be produced, generating a profit of 10,000 pesos per hectare. The increased costs of technological

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packages, particularly fertilizers, is what leads many of the producers to look for alternatives. For example, Pedro states that he produces maize and sorghum in the spring-summer cycle to maintain wheat production in autumn-winter. In addition, he created his own fertilizer business for extra income. Farmers opt for crop diversification, including the introduction of fruits and vegetables, as well as diversification of economic activities.

**Figure 4.1.** Production Value\* of Grains and Fodder in the State of Guanajuato 1990-2020



**Source:** Authors' elaboration with data on agricultural production for 1990-2020 from SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2018.

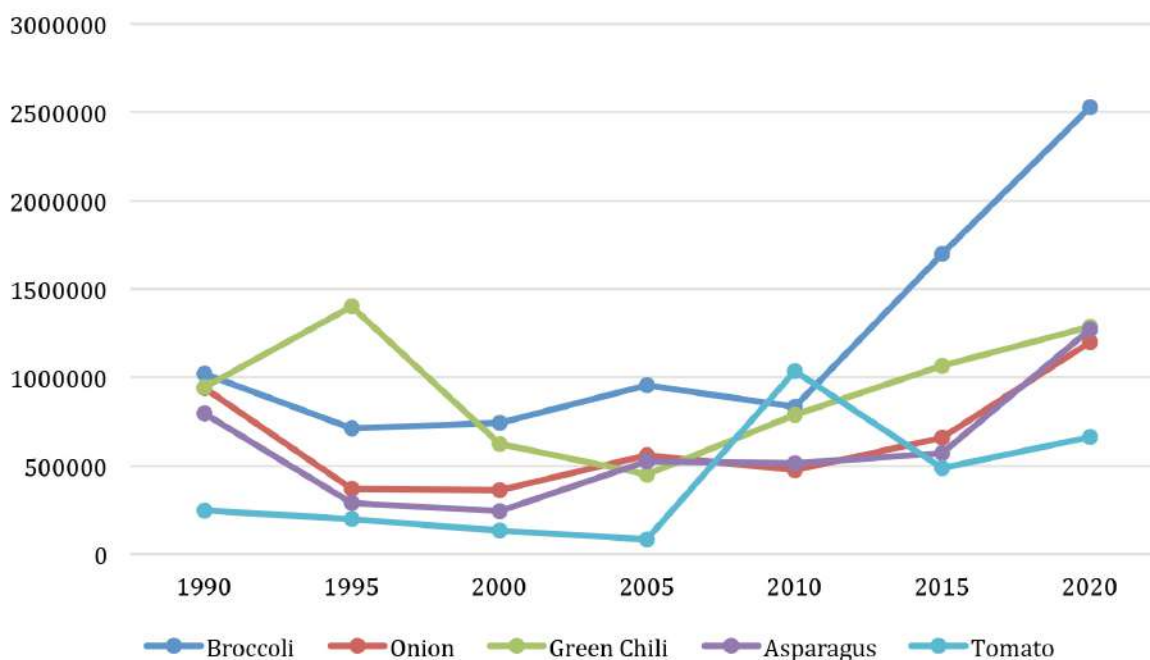
On the other hand, if we analyze the case of vegetables, the trend for products such as broccoli, onion, green chili, asparagus, and tomato is upward. The growth of onion, asparagus and broccoli began in 2000. From 2000 to 2005, the value of asparagus production increased by 116% and since then it has continued to grow. In that same period, the total value of onions grew by 55% and that of broccoli by 29%. Of all these crops, broccoli is the one that has had the greatest growth in production value. According to Echánove-Huacuja, in 1998, "70% of the national area harvested for broccoli and half for cauliflower was in the state of Guanajuato" (2000, p. 107). Green chili has also grown steadily since 2005. Unlike grains and fodder that decreased their production value, vegetables have increased, which reaffirms the change in crop patterns and their profitability.

This change has been largely driven by new technology, which has made it possible to improve yields and make production more efficient. Greenhouses, drip irrigation and the introduction of new chemicals and hybrid varieties are some of the technologies that were



incorporated during this period (Marañón-Pimentel, 2002). Despite changes in crop patterns, the planted area has not changed much. According to SIAP data, in the last 30 years, the area has decreased by 16%. Such a small decrease in the planted area reflects the prevalence of agricultural activity as well as the permanence of extensive field crops, which sits in contrast to other regions where the area has decreased drastically. For example, this is the case of the Valle de Zapotlán region in Jalisco, traditionally a corn-growing region, which in the last decade has focused on the cultivation of berries and avocado (Escobar-Latapí, Martínez-Rubio & Judd-de la Luz, 2023). In this region, the planted area has decreased from 2005 to 2020 by 24%.

**Figure 4.2.** Production Value\* of Fruit and Vegetables in the State of Guanajuato 1990-2020



**Source:** Authors' elaboration with data on agricultural production for 1990-2020 from SIAP.  
 \* Value of production expressed in real pesos based on the INPC, base year 2018.

Despite urbanization and industrial growth, in the state of Guanajuato the decrease in planted area is low, though farmers note that the planted area has decreased due to the growth of urban sprawl and industry. For example, Don Pedro mentions that where the Mazda Motor Corporation's maquiladora is now located, years ago it was land where grains and fodder were grown. However, if we compare the acreage with the value of production, we see that while the former is decreasing, the latter is increasing. This is largely the result of new agricultural technologies that have led to better yields, as well as an increase in production of high-value crops that require less planting area and generate higher income. In recent years, there has been a significant rise in fruit and vegetable production for export in various forms: fresh, frozen, and



processed. According to COFOCE data, from January to May 2020, the export of fresh products represented 50% of agri-food exports, 29% were frozen, and 17% were processed<sup>5</sup> (COFOCE, 2020). The growth of the fruit and vegetable agro-industry has been so relevant that even at the 2020 Global Food Forum, the president of the Consejo Nacional Agropecuario (CNA) [National Agricultural Council] stated that “Guanajuato has ceased to be Mexico’s breadbasket, now it is an export freezer for fruit and vegetables” (Ramos, 2020).

Although the production value of these crops has increased in recent years, the truth is that the agricultural region of Bajío Guanajuatense continues to be an important producer of grains and fodder. Don Pedro agrees. In total disagreement with the CNA’s president’s statement, Don Pedro states that not everyone in the region is planting vegetables as they require access to capital and technology, such as having pump irrigation or access to wells, which is unaffordable for many producers. As such, from his perspective, today there are only a few who can participate in the fruit and vegetable boom. On the contrary, in the past when the region was renowned as the “breadbasket” of the country, the entire agricultural sector could participate to make it possible. In his words: “only a few *Guanajuatenses* are the freezer of the country.”

The significance of grain production in the state is such that when analyzing the production value of all crops, we find that in 2020, corn is the crop that generated the greatest value, above agave<sup>6</sup> and the main vegetables such as broccoli. (Table 4.1). Thus, production in Guanajuato continues to be quite heterogeneous, unlike what happens in other regions of the country that have focused on a single crop. This is the case in the San Quintín Valley, where strawberries and tomatoes predominate, or in the South of Jalisco, where there is a clear displacement of traditional crops by red fruits and avocado. In 2020, the most relevant crops in Guanajuato in terms of value were grain corn, agave, cucumber, broccoli, alfalfa, and wheat. These are followed by barley, green chili, asparagus, onion, and strawberry. In addition, in 2011 Chinese vegetable varieties such as ebo, changai-bok-choy, pack-choi and yu-choi began to be introduced. In 2017, the production of mushroom varieties cultivated for export purposes also increased.

The fruit and vegetable crops that have increased their production value the most in the last 10 years are cucumber with 749%, strawberry with 584%, and broccoli with 203%. These crops are followed by onion, asparagus, carrot, cauliflower, and lettuce, which have grown between 100% and 150%. Maize and wheat have had a lower growth, the former 63% while the latter 77%. On the contrary, potatoes, tomatoes, sorghum, and alfalfa show a decrease in production value during the period from 2010 to 2020. Regarding export agriculture, according to COFOCE data, during the period From January to May 2020, the main fresh agricultural export products by production value were tomato, pepper, lettuce, broccoli, and cauliflower. Regarding frozen horticultural produce, the main ones were broccoli and strawberries.

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5 The remaining 4% corresponds to products made from animals, 3% and products with alcoholic content, 1% (COFOCE, 2020).

6 Agave is the cactus plant from which tequila is distilled. Tequila has undergone a significant boom for 20 years or more.



**Table 4.1.** Production Value in Millions of Pesos\* of the Main Crops in the State of Guanajuato, and % of Change, 2010-2020

Crop	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% Change
Agave	67.86	80.81	47.66	279.28	530.38	332.47	736.18	2,012.70	3,563.64	3,917.03	4,473.91	6493%
Garlic	243.20	249.26	127.81	140.09	90.37	155.45	322.09	307.80	261.73	310.97	344.89	42%
Alfalfa	2,902.18	2,875.30	2,871.88	2,781.61	2,578.82	2,503.37	2,464.54	2,373.94	2,443.51	2,448.71	2,470.89	-15%
Broccoli	834.03	1,092.21	1,021.25	1,462.22	1,503.59	1,698.55	1,992.54	2,186.97	2,561.96	2,510.81	2,527.29	203%
Barley	1,003.52	1,547.24	2,114.15	453.09	1,399.43	829.40	1,727.78	1,643.39	1,671.39	1,589.85	1,323.29	32%
Brain												
Onion	476.39	296.64	251.09	423.85	525.45	660.34	532.37	1,210.01	795.41	1,129.06	1,198.44	152%
Green Chili	789.55	603.83	542.49	679.43	615.45	1,067.67	1,130.58	1,115.94	1,264.21	1,242.69	1,286.49	63%
Cauliflower	66.96	52.28	36.94	57.36	61.38	57.29	91.54	173.28	151.38	166.88	160.60	140%
Corn	56.48	66.19	107.04	57.40	84.07	48.26	41.74	51.65	85.91	73.77	89.10	58%
Asparagus	514.63	408.42	442.21	477.62	417.52	570.55	846.96	1,127.31	1,204.91	1,153.63	1,271.93	147%
Strawberry	158.04	78.00	162.65	136.15	145.20	222.67	307.95	594.82	681.16	814.51	1,080.23	584%
Bean	506.58	511.98	749.99	681.59	474.57	503.87	573.12	587.95	584.16	576.36	642.86	27%
Lettuce	251.88	254.80	181.07	343.45	342.14	357.90	439.37	557.83	560.87	605.45	535.26	113%
Maize Grain	4,583.89	6,501.97	6,218.85	6,065.27	4,710.18	5,324.90	7,480.30	6,055.28	6,679.73	6,102.65	7,487.65	63%
Potato	380.22	304.11	189.84	253.54	235.10	203.08	173.01	146.77	218.63	297.52	124.59	-67%
Cucumber	44.20	41.33	36.24	71.23	109.60	177.94	239.14	292.32	283.48	518.88	375.29	749%
Sorghum Grain	4,860.41	7,221.94	6,955.29	5,983.14	3,931.90	3,230.59	1,779.34	3,220.76	3,210.70	2,548.07	3,713.58	-24%
Tomato	1,036.32	375.87	307.81	358.58	395.53	485.29	528.08	813.40	997.08	697.41	661.49	-36%
Wheat Grain	1,117.52	2,838.50	1,590.48	324.58	1,280.20	1,442.55	1,268.49	1,419.96	1,610.19	1,484.59	1,979.15	77%
Carrot	122.44	270.55	152.99	210.59	168.70	153.09	174.04	212.64	209.60	259.92	302.50	147%

**Source:** Authors' elaboration with data on agricultural production for 2010-2020 from SIAP.

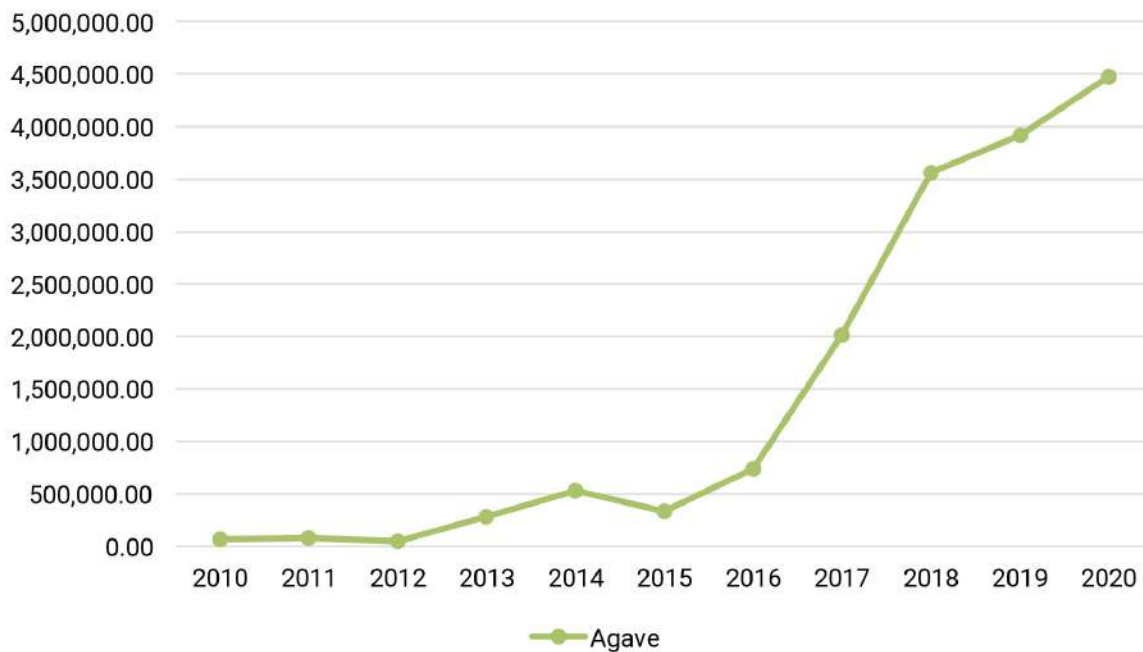
\* Value of production expressed in real pesos based on the INPC, base year 2018.





In addition to these products, the rise of blue agave is notable, having acquired a predominant role in the central-western part of the state. As Table 4.1 shows, from 2010 to 2020, the value of agave production grew 6,493% in the state of Guanajuato. From 2012 to 2013, the value skyrockets, increasing 486% from one year to the next. As noted in the landscape, the tequila makers from Jalisco and even some local producers have painted the landscape of the Guanajuato fields with the characteristic blue of the agave. Tequila companies rent land from *ejidatarios* or small landowners in the region. This crop has grown exponentially thanks to its high profitability and lower labor needs. In the state of Guanajuato, there are seven municipalities that have the Denominación de Origen Tequila (DOT) [Tequila Designation of Origin]: Abasolo, Cuerámaro, Huanímaro, Manuel Doblado, Pénjamo, Romita and San Francisco del Rincón. Agave has become a very profitable option for agricultural producers, especially for those who did not have the resources to make their crops more profitable. For example, in the town of San Gonzalo, to the south of the Romita municipality, corn, beans, sorghum and wheat used to be planted, while now it is surrounded by blue agave fields. In the patios of the houses, you can see the agave plants ready for transplant.

**Figure 4.3.** Production Value\* of Blue Agave in the State of Guanajuato 2010-2020



**Source:** Authors' elaboration with data on agricultural production for 2010-2020 from SIAP

\* Value of production expressed in real pesos based on the INPC, base year 2018.



Thus, crop diversity is one of the characteristics of agricultural activity in the state of Guanajuato, particularly in the Bajío region of Guanajuato, where most of the production is concentrated. However, such diversity is not limited to the type of products that are grown, but also occurs in the type of producers, the size of the agricultural units and the technology used. In Bajío Guanajuatense, both small *ejidatarios* and large companies coexist alongside agri-food packaging companies, planting grains, fodder, vegetables, and fruits to market fresh, frozen, or processed. In addition to this heterogeneity, it is important to highlight that the productive units extend throughout the region. Production is such that today it goes beyond the limits of Bajío Guanajuatense; municipalities such as Dolores Hidalgo, San Miguel de Allende, San Felipe, and Doctor Mora are also important producers. Hence why, even though Bajío Guanajuatense is the main area for agricultural production, this study also refers to these municipalities, which have acquired a significant role in terms of agricultural activity and its structure.

#### *A region of contract farming and middlemen*

The diversity of crops and production units is one of the main characteristics of the agricultural structure of the state of Guanajuato. As we mentioned in the previous section, this diversity has been largely a consequence of favorable conditions for the production and commercialization of agricultural products, which has supported the configuration of this area as an agro-industrial complex. The established agri-food companies demanded various fruit and vegetable products, which transformed the crop pattern in the region. However, despite a rise in fruit and vegetable demand, grain and cereal crops continue to be required for the livestock and agri-food industries. For example, yellow corn is planted as animal feed and wheat is destined for companies in the flour industry such as San Blas, Tres Estrellas, and La Moderna. Bajío Guanajuatense continues to be characterized by the production of extensive commercial crops.

The settlement of large agro-industrial companies in the region has not brought about the displacement of small producers either. On the contrary, it is a state where *ejidatarios* and small landowners continue to produce. As such, it is helpful to understand the agricultural structure of the state of Guanajuato as a mosaic in which productive units of different sizes coexist, from *ejidatarios* who work their own plots to large export companies that rent land or buy the product from farmers in the area. This has contributed to a situation where the main forms of production and marketing are through contract farming and the participation of brokers or intermediaries.

In contract farming, large companies sign agreements with local producers who take charge of the planting and harvesting process. The large companies buy the produce, and they are the ones who pack, transform or market the food. In this scheme, the companies are responsible for supplying the seedlings, chemicals, and technical advice to ensure quality control. The costs associated with the company's input are deducted from the farmer at the end of the contract (Echánove-Huacuja, 2000). The producer is responsible for providing "the land, irrigation, machinery, electricity, fuel (gasoline or diesel), equipment maintenance (pumps, tractors, etc.), freight, and labor required for all the agricultural work" (Echánove-Huacuja, 2000, p. 115).



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This production scheme has been implemented in various regions focused on export agriculture. In some regions, it has allowed greater control over the products that are planted and the working conditions of the workers. This is the case of San Quintín, Baja California, where companies that sign contracts with local producers carefully oversee the production process (Escobar-Latapí, Martínez Rubio & López-López, 2023). However, it is also a scheme that can lead to the subordination of farmers to large companies, as has happened in the state of Guanajuato. In his research, Marañón-Pimentel (2002) pointed out that in this state the companies are the ones who: “unilaterally determine the pricing, adjustments to prices according to inflation and devaluation as well as the percentage of produce that is export quality” (p.194). In addition, the author states that farmers are penalized if they deliver less than the amount stipulated in the contract, while in the event of excess production, companies are not obliged to receive it.

This situation was corroborated during our field work by various Bajío Guanajuatense producers. Some of them commented that it is not convenient for them to make contracts with large companies precisely because of the disadvantageous nature of the contracts. This is the case of José, *ejidatario* in the Valle de Santiago municipality. José recounts that in 1988 the first companies dedicated to buying broccoli and cauliflower from small producers through contract farming arrived in his town. He explains that these companies covered the costs for drip irrigation, seeds, fertilizers, pesticides, and insecticides. When the harvest was delivered, the farmers paid the company back for these costs with a part of the product. A few years ago, one of José’s sons made a contract to plant broccoli. However, when he delivered the product, the company accepted a lower quantity than they had agreed. The amount of broccoli the company accepted was enough to payback the costs covered initially by the company, but it did not leave any profit. It is for this reason that the family now limits itself to planting beans, corn, and alfalfa.

According to the testimonies of José and one of his sons, contracts always include clauses that protect the companies while the producers do not have many alternatives for negotiation. In addition, in this area, many of the producers are older *ejidatarios* who find it difficult to understand the specialized language used in the contracts and all that they imply. In the end, if the company does not want to accept the product, it simply doesn’t, and it is the small producers who end up losing out. They point out that, presently, farmers in the municipality are establishing contracts for planting cucumbers with a large export company. The logic remains, large companies cover the costs of initial supplies while the farmers take care of everything involved in planting and harvesting the product.

The situation in contract farming continues to be disadvantageous for the small landowner and *ejidatario*. Rather, it is the medium or large landowners who should sign with these companies. Don José’s son explains that only these types of producers have the resources and economic capacity to endure the consequences when the contract with a company does not go well, since they tend to produce other crops and have alternate marketing channels. That is, if a contract turns out to be disadvantageous, they can recover their losses with the rest of their production. According to Marañón-Pimentel (2002), companies prefer to sign contracts with medium and large producers because small producers tend to lack the resources necessary.



The author points out that it is for this reason that “the participation of *ejidatarios* is very low, less than a quarter of the suppliers in the region” (Marañón-Pimentel, 2002, p. 194).

Along the same lines, Rafael, a producer from the Romita municipality, asserted that in his experience it does not make sense for him to sign contracts with large companies. He has an area of 25 to 30 hectares combined from *ejido* and private land where he grows chili, tomato, and onion. A few years ago, he signed a contract with an export company, but has not done so again because, according to him, “they gave him all kinds of excuses” to not to buy his produce. For example, he said the broccoli companies argue that the vegetables “have worms” but for him it is just an excuse not to buy when the market price of the crop is very low.

The contract farming model in the state of Guanajuato has caused producers in the area to depend on the companies that buy the product for sale in the United States. These companies are the ones that set the standards of the production process. Various authors point out that this model puts small campesino and family production at a disadvantage (Echánove-Huacuja, 2000; Martínez-Borrego, 2015). As such, *ejidatarios* or small producers are affected as they are excluded from this system due to low technological capacity and resources. That is why some *ejidatarios* have chosen to lease their land and migrate to the United States (Aguilar-Sánchez, 1989). This phenomenon has occurred mainly in the northern regions of the state of Guanajuato, where the inhabitants also have limited job options beyond the possibility of planting their own land (Arias, 2007). On the other hand, in the León-Celaya area, it was possible to deal with the impact of agricultural changes due to the diversification of labor niches, which is a product of growing urbanization and industrialization (Arias, 2007).

Small producers, whether *ejidatarios* or private landowners, who continue to work in agriculture, have sought other marketing schemes, for example through brokers or intermediaries. These actors buy the produce to resell it at different scales. That is, they range from local merchants or regional supply centers to self-service stores and agents of the same companies that freeze and package to export the products (Echánove-Huacuja, 2001). An example of how intermediaries work in the region is pointed out by Echánove-Huacuja (2001) in her research on strawberry production in the municipality of Irapuato. The author explains that the commercialization was done through “*coyotes*”. These were intermediaries in charge of buying the product from small producers and then selling it to wholesalers, mainly from the Mexico City supply center. The coyotes charged a commission per basket of strawberries or set the price for it.

Currently, intermediaries continue to play a key role in the sale of agricultural production. Don Raúl, a farmer in the region who plants melons and watermelons, explains that producers who do not have marketing connections make deals with intermediaries who buy wholesale. These intermediaries have contacts with the warehouses and in some cases, they are the ones in charge of exporting. The diversity of intermediaries in the region is pointed out by Echánove-Huacuja (2000), who mentions that they can be marketers, self-service stores or agents who specifically take on the role of brokers. In this case, it is the intermediaries who control the production and marketing process. They define their own requirements such as the quantity, quality, size, and type of packaging (Echánove-Huacuja, 2000).



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Despite there being more companies today that own enough of their own land to cope with the entire production process, in some seasons the demand is so high that they need to complete orders by buying some of the produce from local farmers. Thus, both in contract farming and in the marketing model, the role of small producers is reduced to being labor suppliers as well as the sale and rental of land. There is clearly a lack of state support focused on *ejidatarios* and small landowners to enable them to take part in fruit and vegetable production to a greater degree. According to the testimonies collected during field work, the current agricultural structure only benefits large companies and large and medium-sized producers. The absence of state intervention and the disorganization of producers is evident when faced with “large companies, strong due to their economic capacity and the management of commercial information” (Marañón-Pimentel, 2002, p. 194).

Although there is a state agricultural council, one of the producers we interviewed mentioned that there is no real organization among farmers in the state. For him, this represents a serious issue because lack of organization results in overproduction, which in turn generates a fall in prices. This produces losses for farmers, but also food waste. When prices fall so low that it doesn't make sense for the farmer to sell, everything that was planted is discarded. According to the experience of this producer, if there was good organization among them to agree on how much to plant and what should be produced, they would never have a surplus and prices would remain stable. He considers that this does not happen for generational reasons. In his words, many of the farmers are elderly and prefer to do things in the traditional way, “as their parents taught them” and do not welcome support or advice from outsiders, including deals or agreements with other producers. In this way, small producers are at the mercy of the market and large companies, as well as competition from other small farmers.

In addition to the subordination that this implies for farmers, this scheme causes the formation of long supply chains in which the responsibilities of social actors disappear. Added to which, in some cases the products go through intermediaries or marketers outside the state. For example, in the case of watermelon and melon, according to the testimony of a local person from the municipality of Romita, these fruits are usually sent first to Mazatlán and from there they are exported to the United States. In her research Echánove-Huacuja (2000), also identified that there are vegetables exported in bulk to be mixed with other products already in the United States. Thus, the agricultural structure of the region is characterized by long supply chains and the diversity of actors. From small farmers who occasionally produce for large companies and packaging firms, to large producers and export companies that take care of the entire process. One of the main problems with this structure is that at the point of final sale, responsibilities become blurred. As food passes through so many different hands, what happens is that many of the large companies exonerate themselves from taking responsibility for the workers in the fields at the very beginning of the chain. Therefore, the structure presented by the state of Guanajuato encourages an informal agricultural labor market to the detriment of the rights and working conditions of day laborers.



## 4.2. LABOR MARKETS AND EMPLOYMENT CONDITIONS

The labor market in Guanajuato is shaped by social diversity, as well as the diversity of the actors involved in agricultural production chains, and the transformations that have occurred in the sale of food. Agricultural work in the region is configured according to the type of crops, the size of the productive units and the transformation process of each product. For example, grains and fodder do not require large amounts of labor, as intensive fruit and vegetable crops do. Even though horticulture is distinguished by its high demand for workers, this labor niche presents itself in a great variety of ways. The fruit and vegetable industry ranges from working in the furrows with small owners and *ejidatarios*, to employment in large packaging and freezer companies. Added to this heterogeneity is the participation of different actors within the supply chains. The fruits and vegetables harvested in the fields of Guanajuato pass through different hands before reaching their final destination. Besides the impact this has on the farm owner, this model has direct consequences on the conditions of farm workers. This section analyzes the ways in which the fruit and vegetable labor market in the region is structured and its impact on the conditions of farm workers.

Unlike what happens in other agricultural regions of the country, where companies are in charge of the entire production process, or labor standards in contract farming are carefully monitored throughout the supply chain (Escobar-Latapí, Martínez-Rubio & López-López, 2023; Escobar-Latapí, Martínez-Rubio & Judd-de la Luz, 2023), in Bajío Guanajuatense there is a lack of monitoring when it comes to the conditions of food production. As Hoogesteger and Massink (2021) point out, when the production and marketing processes incorporate different actors, the traceability of the products becomes more complex, which can cause the responsibility of each actor to fade.

In the last decade, market pressures and worker mobilization have led export agriculture to adopt an approach aimed at complying with labor standards and social responsibility. The objective is to reduce the human and labor rights violations that farm workers have historically suffered. Mainly large companies and transnational brands have adopted this approach, keeping a careful eye on the labor standards of their suppliers (Hoogesteger & Massink, 2021). However, when supply chains become more complex, involving the participation of diverse actors of different scales, which in many cases do not have the resources of a large company, compliance with labor standards becomes difficult. For example, such is the case of many small producers who do not have the necessary resources to carry out said regulations (Hoogesteger & Massink, 2021). However, it is not only the small producers who are non-compliant. Sudden fluctuations in labor demand and the shortage of local workers have led many actors to resort to recruiters or contractors who supply labor by the day. Typically, this workforce lacks benefits and rights, and includes child labor.

Such is the situation in Guanajuato, where small producers are spread throughout the state. Given the lack of resources for marketing, farmers seek alternatives that allow them to put their crops on the market. That is why contract farming, which ensures the sale of the harvest, and commercial relations with intermediaries have become the predominant schemes within

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the state. However, the result is that companies and intermediaries buy the products without any type of label or traceability to guarantee their provenance. For example, in the municipality of Valle de Santiago, we observed numerous cucumber fields where the product was collected in sacks without any type of logo or packaging. This same situation occurs in the municipality of Romita, where small producers and fruit and vegetable production is characteristic. Some government agencies dedicated to working with the day laborer population specifically mention that one of the problems they have is how to identify the brands or owners of the agricultural ranches. The problem with this is that you don't know who is producing or for whom. Which shows a clear absence of control over the products grown in the state.

Besides traceability to guarantee safe, quality, and chemical-free products, this has consequences for farmworkers. When companies buy the product from a supplier without any type of supervision over the production process, it is not possible to guarantee compliance with labor rights in the fields. While it is possible to prove the chemical safety of products—which is the work of the Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria (SENASICA) [National Agrifood Health, Safety and Quality Service]—, it is not possible to prove working conditions. On the contrary, it becomes an ideal scheme for informality, which is characterized by flexibility and the lack of labor rights. We find two types of labor markets in the state: informal and formal. The first of them is quite widespread within the state; most of the small producers have a verbal contracting scheme without any type of labor benefit. Formal work is concentrated in large agricultural companies and in companies in charge of food packaging and processing. Some of the companies usually put out announcements in the communities where they indicate the documents that workers need to provide as well as the hours, salary, and benefits. Alternatively, the same personnel go looking for people in the communities. For hiring, personal documents such as birth certificate, Clave Única de Registro de Población (CURP) [Unique Population Registry Code], proof of address, social security number and ID are requested. Workers sign a contract and receive legal benefits, including social security.

However, although large companies have formalized agricultural work, the truth is that there are informal sector producers who supply these same companies. This is pointed out by Hoogesteger and Massink (2021) in their research in the municipality of Dolores Hidalgo, who state that the vigilance of purchasing companies when it comes to the labor standards of their suppliers is limited to checking for child labor. Therefore, other aspects that are essential for compliance with labor rights are missed. The latter reaffirms how widespread the informal agricultural labor market is in the region, which, without a doubt, has an important impact on the conditions of the farm worker population.

#### *Characteristics of agricultural workers in the main producing municipalities in Guanajuato*

Knowledge about the working conditions in Mexican agriculture is essential for generating public policy proposals aimed at complying with and improving those conditions. Therefore, a diagnosis is necessary to understand these conditions at the national level. However, the task is complex due to the diversity of agricultural activity in Mexico, which can be described as a heterogeneous mosaic where different types of production and crops coexist. Characteristics



such as the size of the productive unit, access to agricultural technologies, the products that are grown and the type of market to which they are directed all affect the type of labor market and working conditions encountered.

Based on the 2020 Population and Housing Census of INEGI and SIAP, Guanajuato ranks seventh in the country as agricultural producer, with 5.64% of the agricultural Gross Domestic Product (GDP), and fifth in terms of number of workers, with 116,223 farm workers, below only Veracruz, Michoacán, Puebla, and Chiapas. In other words, the state ranks fifth in Mexico for the number of farm workers, and third among export states –Michoacán and Jalisco surpass it–.

The census allows us to rank the state in terms of some labor conditions: for 2020, Guanajuato is in twelfth place for its monthly agricultural wage of 4,996 pesos, which is the lowest of the export states. Compliance with other benefits, such as health care rights, is also quite low: 9% according to the census –our findings presented in section 3.3 relate to a much higher level of affiliation–. Finally, it is worth mentioning that, of the export states, it is the one that shows the highest prevalence of underage workers: 6%.

JORNAMEX –this research project– developed the SIVIL as a means of diagnosing the different conditions that occur within the country's agricultural settings. This system makes it possible to identify three indicators of labor violations at the municipal level: the proportion of workers with wages that are equal to or less than minimum wage, the proportion of workers without access to IMSS medical services and the proportion of underage workers. These indicators are particularly important since they identify the violations of labor rights. This system was built with data from the INEGI 2020 Population and Housing Census and 2019 information from the SIAP.

By analyzing this data, it is possible to generate maps that show which municipalities present labor violations to a greater or lesser extent. The municipalities were divided into quartiles according to the proportion of agricultural workers who were underage, without access to IMSS medical services and whose wages were less than or equal to minimum wage. The 25% of municipalities with the lowest proportion of workers with these conditions are in green while the 25% with the highest proportion are shown in red. The maps also show the main crops by municipality, which makes it possible to associate these conditions with the type of crop, although some of the working conditions could be associated with a second crop in the municipality.

Analysis was carried out on the data from the farm worker population in general, but a more detailed analysis focused only on the indigenous farm worker population was also prepared. The maps of the whole country can be consulted on our website.<sup>7</sup> This document only includes the maps for the state of Guanajuato.

In the state of Guanajuato, the proportions vary for each of the indicators. The indicator for workers who receive a wage less than or equal to the minimum wage has one of the lowest proportions for the entire country; this means that, in general, there is compliance with minimum wage within the agricultural sector, although average wages are low. The municipalities that have the lowest proportion of workers experiencing this labor violation are those in the north,

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<sup>7</sup> See: <https://jornamex.com/mapas.html>





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west, and some in the center. The rest of them show a medium level, except for Acámbaro that presents a high level. Although compliance is high and there are no municipalities in red, it is necessary to remember that Guanajuato ranks twelfth in the country for average monthly income of farm workers.

In contrast to the indicator on wages, the proportion of underage workers is worrisome. Several municipalities in the state are in red, some of which are also low in terms of wages. The municipalities that have a higher proportion of underage workers are concentrated in the north and west of the state. There are only five municipalities in the state that are in the quartile with the lowest proportion of underage workers. When it comes to accessing IMSS medical services, the percentage of municipalities in Mexico's lowest quartile tends to be low.

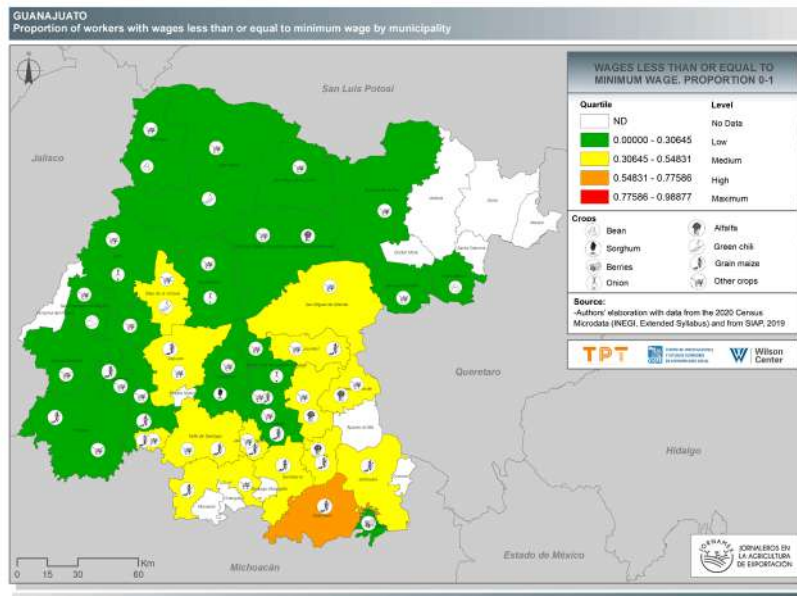
Abasolo, Pénjamo and Romita are among the municipalities that have a low proportion for the indicator of wages less than or equal to the minimum wage and they are also among the five agricultural municipalities with the highest production value. On the other hand, Irapuato and Valle de Santiago, which are also among the municipalities with the highest production value, show medium compliance, ranking in yellow. In the case of Dolores Hidalgo and San Miguel de Allende, which are municipalities that have shown significant growth in agricultural production in recent years, particularly in the export market, compliance with this indicator is high (See Map 4.1).

Regarding the lack of IMSS medical services, the state's compliance is lower (See Map 4.2). It can be noted that the number of municipalities violating this labor right to a medium and high degree is fairly high. Of the five municipalities with the highest production value —namely Abasolo, Irapuato, Pénjamo, Romita and Valle de Santiago—, only Pénjamo is in the quartile with the lowest proportion of workers experiencing this labor violation. Irapuato and Abasolo show a medium level, while Romita and Valle de Santiago show a high level. Dolores Hidalgo presents a medium level and San Miguel de Allende is at a low level. This is relevant because it would be assumed that an increase in export agriculture in Mexico brings about greater formalization of labor markets. However, it is evident that this is one of the conditions that needs to be worked on in the state.

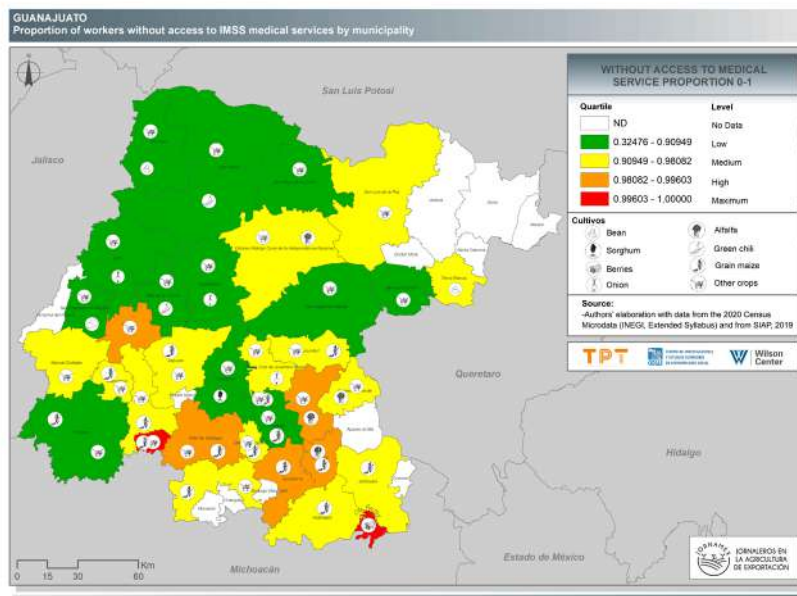
The situation worsens when analyzing the proportion of underage workers employed in agriculture in the state (See Map 4.3). In this case, only six municipalities have a low proportion, none of which stand out for their agricultural production. On the contrary, Dolores Hidalgo, which is one of the main export producers, is in the quartile with the highest proportion, while San Miguel de Allende has a high level. Of the five municipalities with the highest production value in the state, Irapuato and Pénjamo show a medium level, Abasolo and Valle de Santiago a high level, and Romita is in the quartile with the highest proportion. Child labor in agriculture is a problem that persists in the state, especially in the case of indigenous migrant farm workers, an aspect that will be addressed in the fifth section of this study.

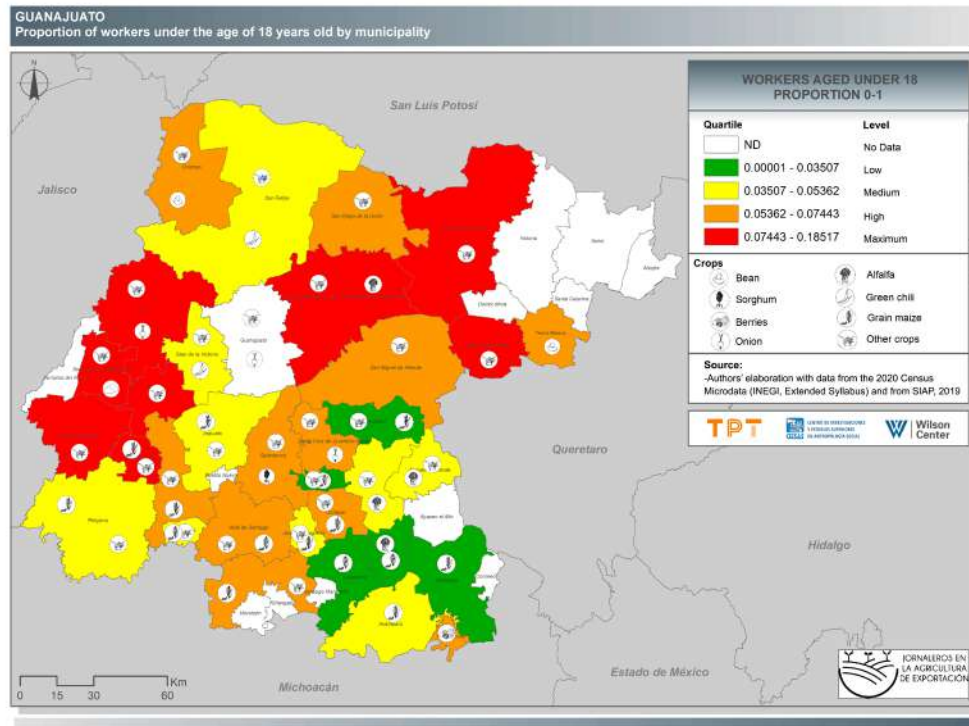


**Map 4.1.** Proportion of Workers With Wages Less than or Equal to the Minimum Wage in the State of Guanajuato, 2020



**Map 4.2.** Proportion of Workers Without Access to IMSS Medical Services in the State of Guanajuato by Municipality, 2020



**Map 4.3.** Proportion of Workers Under the Age of 18 in the State of Guanajuato by Municipality, 2020

Within the indigenous population, the violation of these labor rights follows a similar pattern. In terms of wages, the municipalities where there is sufficient data –namely, San Luis de la Paz, Tierra Blanca, Salamanca, Valle de Santiago, Cortázar and Celaya– show a low proportion of workers with wages equal to or less than the minimum, except for Celaya, which indicates a medium level. This is striking because Celaya is an important municipality for export agriculture. In terms of access to IMSS health care services, the situation is one of concern, only Salamanca and Cortázar have a low level. The municipalities of Valle de Santiago and Tierra Blanca indicate a medium level. San Luis de la Paz presents a high level and in Celaya the level reaches the maximum level, ranking in the quartile with the highest proportion of workers without access to this service. Regarding underage indigenous workers, there is only sufficient data for the municipalities of San Luis de la Paz, Tierra Blanca, Valle de Santiago and Cortázar. All of them exhibit the maximum level of violation, except for Cortázar which has a high level.

The SIVIL allows us to make a general diagnosis of the working conditions in the agricultural sector. In order to deepen our understanding and clarify the employment situation in the state, the following sections show the results of the ENJOREX 2022 survey, and the fieldwork carried out in the municipalities of Dolores Hidalgo, Irapuato, León, Romita, San Francisco del Rincón and Valle from Santiago. This allows us to make a more in-depth analysis of the working and living conditions of farm workers in the state.



*The ENJOREX 2022 survey: wages and working conditions in export companies*

The ENJOREX survey forms a central component of our study. As of 2021, this survey, which already includes five different samples, included the following:

1. A stratified, random survey of 2,800 workers in export agriculture, in companies affiliated with AHIFORES. This survey was applied in Michoacán, Guanajuato, Jalisco, Sinaloa, and Baja California in 2019, and represents workers in four of the main export crops. This survey was and continues to be the only source of rigorous representative information on working conditions in export agriculture companies. The general results of the survey were presented in the book *Farm Labor and Mexico's Export Produce Industry*<sup>8</sup> and detailed analyses of labor conditions in Jalisco and Sinaloa were made from the same data. The regional reports based on these analyses appear on the pages mentioned in the previous note. Being representative and random, it is possible to expand it to population. It represents the workers of companies that employ more than 83,000 workers, but we also believe that it is representative of workers in export companies affiliated with AHIFORES.
2. A sample carried out simultaneously to the aforementioned survey, applied to 575 temporary or informal agricultural workers in San Luis Potosí, Michoacán, Jalisco and Sinaloa. This survey was not random but obtained via snowball sampling from contacts made by its coordinator.
3. A sample of 300 avocado workers, collected in Jalisco and Guanajuato. It includes "ranchero" workers – those in charge of the ranch, who are usually permanent - pickers and packers. Project interviewers selected the workers themselves, but the firms were not chosen at random. They were well-known companies referred by personal contacts. The survey was applied between May and August of the year 2020. Its application complies with the protocols recommended during the COVID-19 pandemic.
4. A sample of 917 workers in 12 export agricultural companies in San Quintín and Maneadero, Baja California, obtained in 2021. This survey is representative since it was random and stratified. The results were published in the regional report prior to this one. It represents 19,000 workers in the abovementioned companies, and the workers in export companies in Baja California.

This section addresses the results of the fifth survey, ENJOREX 2022, involving workers of companies affiliated with the CEAG. The president of the council, Eng. Francisco López Tostado, and its general director, Ulises Esquivel Hernández, organized a meeting with representatives of export agriculture companies at the request of this team. In attendance at this meeting also were Héctor Uruga, general director of the Consejo Agrícola de Baja California (CABC) [Baja

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8 Available in full at <https://jornamex.com/publicaciones.html> y en <http://wilsoncenter.org/publication/farm-labor-and-mexicos-export-produce-industry>



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California Agricultural Council], who spoke about his experience supporting this project's survey in 2021, and Marion Avril, vice president of social and environmental impact at Driscoll's, who advocated the importance of having rigorous and truthful information on the labor conditions of agricultural workers. Representatives of more than 30 Guanajuato export companies attended. However, of these attendees, only one agreed to collaborate with the survey. We obtained the consent of another export company thanks to personal contacts. The total sample of workers for Guanajuato is 314, which does not strictly represent the entire working population in export companies, not only due to the number but also due to the sampling method. However, the survey makes it possible to delve into characteristics of the workers that do not appear in the population census. For its part, the Encuesta Nacional de Ocupación y Empleo (ENOE) [National Occupation and Employment Survey], which is the official source for monitoring Mexican workers and their jobs, does not offer specialized samples like the one presented here.

Hence, the need for this survey, which includes sociodemographic information, general employment data, origin, a section for permanent immigrant workers, a section for temporary migrants, one for jobs in the US, information on households, information on workers' chronic diseases, housing characteristics, details about workers' plots if they have one, wages and working conditions, recruitment conditions, debts, and finally COVID.

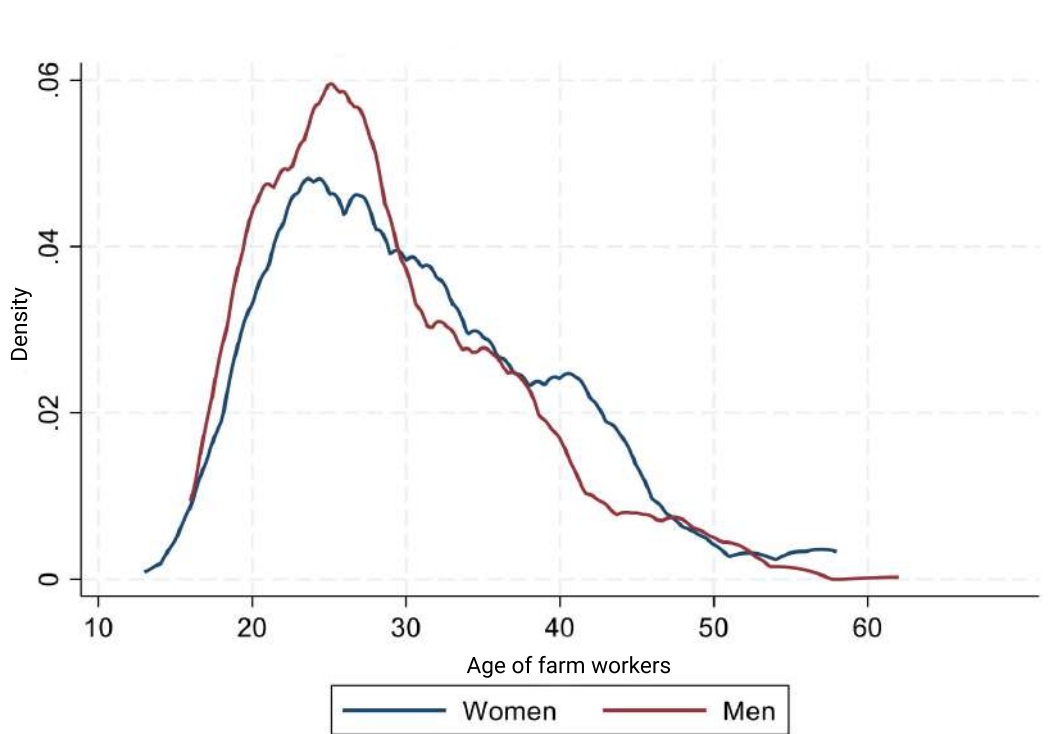
The two companies that agreed to participate are very different, which allows us to explore how these differences impact working conditions. One of them employs more than 3,500 workers. Its facilities consist mainly of greenhouses. Work at this company varies little throughout the year, and wage differentials are minimal between workers and between seasons. The second company is smaller. It employs around 70 workers. Its technology is closer to the average, with macro-tunnels and open fields. In it there are seasonal variations in employment and wages.

### *General characteristics*

The workforce interviewed in 2022 consists of 52% women and 48% men. The personnel managers and the owner of one of the companies indicated that they preferred women. This contrasts with the rest of the export states, where the balance leans slightly towards men –54% vs 46%–. It is worth remembering that in the rest of the country, in agriculture more than 80% of all farm workers are men.

The vast majority are aged between 18 and 50 years old: 1% are under 18 and 2% are over 50. Women are, on average, slightly older, at 30.8 years old, while men average at 29 years old. In our 2019 survey of five export states, the median age turned out to be 32, a bit older. The following graph illustrates the age distribution in Guanajuato:



**Figure 4.4.** Age of Farm Workers by Sex

Source: ENJOREX Guanajuato, 2022.

The age distribution for men shows a very pronounced mode—or peak—at 28 years of age. The women’s mode is less noticeable, and there is a secondary peak among women 37-42 years of age. In general terms, this indicates that young men take these jobs, but as they get older, they move to other sectors. Although the same thing happens with women in general terms, it is noteworthy that they return to agricultural employment after having children and taking care of them in early childhood. We had already found women’s return to employment in Sinaloa, where we believe that the abundance of nurseries facilitates the employment of women who are mothers. In Guanajuato, this infrastructure is almost nonexistent, partly because the presence of temporary migrant workers is new. However, it is urgent to create such facilities because it benefits all parents not only migrants. Regarding marital status, the largest group is single, as can be expected due to their relative youth: 45% are single, 44% are cohabiting or married, 8.5% separated or divorced, and 2.5% widowed.

Traditionally, agriculture has employed the population with the lowest education levels in the country. In Guanajuato, 6.5% have no schooling, 66% claim to have up to 9 years of schooling,<sup>9</sup> and 26.5% attended some high school or other. Women average 8.3 years, men 9. In other words, illiterate farm workers are still present, but in Guanajuato they represent a small minority, and length of schooling is almost two years longer than the national average for

<sup>9</sup> Years counted from the 1st grade in primary school.



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agricultural export workers. Natives have the highest education level. However, some temporary migrants also have a baccalaureate. In 2021, our survey in Baja California showed an average of 6.5 years of schooling for women, and 7.1 years for men. In other words, due to their origin, their education, and the scarce presence of indigenous people, there is diverse evidence that points to lower social vulnerability among agricultural workers in Guanajuato.

#### *Composition of the labor force according to origin in Bajío Guanajuatense*

The state of Guanajuato stands out from other exporting states because its workforce is mostly native. In Guanajuato in 2022, 87% of the agricultural workers interviewed by us are originally from the state and 7.5% are permanent immigrants, while only 5.5% are seasonal or temporary migrants. In other states, this composition is closer to a third for each category, while in Baja California, only 20.9% are native to the state, while 79.1% are permanent or temporary immigrants. However, the figures we found in Guanajuato in 2022 represent an increase in the population born outside of the state: in 2019, we only found 3% of the workforce was not native to Guanajuato. The growing demand for labor is changing this profile.

The population of temporary migrants is the youngest of all: its mode stands at 24 years of age, although it picks up slightly after 30.

The increase in temporary or permanent migration from the southern states has consequences both for Guanajuato as well as the southern states, where a labor shortage has also been generated —see salary section—. Either way, it is still a small group: only 3.2% of the workers we interviewed in 2022 speak an indigenous language. There are likely two reasons that explain this: firstly, the high-tech greenhouse does not need migrant labor, since its relatively constant need for workers is met by the local labor force. Secondly, in the medium-sized company, whose labor demand does fluctuate, the interviews were carried out when the high season had practically come to an end.

Before the spectacular growth of Guanajuato agriculture in 2010-2020, Bajío companies had based their recruitment in rural communities in the south of the state. There are municipalities with more than 200 rural communities. Moreover, unlike Oaxaca for example, the roads between these communities are reasonably good and the orography is favorable, so it is not difficult to transport workers from their communities on a daily basis, or simply ask them to arrive themselves by public transport.

This factor —abundance of local labor— was reinforced by another phenomenon. As is well known, Guanajuato is one of the states with the longest migratory tradition to the United States. The population that emigrates more intensely is that of rural origin. A drastic fall in immigration to the United States occurred in 2008 as a result of the financial crisis. As emigration fell, there was an increase in the labor supply, which fueled agricultural growth, and fostered a drop in wages in agriculture throughout the country in 2008-2012.

For all of the above, Guanajuato differs substantially from other exporting states where between 40% and 70% of the workforce migrates, whether temporary or permanently, from the southeastern states of Puebla, Veracruz, Guerrero, Oaxaca, and Chiapas. In Baja California, as said, 80% of the workers are not natives of the state.



However, this “labor self-sufficiency” is decreasing. Starting around 2015, labor shortages caused by the growth of agricultural and manufacturing employment have forced the recruitment of workers from other states. Today, these workers are an important part of the Guanajuato labor market, not so much because of their number, but because they are crucial during periods of intense workload, mainly the harvest. For this reason, in Irapuato, Romita and other municipalities, you see workers from other states transported in unacceptable conditions in haulage and pick-up trucks or housed in warehouses and other places not built for that purpose as well as some who are transported in appropriate transport such as school buses, and who stay in purpose-built shelters. The contribution of these workers is mostly temporary, sometimes for just one week. The presence of these workers is relatively new.

The development of high-tech agriculture, especially in greenhouses, could bring new changes. If the development of highly technical greenhouse-type agriculture is imposed, even if the demand for workers increases, this will tend to stabilize the new population.

Nevertheless, the currently situation is that all kinds of crops are attended to by migrant workers who are not being treated as they should be because they are hired by recruiters, who sometimes are the contractors. Although, as will be seen, we did find decent shelters, in Romita we saw accommodation in very poor conditions: with barely one toilet for all the workers, no running water, no privacy, and no adequate cooking facilities.

### *Wages*

To place agricultural wages in Guanajuato within the national panorama, it is useful to describe the major trends of real wages in Mexico. From 2014 to 2021, the ENOE reports that the real monthly salary<sup>10</sup> in non-agricultural jobs in Mexico went from 6,824.33 pesos to 7,321.21 pesos, for a real increase of 7.3%. In that same period, the monthly agricultural salary in the non-export states went from 3,061.67 to 3,608.03 pesos, for an increase of 17.8%. And the monthly agricultural salaries in the five states with the most export fruits and vegetables, including Guanajuato, went from 4,204.34 to 5,166.78, which is equivalent to an increase of 22.9%. Meanwhile, in 2014, the agricultural wages of the states with the least exports were equivalent to only 44.8% of the national non-agricultural wage, by 2021 they already amounted to 49.3%. The wages in the export states rose from 61.6% for non-agricultural wages in 2014, and to 70.5% in 2021.

In short, three trends can be observed: countrywide, official sources indicate that agricultural wages in general, even those of states with fewer exports, are increasing in real terms faster –at 3 times the annual rate– than non-agricultural wages. Consequently, the gap between agricultural and non-agricultural income narrows significantly. Finally, the increase in agricultural wages in the export states is faster than in the other states.

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<sup>10</sup> Real salaries calculated based on first quarter of 2020. The salaries mentioned here are the average salaries of the four quarters of the year.





These are the monthly salaries reported by workers in Guanajuato:

**Table 4.2.** Net Monthly Wages of Agricultural Workers in Bajío Guanajuatense According to Various Characteristics

	<b>Sex</b>	
	High Season	Low Season
<b>Women</b>	6,757	6,653
<b>Men</b>	6,820	6,768
	<b>Indigenous Language</b>	
<b>Does Not Speak</b>	6,804	6,722
<b>Speaks</b>	6,280	6,280
<b>Woman, Does Not Speak</b>	6,770	6,664
<b>Man, Does Not Speak</b>	6,842	6,788
<b>Woman, Speaks</b>	6,143	6,143
<b>Man, Speaks</b>	6,349	6,349
	<b>Schooling</b>	
<b>No Schooling</b>	7,318	6,929
<b>1 – 9 Years</b>	6,761	6,687
<b>10+ Years</b>	6,722	6,707
	<b>Migratory Status</b>	
<b>Native</b>	6,782	6,732
<b>Permanent Migrant</b>	7,064	6,595
<b>Temporary Migrant</b>	6,485	6,485
<b>Temporary Migrant - Women</b>	4,991	4,991
<b>Temporary Migrant - Men</b>	6,747	6,747
	<b>Civil Status</b>	
<b>Single</b>	6,616	6,535
<b>Divorced, Separated</b>	6,773	6,627
<b>Widow</b>	6,667	6,627
<b>Married</b>	7,098	6,997
<b>Cohabiting</b>	6,766	6,751
	<b>Totals</b>	
<b>General Average</b>	6,787	6,708
<b>In Minimum Wages 2022</b>	1.29	1.27

Source: ENJOREX Guanajuato, 2022.

It should be noted that the salaries obtained by our survey are always higher than those of the ENOE, or those registered in the Census. Those from these two official sources are reported by any person in the household over 15 years of age who claims to know the income of all household members. Those in our survey are reported by the workers themselves.



Wages reported by farmworkers in Guanajuato are below those found in Baja California –where, in 2021, women reported 10,280 pesos per month and men 11,000–, which are the highest in the country, and are similar to those of Jalisco in 2019, although it cannot be said that these levels are comparable, due to the difference of three years.

Reported wages were obtained for high season –when the data was collected– and low season. In other states and years, the differential between one and the other had been more than 30% in case studies. It is striking that the differential in Guanajuato is small or null, partly due to the weight of the advanced technology company in the sample, which has practically no differences in management or pay depending on the seasons. On the other hand, many workers simply responded that their low-season salary “is the same” as their high-season salary, which makes the differential zero.

In 2019, our team observed that Guanajuato was the only state with a wage gap in favor of women. In the 2022 survey, there is a gap in favor of men, but the smallest of all the states we studied: 1%. In other words, in general, the gender wage gap is not relevant in Guanajuato, although in certain categories it is. Indigenous language speakers earn 8% less, and in the case of women this gap is 10%.

Contrary to what might be supposed, there is a wage gap in favor of workers without schooling. Although this can be studied in more depth, it seems to be related to the fact that these workers work more frequently on a piece rate basis. On the other hand, in the 2019 survey as a whole, the conclusion is that income is directly proportional to schooling.

There are important differences in income according to immigration status, and even more so by immigration status and sex. The category of worker with the lowest salary in the survey is that of temporary migrant women, who show a relevant gap with respect to the other categories: they earn 36% less than the general average. This is surely related to the fact that they do not work full weeks but are hired in various fields for just a few days. It is noted, however, that this figure was obtained from a very small sample and should not be generalized. Marital status makes practically no difference in income, although married people earn 7% more than singles. In general, however, both from a seasonal point of view and in terms of the gaps between various categories, Guanajuato shows the lowest internal wage differentials observed in our survey.

We asked workers if their income is higher than the previous year, and to compare the amount of work they had in 2021 and –up to the time of the interview– in 2022. Firstly, 34% of women and 41% of men report earning more this year than last; 43% of all groups report the same income, and 4% of women and 7% of men report earning less in the current year.<sup>11</sup> To control whether the above was due to more or less demand for workers, the next question refers to the amount of work. All but 4 workers out of 321 stated that they have more or the same amount of work in the current year than the previous year. We asked them to estimate whether 2022 salaries are higher, the same or lower than those of 2021. One third affirmed that they have gone up, two thirds that they remained the same, and only 2% that they had gone down.

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11 The missing percentage is from an unanswered question.



Among scholars of the subject, there is a discussion about effort or labor intensity. Given the shortage of workers and the growing need for labor, the question is whether the increased productivity per worker comes about because the pay structure drives workers to work more. The vast majority affirm that their effort is the same in 2022 as in 2021. Only 3% of women and 6% of men report having increased their effort. We did not ask for previous years because it is likely that the answer is inaccurate –this was shown by our pilot with the team members themselves and with a few interviewed workers–.

One last notable fact is that 3 years ago, the wages we observed were equivalent to 2.3 times the minimum wage. Those reported in Guanajuato in 2022 are only equivalent to 1.29 times the general minimum, due to the substantial increases to the minimum wage. And if this is estimated with respect to the minimum professional wage for farm workers, the differential is lower, although it is still higher than the minimum wage on average. Only from 2021 to 2022, for example, the minimum wage increase was 22%.

### *Formal benefits*

Workers are asked if they know if their job entitles them to a series of benefits required by law. This is later contrasted with another question, that of actual or effective access to these benefits. The table 4.3 breaks down what was reported by workers regarding each right, or formal access, to these benefits.

Employer compliance with providing end of year bonuses and paid days off, or “economic” days, which are six a year for new workers,<sup>12</sup> is extremely high in Guanajuato and the highest in the country, up till now. However, there are important differences between the groups: the average drops substantially among indigenous workers. This may be related to their short tenure or years of service in their jobs. In the case of these two benefits, it should be noted that we have observed that workers provide the same response when asked about effective access to the benefit, which is why we no longer ask about effective access to these two.

Employer compliance with providing workers with formal access to legal benefits is quite good in Guanajuato, though lower than the other export states, where the average formal access to IMSS health care, for example, is 96%. Compliance in terms of end of year bonuses is generally good, but there are important gaps for speakers of indigenous languages, who have 16 percentage points less, and for permanent migrants, who have 8 points less. The differential regarding schooling is small.

As in other export states, workers reporting access to INFONAVIT is very low. This is the product of two phenomena: the lack of effective mechanisms for accessing INFONAVIT in the case of agricultural workers, and short periods of time employed in formal jobs, which means that they do not qualify for financing. In 2021, the INFONAVIT delegate in Ensenada, Baja California, stated that they were testing a pilot for farm workers to have access to INFONAVIT funds. Apparently, this pilot has not been expanded. Given that INFONAVIT is paid together with

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12 One chamber of the Mexican congress has already legislated that these days be extended to 12 per year, and it is likely that the other chamber will agree. At the time of writing, the law only mandates 6 days.



social security contributions, we can estimate that INFONAVIT has been paid for 80% or more of agricultural workers in the survey, but they do not consider that they are entitled to it. This situation must be resolved so that some of the poorest workers in Mexico can exercise this right. However, in no way should they be inflation or minimum-salary-indexed loans, which all but guarantees that these workers default, and their homes are foreclosed.

**Table 4.3.** Formal Access to Benefits by Agricultural Workers From Guanajuato Employed by Export Companies (%)

	<b>Sex</b>					
	End of Year Bonus	Paid Days Off	IMSS Healthcare	INFONAVIT	IMSS Daycare	Other Public Daycare
<b>Women</b>	92	91	92	14	1	1
<b>Men</b>	95	94	94	13	3	0
	<b>Indigenous Language</b>					
<b>Does Not Speak</b>	94	93	93	14	2	0.4
<b>Speaks</b>	78	78	78	11	0	0
	<b>Schooling</b>					
<b>No Schooling</b>	93	87	93	16	0	0
<b>1 – 9 Years</b>	94	93	93	12	2	0
<b>10+ Years</b>	94	94	94	19	3	1
	<b>Migratory Status</b>					
<b>Native</b>	94	93	94	14	2	0.4
<b>Permanent Migrant</b>	86	86	86	14	5	0
<b>Temporary Migrant</b>	92	91	91	6	0	0
	<b>Totals</b>					
<b>General Average</b>	94	93	93	14	2	0.4

Source: ENJOREX Guanajuato, 2022.

Finally, formal compliance in terms of access to daycare is almost zero. Like INFONAVIT, daycare insurance is paid at the same time as the IMSS contributions. For this reason, we can assert that more than 90% of the agricultural workers in these export companies are paying for a service they do not receive yet need. IMSS offers employers a scheme whereby employers build and operate a daycare center in compliance with IMSS standards. Meanwhile, IMSS reimburses them \$4,200 pesos per month per shift per child to operate the daycare center. This



scheme has been rejected by most of the employers with several arguments: 1) if the fees have already been paid, IMSS should be the one to build the center and provide daycare. Asking the employer to build the daycare without contributions from the IMSS itself, is not correct. 2) the employer is required to provide access to any child of an IMSS affiliate, not only the children of their own workers, in which case the benefit for the company and its workers is diluted. And 3) due to legal measures taken by the current government, businessmen are wary in the sense that the nursery could be expropriated.

#### *Effective access to benefits*

The following table is based on how workers report the real or effective access to the aforementioned benefits.

**Table 4.4.** Effective Access to Benefits by Agricultural Workers From Guanajuato Employed by Export Companies (%)

	<b>Sex</b>			
	IMSS Healthcare	INFONAVIT	IMSS Daycare	Other Public Daycare
<b>Women</b>	68	29	0	0
<b>Men</b>	68	11	0	0
	<b>Indigenous Language</b>			
<b>Does Not Speak</b>	69	21	0	0
<b>Speaks</b>	57	0	0	0
	<b>Schooling</b>			
<b>No Schooling</b>	88	67	0	0
<b>1 – 9 Years</b>	68	14	0	0
<b>10+ Years</b>	64	21	0	0
	<b>Migratory Status</b>			
<b>Native</b>	70	14	0	0
<b>Permanent Migrant</b>	78	67	0	0
<b>Temporary Migrant</b>	29	100 <sup>1</sup>	0	0
	<b>Totals</b>			
<b>General Average</b>	68	20	0	0

**Source:** ENJOREX Guanajuato, 2022.

<sup>1</sup> A single case.



As already mentioned, employer compliance with the end of year bonus and paid days off is the same as shown in the table on formal access.

Effective access to IMSS healthcare is 24% points below formal access or the right to the service. This gap is larger in Guanajuato than in the rest of the export states. The magnitude of this is surely related to the distances from clinics, saturation of the service, or lack of medicines, which leads them to forgo seeking out this service. When talking to workers at one of the companies, they also mentioned that their local health clinic provides them with the most basic care necessary. In other states –Jalisco– farm workers reported resorting to private pharmacies, where a doctor prescribes what they need. It was already pointed out in the Jalisco study that this has a negative effect on both the pocketbooks and health of workers. These pharmacy doctors over-medicate the workers because the pharmacies offer them incentives to sell more. On the other hand, they do not provide corrective and preventive recommendations, as the public health service should do. Despite temporary migrants frequently reporting entitlement to IMSS healthcare (91%), it turns out that the vast majority lack effective access to the service (29%). The second most excluded group is that of indigenous language speakers, among whom only 57% report effective access. It is imperative that workers whose contributions have been covered receive real access to this service.

Access to INFONAVIT is hard to believe because the same categories of workers who reported very low formal access –or entitlement– to INFONAVIT report high effective access to the service. These are permanent and temporary migrants, and workers without schooling. If these categories of workers have very low levels of right to access, it is impossible or very difficult for them to have a high level of effective access. It is possible that they did not understand the question, or that they are confused, but it is also possible that they do have access to the service of home loans. This needs to be further investigated.

In Guanajuato, the effective access of workers, men and women, and their children to public daycare centers, whether provided by IMSS or from any other source is zero. Although in other states effective access is low, this is the lowest found in the five states with large agricultural exports. It is extremely important that IMSS complies with this legal and moral obligation, or that employers and IMSS reach a satisfactory agreement to provide the service.

In Baja California, it was reported that a significant percentage of workers had work experience in the United States. In Guanajuato the same thing happens, though to a slightly lower extent. Men with work experience in the United States add up to 7.5%, with 2.7% for women. The most frequent employment among men is that of agricultural worker (42%), while among women, it is non-agricultural salaried worker (50%). In the United States, these jobs are more masculinized than in these Mexican companies.

In Baja California, a notable phenomenon is that of internal remittances: 30.9% of men, and 17.3% of women, regularly send remittances to Mexico's southern states. This is consistent with the high proportion of migrant workers, whether temporary or permanent. In Guanajuato, where the total migrant labor force only accounts for 13%, only 14% of men and 1.4% of women send remittances to other states. However, saving is frequent: 42% of women and 54% of men say they are saving.

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### *Housing and household composition*

Consistent with the high proportion of native workers and the fact that Guanajuato was not, until recently, a state that received many migrant workers, the quality of worker housing in Guanajuato is high. Housing quality tends to be lower in states with large migrant population growth, because recently arrived migrants tend to build their houses gradually, and can spend years in small, underserviced housing. The vast majority of women (81%) report living at “home” and, though the percentage is lower among men (75%) it is the majority dwelling type. The second type of housing in order of importance is the “ranch” –18 and 16% for women and men, respectively– which is consistent with what has already been said about the rural population that accesses these jobs. And the third is “shelter” or company lodgings, which is reported by 0.7% of women and 7% of men.

**Table 4.5.** Characteristics and Services of the Dwellings of Workers Employed by Bajío Guanajuatense’s Export Agriculture Companies (%)

	Piped Water	Cement Floor	Electricity	Drainage	Gas Stove	Refrigerator
<b>Women</b>	93	93	99	87	93	96
<b>Men</b>	97	96	99	95	92	95

**Source:** ENJOREX Guanajuato, 2022.

The services and quality of the housing of the farmworkers interviewed are considerably better than what was found in other states. This fact must be recognized. Even among the small sample of migrant workers, very good housing conditions were observed. It can be noted from the anthropological fieldwork that we found a lot of variation in temporary worker shelters, from adequate to unacceptable conditions.

In Baja California, we noted that the household size was extremely small and that this was probably because workers traveled mostly alone or with only their spouses. In Guanajuato, the households of farm workers are very small: 3.4 members among natives, 3 members among permanent migrants, and 3.1 among temporary migrants. In the homes of permanent migrant workers, the masculinity index is low (.38), which indicates that the men in these homes either do not exist or work in other states. As expected, just over two members in these households are adults of working age, while between 0.5 and 0.75 members are younger than 11 years old, and between 0 and 0.18 people are adults aged 65 or older. In short, these households are very small, and their dependents are almost exclusively young children. The commonly held notion that rural households are larger than urban ones should be dispelled.

In these households, between 1.5 and 1.9 workers perform some kind of paid work, and of these, the majority do the same job as the worker who was interviewed: between 1.1 and 1.4 are agricultural workers. In other words, there tends to be more than one paid worker,



despite the small size of the household. Between 6% and 14%<sup>13</sup> of the paid workers in these households are minors, though not necessarily working in agriculture. It should be emphasized that the main income of these households is from wages, not from the sale of any self-grown produce.

#### *Recruitment, transportation and debts*

Only 5.85% of the workers were actively recruited by the employer or contractor. As is the case for the urban job markets, 52% were recommended by family, friends, and colleagues; between a quarter and a fifth sought employment on their own; and one sixth followed information that reached their community through various channels. In other words, from the point of view of recruitment, there is a very low probability of forced labor.

Another indicator of potential abuse relates to when employers offer transportation for workers, later charging them for the journey or deducting the cost from their paycheck. Only 1 of 321 workers reported that the employer transported them and then charged them for the journey. All the others made the journey by their own means, were transferred free of charge by the employer, or they report that the national employment system transported them—remember that in this sample, there are workers who have been with the company for many years and this transfer may have occurred a long time ago—.

Debt is also a potential indicator of forced labor. No woman in the sample claimed to have debts with her employer. Only 1.5% of men reported a debt, which were men with a high level of schooling. In other words, they most likely acquired this debt fully aware of what they were doing.

Therefore, taking these three indicators into consideration together, the probability of forced labor in these two companies is extremely low.

#### *Illnesses*

Our survey includes sections on chronic illness and COVID-19. The population of workers interviewed in Guanajuato is very healthy in terms of its low prevalence of chronic diseases. Only hypertension reaches 13% among permanent immigrants, and temporary migrants report a very low prevalence of chronic diseases. Diabetes mellitus is reported between 2% and 4%, according to migratory category. Although it is likely that the workers have not been tested, in other states we have verified the general good health of this population, which is probably due to their youth, their level of activity, and the rural diet, which is healthier than the urban diet. However, good health is lower among both permanent immigrants and natives. This phenomenon coincides with the “Latino Health Paradox”, which shows better levels of health among Latino immigrants recently arrived in the United States than among native whites, second-generation immigrants, and immigrants who have been in the country for longer.

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13 These are the averages among the three types of households defined by the immigration status of the worker. Obviously, there are many households where minors do not work, where this proportion is zero.





**Table 4.6.** Reports of COVID Cases Among Agricultural Workers in Guanajuato Until August 2022 (%)

	Family Member Sick	Work Colleague Sick	Interviewee Sick
<b>Women</b>	21	38	12
<b>Men</b>	23	37	14
<b>Total</b>	22	38	13

**Source:** ENJOREX Guanajuato, 2022.

The prevalence of known COVID-19 patients among the workers of these companies is also low, and lower than that found at the national level in a survey where the disease is self-reported (CIHR, 2022).<sup>14</sup> This incidence is 35.6% as of March 2022 according to this other survey. Of course, there may be a bias in that poorer people were tested less.

In short, we can say that in these companies, wages are in fourth place among export entities, their compliance with the law is average, and they are higher than those of non-export states; benefits coverage is generally very good, although in some cases the low level of access reported by indigenous people and temporary migrant women is worrying; potential indicators of forced labor are extremely rare; housing conditions are relatively very good, and the homes are small; and the incidence of chronic diseases and COVID is or has been lower than among the general population.

#### *Characteristics of the formal labor market*

The formal job market, as its name indicates, is characterized by hiring under a legal scheme mediated by written contracts. The extension of this model is fundamental in the agricultural sector since it is a very important step to ensure the fulfillment of farm workers' labor rights. Due to the way the agricultural structure is configured in the state, this market coexists closely with the informal labor market. As Hoogesteger and Massink (2021) pointed out in their research, even formal companies, in some cases, rely on informal labor markets for certain processes in their supply chain.

The formal labor market occurs mainly in large and medium-sized agricultural companies, as well as in packaging firms or factories dedicated to food processing. In this type of contract, in addition to having a contract that covers workers, companies are obliged to provide the legal benefits such as social security that provides access to health care, retirement savings, daycare centers and housing credit. Other benefits such as end of year bonuses, payment for seventh day of the week and vacations are also of great importance.

Besides written contracts and benefits, there are other conditions that indicate formality such as transportation, services provided by companies, and housing. Housing is a particularly relevant aspect for migrant workers. The large companies in the region meet labor standards

<sup>14</sup> The 4th round of the survey on COVID-19 funded by the Canadian Institute for Humanities Research (CIHR) and applied by the ACS (Association for Canadian Studies), in the United States, Canada and Mexico.



and the provision of formal employment. This is the case of some of the farms we identified in the municipality of Dolores Hidalgo, one of the main export municipalities in the state. One characteristic that immediately stands out among the companies in Dolores Hidalgo is how they control and establish the boundaries of their fields. This contrasts with the open-air fields that are scattered throughout Bajío Guanajuatense which are not identified or demarcated with signage or entrances.

The requirements of the export market shape workers conditions as well as the companies' facilities and the services they offer. Signs with logos and regulations, a rarity in the open broccoli and chili fields in municipalities like Romita, have become the rule rather than the exception in Dolores Hidalgo. Dedicated spaces for the shelters, first aid care and educational centers are part of the landscape in Dolores Hidalgo's greenhouses and fields.

Another aspect that distinguishes the formal and informal markets is the type of transport used to transfer workers. School buses were seen in the fields of Dolores Hidalgo, while in Romita the van transporting workers was identified as a vegetable freezer. As will be analyzed in the next section, informal companies transport people in pick-up trucks and open-top delivery trucks, with all the risks that entails.

The differences between one market and another are particularly important for migrant workers, who are at a greater disadvantage than locals due to their situation. Workers who come from other states depend on the housing, health care and education services offered in the place of arrival. In many cases, the fields are far away from the cities or towns with services; therefore, there is a responsibility on the part of employers to provide such access.

Dolores Hidalgo's agro-export companies have shelters, educational centers, and a health center within the boundaries of their fields. Although the way in which these services are provided varies from one company to another, in general, they are concrete constructions with tin roofs where basic services are available. In the housing areas, there are medical clinics, spaces for classes taught by the Ministry of Education and general stores to purchase basic necessities. This does not mean that conditions in agro-export companies are ideal, but rather that formalization is necessary to improve the conditions of workers.

Another aspect that is very significant depending on the type of market is the impact of intermediaries. Although there are companies that do the hiring directly, others use contractors. Intermediation is a problematic issue because it allows companies to distance themselves from the responsibilities that the hiring process entails and favors the precariousness and informalization of employment. However, even when using intermediaries, formal companies have to comply with legal benefits and adequate conditions for their workers. Thus, even with the presence of intermediaries, there is some compliance by the companies, though it should be noted that compliance is not complete. There are underage workers who work because their parents provide other people's IDs, something that was verified by us and corroborated in the testimonies of the workers themselves.

This is the case of an export company dedicated to planting blueberries in the municipality of León. This company uses a contractor to bring in migrant labor from the state of Oaxaca. The company's workers have social security and are provided with free housing, transportation, and food. However, the responsibility of covering these needs falls directly on

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the intermediary who, in many cases, does not have the capacity to provide these services or an adequate space to live.

The intermediary was in charge of transporting the workers from their community of origin to the workplace in a van. Transportation costs were covered by the company. He also had to find housing for the workers, which was a shelter with three rooms fitted with bunk beds shared by 32 workers. The building has laundry rooms, a kitchen, and showers. The toilets are portable. The shelter is located on a hill in one of the towns in the municipality. Due to drought in the area and the location of the shelter, they do not have drinking water. The contractor claims that a pipe will supply water so that people can bathe and wash their clothes.

The recruiter negotiated with the employer that he would cover the costs of food and the salary of two kitchen workers who are paid 1,800 pesos a week. With this, the workers have their food covered as well as not having to arrive and cook after an exhausting day of work. This reflects the bargaining power that intermediaries have when it comes to formal companies, which contrasts with informal work, as will be explained later. However, it also shows how the responsibility of companies is diluted by incorporating intermediaries into their contracting practices.

Packaging companies and factories dedicated to food processing are also a formal niche in agricultural work in the region. They employ mainly local people. For example, Juana from Romita started working in the fields weeding and planting when she was 12 years old. She has worked in greenhouses for export companies that send their products to China and the United States. Five years ago, she started working for a vegetable freezing company. She prefers working in the packing house to working in the fields because the schedule allows her to spend more time at home.

Juana currently works alternating the morning and evening shifts; the morning shift is from 7:00 a.m. to 3:00 p.m. and the evening shift is from 3:00 p.m. to 10:20 p.m. One of the characteristics of packaging companies is the constant rotation of shifts. Vegetable freezing companies alternate their workers each week between morning and evening shifts. It is important to mention that the constant rotation of shifts can become a challenge for the organization of daily life and housework. In addition, in the harvest seasons, the “daytime” hours extend until nightfall.

Even when companies can be considered formal, the logic of the packaging companies and farms is marked by labor flexibility. Flexibility not only in terms of shift rotation, but also in terms of piece rate payments and irregular employment. This is illustrated by Alfonso’s story, a migrant farm worker who is working in the aforementioned blueberry company. He commented that during Easter week when they only worked three days, as imposed by the employer, despite having a signed contract, the reduction in the number of days worked affected the wages they received that week, since the company only paid for the days worked. This type of situation is worse in the informal labor markets, which has a significant impact on wages, employment conditions, and living conditions, as will be analyzed below.



### *Characteristics of the informal labor market*

Unlike the formal labor market where there is a written contract and legal benefits are provided, informal hiring is characterized by the absence of these elements. Not having a contract and labor rights places workers in a clearly disadvantaged and vulnerable situation. In addition, the absence of these elements brings about other types of scenarios such as abuse of power, human rights violations, workplace harassment or even human trafficking. It is therefore urgent to review the conditions faced by workers in the informal labor market in Bajío Guanajuatense and its logic. One of the aspects that stands out is the significance of the recruiter or contractor role. This is the person in charge of hiring workers, both locals and migrants. This person also usually works as a foreperson or manager of the crews that they themselves recruit. Hiring is done with verbal agreements between the contractor and the workers. The recruiters are known within the communities; therefore, the agreements tend to have overtones of camaraderie. People who need work only need to approach one of them, or the same contractors reach out to the workers they have already identified when they need more labor.

The dynamic between locals and the recruiters is clearly shown in the case of Rebeca, a young 20-year-old worker from a community in the municipality of Irapuato. Rebeca began working in the fields at the age of 18. She obtained the contact of her contractor and manager through her best friend, who also works in the fields. The day before they work, the contractor tells them what crop they will do and what tools they will need, for example a knife or a sack. She then buys everything she needs at Romita's flea market with her own money. The contractor typically rotates crop workers each week. With this contractor, Rebeca has harvested potatoes, onions, beans, chili peppers, and broccoli. Rebeca works upon demand, and says that she had not gone to the fields for a while, but a few days ago the contractor called her because he needed people.

The work of the contractor is not limited to hiring, he is also in charge of transporting people, which usually happens in a pick-up or in open-top delivery trucks, where people have to stand up without any protection. You can even see people sitting on the edges of the trucks. In other agricultural regions, the situation is different and reconditioned school buses are used for this purpose, something that companies in the region that contract workers formally also do. The workers usually meet the managers at previously agreed meeting points, these can be on the highway, at intersections of streets or avenues, in the center of towns, or at the houses of the managers themselves. In a small town in the municipality of Romita, we identified that the contractors drop people off on the road right by the town's park.

At the end of the day or week, it is the same contractors who are in charge of paying the workers according to the days they worked. In the absence of a clear and written contract, there is a risk of conflict or abuse of power between contractors and workers. Such was the experience of Margarita, a young worker from the municipality of Romita, who complained that each week she was paid less than what she was due for the days she had worked. She was working weeding the furrows and paid by the day.



During the day, she had to weed a certain number of furrows. However, due to lack of practice, because she had not worked in the fields for a long time, she fell behind. Some workers began to help her finish the furrows that she had to complete for the day. Her surprise was that the help was not free since they took half of her pay at the end of the week. Instead of paying her the 1,440 pesos she should have got for working all week, the contractor only paid her between 700 and 800 pesos.

For this reason, every payday Margarita's mother waits for the young woman where the contractor leaves the workers. Her mother checks that her daughter has been paid her full wage. The lady explains that the young woman has difficulties reading and doing numbers, so she checks with the contractor that the amount they give her matches the days she worked. This case shows how informality, the lack of regulations and contractors having an excess of control can lead to the abuse of power over workers.

Informality also fosters the problem of labor flexibility, which is characterized as being temporary and unstable. Agricultural work depends on the seasons of each type of crop. During some periods of the year more labor is required, while crops are constantly changing. When workers are hired seasonally and temporarily, it translates into job and wage instability. The work is usually "safe" during the weeks or months that the season lasts. However, in low seasons or depending on the demand for labor of each employer, farm workers are not guaranteed to find work every day.

For example, Cristina, a local informal worker, describes that she used to work on a farm where there was only work two or three days a week. At that time, she saw the van pass by of the manager with whom she now works daily. When she realized that he had work to offer every day, she chose to ask him for a job instead. This contractor always took them to the same employer: a man who has a lot of plots where he grows different vegetables, which allows him to supply work all year round. When we met her, she had finished cutting broccoli and was about to start the first chili harvest. After working on chili, they would go to plant onions for three months. Potatoes and tomatoes also work with this pattern. These kinds of situations are more commonly found in the informal labor market due to instability and the absence of an employment relationship, though, as we pointed out in the previous section, they can also be found in formal employment.

Depending on the season and the crop, the hours and payment modality also change. Currently, between 200 and 270 pesos per day are paid for a day in the field. Payment per day is decided by each employer, but it also depends to a large extent on the crop being worked. The broccoli workers we had the opportunity to interview reported earning 240 pesos a day. Instead, a worker who had gone to "throw tape to plant cornfields"<sup>15</sup> was paid only 200 pesos for the day. This same worker said that for chili she earns between 200 and 220 pesos a day. Another worker stated that she is paid 220 pesos a day to harvest jicama. Agave is the crop that pays the best; a jimador earns 400 pesos. Just as the wages are variable depending on the crop in question, the hours also change according to the crops and the season. This is not limited to the informal labor market; as mentioned above, it also occurs in the formal labor market.

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15 Throwing tape refers to placing the irrigation hoses in the furrows.



For some crops, harvest is paid as piecework, which means they get paid depending on how much they harvest each day. Such is the case of chili in the informal labor market. This produce is cut and collected in burlap sacks that fit around three 20-liter buckets. Each worker's payment depends on the number of sacks he or she fills. The price per sack varies by a few pesos between farms. Currently, a sack of jalapeño pepper that weighs between 32kg and 34 kg pays between 16 and 17 pesos. A sack of serrano chili weighing between 28kg to 38 kg has a higher value; these pay between 25 and 28 pesos. Alma, a migrant worker who lives in the municipality of Romita, stated that she usually fills around 37 sacks of jalapeño or 17 sacks of serrano chili per day, which is equivalent to 592 or 459 pesos a day, respectively. Arturo, a migrant worker who lives in the municipality of San Francisco del Rincón, commented that in one day he fills and loads up to 45 sacks of jalapeño, which earns him 17 pesos each or 32 sacks of serrano chili for 25 pesos each. This totals between 765 and 800 pesos a day for a shift where he carries up to 1,500 kg from dawn to dusk.

Labor flexibility, which translates into employment instability, variable schedules and different payment modalities is not the informal market's only problem. Oral contracts and recruitment through intermediaries exempt employers from granting benefits they are required to provide by law, which include the payment of the end-of-year bonus, disability allowances and profit sharing, as well as the right to vacations and affiliation to social security. Labor flexibility and lack of benefits affect both local and migrant workers. However, there is a differentiated impact between the two. This difference is related to the degree of vulnerability in which migrant workers find themselves, but it is also the product of segmentation by origin and ethnicity in the agricultural labor market.

#### *Segmentation of labor by origin and ethnicity*

Given the lack of benefits and labor flexibility in agricultural employment, informal workers are at a disadvantage. However, the impact of not having employment benefits and labor flexibility is different depending on the origin and migratory status of the workers. This is largely due to difficulties in accessing public services and the lack of support networks in the workplace, issues that will be addressed in the following sections.

Furthermore, labor flexibility manifests in different ways according to the origin of the workers. When the harvest season arrives and the work is intensive, migrant workers are hired and paid per piece, unlike the locals who are usually paid by the day. This is because employers consider that migrant and indigenous day laborers are more skilled to carry out this intensive work, but they are also the ones who accept exhausting hours in extremely precarious conditions.

This situation is described by Cristina, a local worker from the municipality of Irapuato. Cristina belongs to a crew of local workers who are paid by the day. She explains that when her crew goes to the chili field, they are the ones in charge of planting and weeding: "those who come from outside are the ones who have to cut. They are the ones that get paid for the number of burlap sacks they fill, not the local people".



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Cristina explains that if the crew requests it, they can also be put on cutting, but local people prefer to get paid by the day. Cristina says that she likes doing piecework because she can earn a little more; however, in general, local workers do not like it because in this modality they do not even earn what they would when paid by the day. In other words, to reach a wage equal to or greater than what is earned when paid by the day, they must fill a large number of sacks or buckets with the product being harvested.

While piecework can mean greater earnings during the harvest season, it requires greater demands and physical exhaustion as the days are long and intensive, with the aim of cutting the most product in the shortest possible time. In general, the workers indicated that when paid by the day, the workday is less exhausting because they can go more slowly or at their own pace.

The preference to employ migrant labor for piecework is related to a highly segmented labor market in which an unequal structure persists that responds to categories such as ethnicity, class, and gender (Holmes, 2016). Despite the knowledge and skill that this type of work requires, they are usually considered unskilled tasks. It is for this reason that women, children, indigenous and migrant labor is usually preferred for these tasks.

Rafael, a producer of *chile güero* [blonde chili] from the municipality of Romita, mentioned that migrant day laborers are the ones who usually perform piecework because they work as a family, which allows them to pick and earn more during the workday. This same producer says that he prefers to hire only local people and pay by the day. It is more expensive for him to bring in people from out of state because he has to pay for a place for them to stay. In addition, he points out that as they come as a family, this can cause problems with the authorities if they identify that there are minors working in the fields.

Since Rafael only hires local people, even during the harvest, he prefers to pay them by the day. He explains that many workers use “tricks” to fill the bags faster and make more profit. That is, they cut fruits that are not yet ready or that do not meet the necessary quality standards. For example, people cut chili peppers before they are ready, while they are still tender. Or, to fill the sacks, they grab fists full of chili peppers of all sizes, which damages the bushes. The problem is that buyers do not want the product because too much of it is not ripe. He pays the people he hires 250 pesos a day from 7:00 a.m. to 2:00 p.m. to pick the fruit.

The division between locals and migrants in the labor market is justified by arguments such as migrants working within a family unit or their greater abilities for cutting. However, such discourse is argued under the concept of culture as if both aspects were inherent to their place of origin; or as if they had some natural born ability related to where they came from. According to a member of a civil association that works with migrant day laborers, employers tend to uphold the idea that indigenous workers are faster and “endure more,” and that “nobody works it [chili] like the people of Guerrero.”

Other producers have mentioned to him that it would also be better for them to hire local people, but from their perspective, it is hard to get local people to accept the conditions chili cutters work under. For piecework, families work from seven in the morning to seven at night. The work is extended because the producers usually stipulate a certain number of cargo trucks that they have to fill in order to finish their day. Although a worker earns more than he would



earn per day with piece-rate pay, the time spent in the furrows exceeds one standard working day. Sometimes this wage is earned from the work of several family members. The truth is that with this method of payment, producers make sure they get the job done in less time. In addition, they relinquish themselves from the responsibility of paying overtime or premiums related to working Sundays or national holidays.

The discourse regarding the ease that migrant and indigenous workers have for this kind of work is perpetuated without question, not considering it as a skill acquired as a result of the job options to which they have access and in which they are socialized from an early age. The perception that it is a skill related to their origin and not a job qualification acquired through training causes this hyper-specialized task to be reviled and considered as unskilled work. This has been pointed out by various authors for decades, including Rebolledo (1993) and Lara-Flores (1995) in the case of women agricultural workers and packers. The same happens with the work of minors, which is taken for granted as a cultural attribute without reflecting on the limited opportunities that boys and girls have to carry out other activities.

Even though labor segmentation is a characteristic of the informal labor market, some formal companies hire migrant workers on a piece-rate basis for the harvest. Such is the case of a blueberry company that pays eight to nine pesos for each bucket. With this modality, workers can earn from 2,800 to 4,000 pesos a week. However, there are workers who claim that despite all their best efforts they are unable to achieve the amount necessary to earn the equivalent of a day's wage. This is the situation in which Alfonso, originally from Oaxaca, finds himself, who barely manages to earn between 150 and 180 pesos a day. His experience differs from the one he had working in a formal berry company in Jalisco, where he earned around 1,500 or 2,000 pesos a week. Alfonso explains that people work differently there because they have to fill boxes with fruit, attributing the difference in his wages to this.

Although the formal market in Guanajuato is not exempt from the problems caused by labor flexibility and segmentation, the truth is that there is better compliance with labor rights. Nevertheless, it is necessary to highlight that in Guanajuato, in addition to a labor market divided between formal and informal, there is a clear segmentation that differentiates local workers from migrant workers. This division must be analyzed in order to generate greater equality within the agricultural labor markets.

#### *Population, migration, and agricultural work*

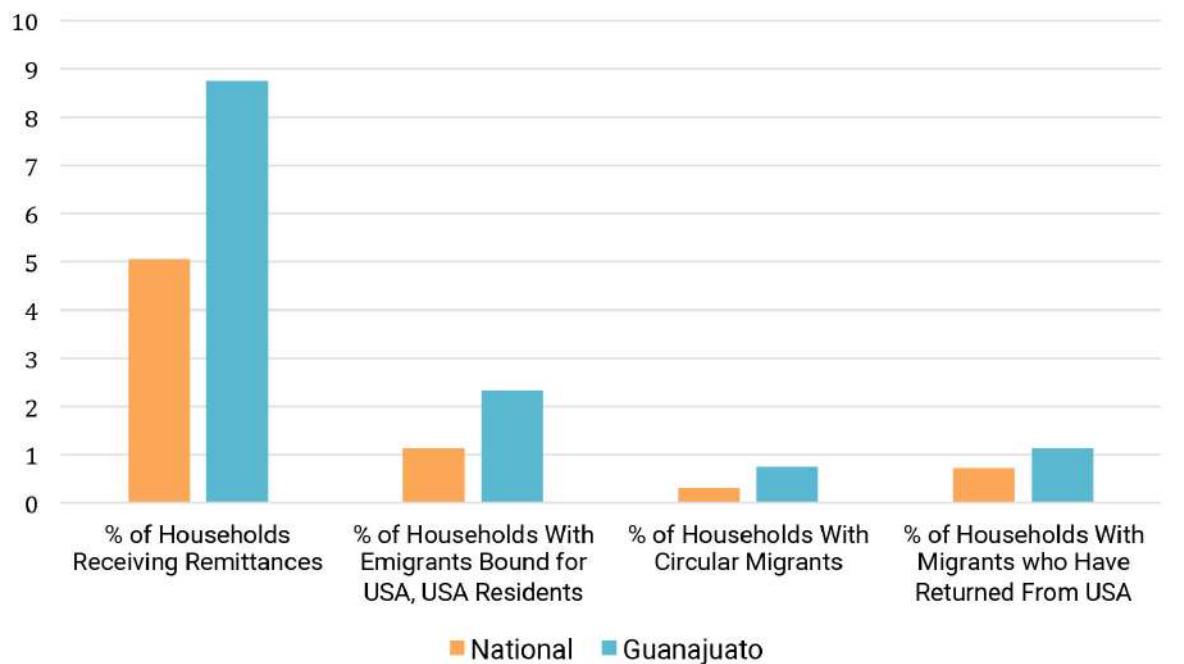
One of the elements that fostered the growth of agribusiness in Bajío Guanajuatense was the possibility of having cheap labor from the state's rural areas (Echánove-Huacuja, 2000). In recent years, the Mexican countryside has suffered from a crisis due to lack of land, the high costs of supplies needed for planting, and low wages, which has forced many rural families to seek employment options outside the agricultural sector or in other latitudes (Arias, 2009). Even though in the state of Guanajuato most farm workers are natives, it is no exception (Arias, 2009). Facing this crisis, families have deployed two main strategies: migration to the United States and diversification of employment within the same state (Arias, 2009). Recently, however, this has changed significantly. Currently there is a shortage of labor in Mexico's agriculture.





In Guanajuato, there is a long-standing migratory tradition. At the beginning of the 20th century, 60% of migration nationwide could be attributed to the state, and it continues to play an important role in the country's migration history today (Durand et al., 2019). According to the 2020 Migration Intensity Index<sup>16</sup> by the Consejo Nacional de Población (CONAPO) [National Population Council], Guanajuato is among the states with the highest migration to the United States. The index shows a very high degree of migratory intensity, ranking as the fourth state with the most migration to the neighboring country. The importance of migration for the state is reflected in the percentage of homes that receive remittances, which reaches 8.75%. Households with emigrants residing in the United States add up to 2.33%. The lowest percentages relate to households with migrants who have returned with 1.13% of homes and circular migration with 0.75% of the homes.

**Figure 4.5.** Migration Intensity Index for Mexico-United States, Comparing Guanajuato, and National Data 2020



**Source:** Authors' elaboration with data from the Mexico-United States migratory intensity index, 2020 by the CONAPO.

The municipalities with the highest degree of migratory intensity to the United States are Manuel Doblado, Cuerámara, Ocampo, San Diego de la Unión, San Luis de la Paz, Santiago Maravatío, Xichú and Yuriria, with the exception that Manuel Doblado, Cuerámara and Santiago Maravatío fall outside the Bajío Guanajuatense region. The municipalities with the greatest agricultural

<sup>16</sup> CONAPO's migratory intensity index is a measure that analyzes three forms of relationship between Mexican households and migrants to the United States at the national, state, and municipal levels. The estimates are made based on data from the INEGI's 2020 Population and Housing Census.



relevance present an index of migratory intensity between low and very high, as shown in the following table:

**Table 4.7.** Mexico-United States Migration Intensity Index 2020 for Guanajuato's Main Agricultural Municipalities

Municipality	% Households Receiving Remittances	% Households With Emigrants Found for USA, USA Residents	% Households With Circular Migrants	% Households With Migrants who Have Returned From USA		Degree of Migration Intensity Index
Abasolo	16.49	2.82	0.89	2.47		High
Dolores Hidalgo						
Cuna de la Independencia	21.86	9.40	3.76	4.08		Very High
Nacional						
Irapuato	4.62	1.03	0.26	0.41		Low
Pénjamo	16.54	6.27	1.02	3.38		High
Romita	8.68	1.59	1.15	1.50		Medium
Valle de Santiago	13.44	2.53	0.92	1.16		Medium

**Source:** Authors' elaboration with data from the Mexico-United States migratory intensity index, 2020 by the CONAPO.

The state's population has been marked by its history of migration to the United States. Nowadays, it is common for families to be binational or for entire generations to have grown up in the neighboring country. One of the impacts that migration has had is a decline in the numbers of the agricultural labor force. A grain producer from a small town in the municipality of Salamanca explains that most of the people who live in the rural areas are already elderly, as their descendants migrated to the United States or went to work in some other trade. With no workforce to sow the fields, the land has to be rented or sold to large producers.

The migration of labor to the United States decreased markedly after 2008, both from Guanajuato and from the rest of the country. However, the decrease in migration occurs following a decline in the rural population of reproductive age, which had already declined sharply due to the same migration history. Therefore, the supply of local workers grew, but only modestly. In Guanajuato, this labor force had access to the entire range of economic activities in the state, which includes a strong export manufacturing industry and various services. For this reason, no labor surplus was generated for the agro-industry; on the contrary, by around 2012, a shortage began to manifest, which has only worsened since (Escobar-Latapí & Masferrer, 2022).



Over the last two decades, the primary sector has seen a decrease in the number of workers. In contrast, the number of workers employed in the commercial and service sector has increased. The decrease in the primary sector workforce is also a consequence of the diversification of the rural population's activities. The economic diversity of the state allows the local population to have access to other employment options with greater stability and better wages. Although a shortage of agricultural workers is a general trend in the country, the situation is getting worse in this state, since agriculture competes directly with the industrial, commercial, and service sectors. Since the early 2000s, Marañón-Pimentel has pointed out that agricultural packing firms were in direct competition with the maquiladoras that monopolized a large proportion of the female workforce at the time (2002, p. 199).

**Table 4.8.** Employed Population by Economic Sector From 2000 to 2020 in the State of Guanajuato

	2000	2010	2020
<b>Primary Sector</b>	13.23	12.72	9.08
<b>Secondary Sector</b>	36.43	32.01	35.69
<b>Trade</b>	17.82	20.67	19.03
<b>Services</b>	29.47	33.86	34.26
<b>Nor Specified</b>	3.05	0.75	1.94

**Source:** Authors' elaboration with data from the 2000, 2010 and 2020 Census of Population and Housing, INEGI.

The problem of labor shortages in the agricultural sector was pointed out by the producers that we interviewed during the field work. One of them was Pedro who, although he does not need a large number of workers because he plants grain, also has a fertilizer business for which he requires labor. He explains that while he prefers to hire workers from the same town, given the shortage of labor he is forced to bring people in from other municipalities. For example, he usually brings people from Rincón de Parangueo in the municipality of Valle de Santiago.

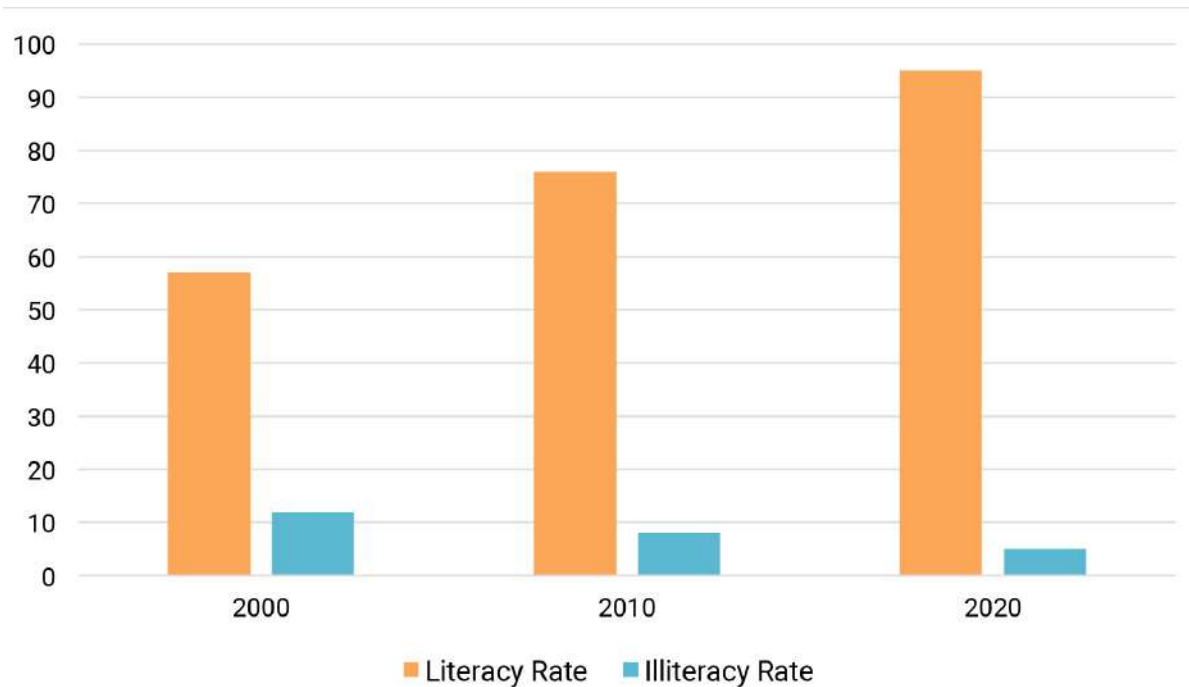
Difficulty in finding workers has been the reality for the past twenty years. Initially, because people left for the U.S. Now, because they have other local options. Pedro acknowledges that this problem has worsened with the growth of the industrial and service sectors, which have the capacity to offer better working conditions. Although the wages are sometimes lower than on the farms, in manufacturing plants workers have social security and overtime pay. For example, he says at the Mazda car assembly plant, workers earn only 800 pesos as a basic wage per week, but they "have benefits."

Moreover, at the car assembly plant, they work in shifts, so in the end, with overtime, a worker earns around 1,800 pesos per week, while, according to Pedro, on the farms they earn around 1,500 pesos per week working six days a week —our survey shows higher salaries, as noted in Table 4.2—. Another producer mentioned that for him local agriculture is going through a difficult period because almost all the labor works in factories or in the agave fields, which has become a very profitable activity.



Another factor contributing to the shortage of agricultural labor is an increase in schooling levels. In the last two decades, the illiteracy rate has decreased significantly in the state, with an increase in the population attending school and in the educational levels achieved. This in turn favors two phenomena: people can enter other labor sectors where more schooling is required, and adolescents are not working in the fields because they attend school.

**Figure 4.6.** Literacy and Illiteracy Rates in the State of Guanajuato 2000-2020



**Source:** Authors' elaboration with data from the 2000, 2010 and 2020 Census of Population and Housing, INEGI.

To meet their labor needs, large producers have chosen to hire workers from other states in Mexico. While local workers labor throughout the year weeding and performing other tasks, for which they are paid around 250 pesos a day, migrant workers arrive in Guanajuato to work on the harvests of various crops. As explained in the previous section, migrant workers are paid piecework, according to the amount of product they harvest per day. Despite their great skill, speed, and efficiency, they are considered unskilled. Their migratory status also places them in a situation of greater vulnerability and precariousness.



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### 4.3. LEAVING THE HOMETOWN: LIVING CONDITIONS OF MIGRANT FARM WORKERS

The migration of agricultural workers to the state of Guanajuato is a relatively recent phenomenon. Traditionally, Guanajuato has been a state where men and women leave to seek job options in the United States. In recent decades, the rise of industry has brought about new internal migration to the state, mainly from neighboring states heading to urban environments. For a decade, the growth of agribusiness and more recently the shortage of labor in the countryside, has also led to the migration of farm workers who come from other states of the country. The migrant workers come mainly from the most impoverished areas of southern Mexico. The people who come to work in the fields are mostly from Oaxaca and the mountains of Guerrero. A large number of them are Zapotec, Nahuatl, Nuu Savi and Me'phaa indigenous people who join the fruit and vegetable labor market in the municipalities of Romita, Silao, León, Dolores Hidalgo, Manuel Doblado, Purísima del Rincón, Valle de Santiago, Guanajuato, and San Francisco del Rincón.

The main reasons they decide to migrate are because of a lack of job options and low salaries in their places of origin. For example, in the mountain region of Guerrero,<sup>17</sup> CONEVAL data indicates that by 2020, 87.8% of the population lived below the income poverty line and 61.9% below the extreme income poverty line. In Oaxaca, 66.3% of the population lived below the income poverty line and 36.6% below the extreme income poverty line. In many of the communities of origin, the main source of income is subsistence agriculture. Employment options are limited to working the land with crops for self-consumption or as a waged laborer in construction or in commerce, activities that tend to pay poorly.

Alfonso, a worker from San Juan Lachigalla in the district of Ejutla, Oaxaca, is a clear example of this. In his town, Alfonso plants corn and beans on two hectares of hillside that he bought with what he earned as a farm worker in other regions of the country. He says that in his community there is no work because the only employment options they have are in road construction or in a greenhouse producing red tomato. In the greenhouse, they pay him 150 to 200 pesos a day. However, when the season is over, there is no work and they only hire a few men to make the furrows. In road construction, the pay is 200 pesos a day. Alfonso usually goes to the tomato greenhouse two or three days a week to earn an income that allows him to buy supplies; in his words: "so he has enough for soap". Alfonso and his family's option to earn a wage is to migrate to other states of the country as farm workers.

Besides a lack of employment opportunities and low wages, another of the problems faced by the communities of these two states are conflicts and violence. The degree of violence is such that the inhabitants have been forced to move to other parts of the country (RNJJA, 2019). Regarding this, a government official explained to us that the families arriving in the

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17 For this, we refer to the boundaries identified by Martínez-Rescalvo (2004), which considers 19 municipalities: Acatepec, Alcozauca, Alpoyeca, Atlamajalcingo del Monte, Atlixac, Cochoapa el Grande, Copanatoyac, Cualac, Huamuxtitlán, Iliatenco, Malinaltepec, Metlatónoc, Olinalá, Tlacoapa, Tlaxiataquilla, Tlapa, Xalpatláhuac, Xochihuehuatlán and Zapotitlán Tablas.



state come with lots of babies and young children while the number of adolescents is much lower because they go to work in the United States or are recruited by the self-defense groups in their places of origin. Self-defense groups can replace the police and the army to ensure peace in communities, but some also have chosen to work with criminal organizations.

Added to these problems is the lack of basic health care and educational services in these communities. According to the 2020 data from CONEVAL, in the mountain region of Guerrero the percentage of the population lacking access to basic services in the home rose to 80.7%; 15.9% do not have access to health care services and 34.7% have an educational deprivation. The same is pointed out by Arturo, a Mixtec worker from the Joya Real community in the municipality of Cochoapa el Grande, who explains that in addition to the lack of work in his town, people migrate because “they don’t have a house, they don’t have water and there is no drainage” —Cochoapa el Grande is one of the five poorest municipalities in the country, along with Metlatónoc, its immediate neighbor—.

According to CONEVAL 2020 data, the percentage of the population in this municipality without basic services in the home rose to 97.1%. Moreover, there is a lack of health care services and schools in this municipality. What people earn or sow is for the subsistence of family members. For these reasons, despite the precariousness they find when they arrive at their destinations for work, families have no choice but to migrate.

The profile of the informal migrant workers who come to work in the Guanajuato farmlands is mostly indigenous, especially Mixtecs from the state of Guerrero who come to work in chili harvests in the fields of León and neighboring municipalities (Durand et al., 2019), though they also work on other crops such as tomatoes or broccoli during their stay. The chili season in Guanajuato begins in May, when the arrival of temporary migrant workers is most evident. Usually, the migrant farm laborers who arrive in Guanajuato are “swallows” that migrate throughout the year following the harvest seasons that continue in different agricultural regions of the country, including the fields of Jalisco, Sinaloa, and Baja California.

These migrants are hired from their communities of origin by an intermediary that is commonly known as a recruiter, contractor, or foreman. The contractors are usually people from the same town who advertise on billboards, through loudspeakers or on the radio. These workers, who join the informal labor markets, usually arrive with their families, and are transported in pick-ups or open-top delivery trucks identifiable by their Guerrero license plates. Although in both the formal and informal labor markets, the figure of the recruiter is essential, there are important differences that are mediated precisely by the formality of the job.

The contractors in charge of looking for people for the formal market have a greater capacity to negotiate with companies and employers. This is the case of Néstor, a 27-year-old Zapotec foreman who, together with his father, brings people from Oaxaca to work in Guanajuato. Nestor and his father hire people to work in the fields planting Chinese vegetables and blueberry. Recruitment is announced on a loudspeaker in the communities. This year they advertised on the radio and recruited people from Santa Cruz Xitla, Coatecas Altas, Miahuatlán, Santa Lucía and Loxicha. This season, they brought between 90 and 100 people on three separate trips. Néstor explains that not everyone stays to finish the season because often the job doesn’t work out for them, which is why in these cases he returns to Oaxaca to find more



people. The young man is emphatic in saying that he cannot stop anyone from leaving; if people want to return, they can do so without problem –but they have to pay for their trip back–.

When Néstor's father first began to recruit people, the company provided him with transportation to bring the workers. These were passenger buses conditioned for this purpose. However, because the company brought people after the harvest cutting had already begun, by the time the people arrived there were not as many vegetables to cut, so they earned less. Nestor's father then proposed to the employer that he would bring the people as long as the company continued to take care of the expenses. Since then, the workers arrive in time to start the harvest season. Nestor's father uses passenger bus and a van to transport workers. According to the testimony of one of the workers, they left Oaxaca in the manager's van on September 4th, and arrived in Guanajuato at dawn on September 6th. The transfer time was longer than usual because the vehicle broke down. The farm owner covered the cost of food for them during the journey.

This situation, although not ideal, contrasts radically with the experience endured by informal workers who are transported in the back of pick-ups or open-top delivery trucks from their place of origin. To get to Guanajuato, workers usually travel up to 14 hours, many times standing and in overcrowded conditions. According to the testimony of officials interviewed, due to the characteristics of the trip, there have been cases of small children who have died of suffocation on the journey. During our field work, we had the opportunity to talk with Miguel, a foreman from Guerrero. He transported four families, eight adults and eight children in total, from his community of origin to Guanajuato. The journey of more than 14 hours was done in an open-top delivery truck, without any type of safety precautions. That day they arrived at exactly 3:00 a.m. to start work a day later.<sup>18</sup> Miguel was in charge of finding out which employer they could work with. In his words, they would take "whatever there was", whether it was chili or tomato.

Besides being responsible for transporting people, the intermediaries are the ones who find places for the migrants to work and who have the capacity to negotiate with landowners. The formality in which Néstor and his father find themselves affords them the ability to negotiate with the companies that hire them. They decide to go with whoever suits them best according to the wages and the conditions offered. For example, in addition to requesting that travel expenses be covered, Néstor and his father pay for housing, basic services and food costs, including the payment of two cooks to prepare the meals. One of those cooks is Rocío, who has a contract and benefits; her salary is 1,890 pesos a week for working Monday through Sunday. Her tasks, along with another lady who is also in the kitchen, are to prepare breakfast and lunch for all the workers staying in the shelter. At that time, there were 19 people, including the cooks, 14 men and 5 women.

Before the season begins, Néstor's father visits the company and the house they are offered, to verify that the conditions are as promised. He does this so that he is not deceived, because he is the one who has to answer to people. In contrast, even though contractors in the informal labor market know in advance which employer they will work with, not only do they lack any bargaining power in the absence of a written contract, but employers can distance

18 That is, 27 hours after their arrival.



themselves from all responsibility. It is the contractors who are responsible for getting the accommodation and the workers, as well as for covering their needs, which places them in a position of clear disadvantage and precariousness.

Hiring through an intermediary allows the landowner to evade all responsibilities, since the employers distance themselves from any labor relationship, leaving the contractors responsible. This is clearly pointed out by Néstor, stating that although the employer is responsible for some of the expenses that arise, in the end he is responsible for resolving any issues. For example, when they have run out of water, it is he who must go out and find where to buy it. If people arrive very hungry and there aren't enough tortillas, then he has to go out and get more. When a worker gets sick, even if they have the right to use the IMSS or, even if the employer reimburses the expenses, it is he who has to resolve the situation.

This problem impacts both migrant farm workers working in formal market as well as those in the informal market. However, despite the conflicts that may arise between employers and intermediaries in the formal market, the truth is that formality allows for a certain level of negotiation when it comes to worker conditions, while informal workers find themselves in an extremely precarious situation. These differences are clearly illustrated by the housing conditions.

#### *Living precariously: housing conditions*

During the high season, farm workers from other Mexican states arrive in Guanajuato to work the lands. The families that arrive need a place to stay during the weeks or months they will be residing in the state. In the formal labor market, as part of the agreement, companies or employers offer workers a place to live. Some of the companies have shelters on site. This is the case of the export companies in the municipality of Dolores Hidalgo, where brick-and-mortar rooms have been built on site in the fields so that the families arriving to work in the state have somewhere to live. Other companies do not have their own accommodations but negotiate options with the contractor before the contingents of workers leave their place of origin.

A clear example of this is the case of Néstor, who negotiated accommodation with the employer in the absence of a shelter or housing complex provided by the company. Initially, the company had set up a space on site in the blueberry fields. However, during a visit from the company who buys the product for export, they noticed people living in the fields and immediately asked them to be removed because safety standards were being put at risk.

Currently, Néstor's crew is living in a brick-and-mortar building with a dirt patio where they have bedrooms, a kitchen, portable bathrooms, and a laundry room. The rooms have bunk beds and are shared by several workers. The place is located up a hill on the edge of the town, surrounded by vacant lots. There is no water supply. They must buy water from a water truck to bath and wash clothes. The agreement is that the employer covers half of this expense.

One of the problems they have faced is not having a refrigerator. When they arrived at the accommodation, Néstor asked the employer for a refrigerator to store food. After a





month of waiting, one arrived but it immediately broke down. It has not been replaced since, so it is difficult to store food, meaning they have to buy groceries each day in the little store, which increases the cost of food. Néstor explains that these types of necessities are managed through the human resources department, however their requests take time.

Thus, although formal workers have some bargaining power, the truth is that the lack of a direct employment relationship with the company means they continue to suffer from certain deficiencies such as access to water or the material conditions of the space. Even so, despite conditions being far from ideal, it is clear that the formality of their employment puts them in a very different situation than that endured by informal migrant workers.

Informal migrant workers arrive to the spaces the contractor has found in the towns surrounding the fields where they will work, for example, in the communities of La Sandía and Barretos in the municipality of León or Corrales Ayala and El Jagüey in the municipality of Romita. The cost of these places is covered by the informal workers themselves. The spaces provided are warehouses that were not intended to be lived in or houses whose construction has not been completed, where whole families are accommodated. According to some testimonies collected during our field work, people who have immigrated to the United States rent their half-finished homes to migrant workers.

These spaces not only lack basic services such as water supply but also do not have rooms, beds or a kitchen. Families share the spaces, either in fully open warehouses or in houses with one or two rooms. This translates into a clearly overcrowded situation where lack of privacy is a constant. It is common to see people sleeping on the floor on blankets. In some houses, the workers have a gas grill for cooking, but in other cases they cook with firewood, improvising a stove with drums or even directly on the ground.

Furthermore, workers' safety is at risk from the fact that these places do not have windows, doors or the appropriate finishes. According to some testimonies collected in León, the looting of homes is very common in the towns where migrant farm workers live. When the workers return from their shift, they find that all their savings from the season have gone, as people enter and steal everything. The strategy of some workers has been for a family member to stay at home as a precaution, usually women or children.

Given this situation, housing has become one of the main problems faced by this population group. Based on this need, the state government has set up the possibility of building shelters in the main host municipalities. Currently, there is one government-run shelter in the area. It is a shelter that was built with resources from the SEDESOL. This secretariat stopped funding these works since 2019. It is currently administered by the Desarrollo Social [Social Development] and Desarrollo Rural [Rural Development] dependencies in the municipality of San Francisco del Rincón. Workers from Guerrero employed for the chili harvest arrive to stay at this shelter every season.

Even though conditions are better than in the spaces that the workers rent on their own, the shelter has some important shortcomings. One of the main problems is that this place does not have any stoves, so the occupants have adapted metal drums for cooking with firewood. In the evenings, despite cooking in an open space, the smoke permeates the entire



shelter. As soon as the women begin to cook, the sound of dry coughing starts as throats close in reaction to the smoke, especially among the youngest occupants.

The facilities of the place are in good shape; the bathrooms are spacious and are divided by gender. However, it does not have hot water and there are electrical faults in the rooms. Although the occupants have already reported this problem, the last time they went to fix it, they complained because their work “was interrupted” when the farm workers came home from work. Therefore, they decided that they would go and fix the problem “after the workers have left;” that is, when the season is over, and it is no longer a pressing necessity as it is now.

Although the “swallow” worker profile is the most characteristic in the region, the reality is that there are some migrant workers who have settled in the localities. Magnolia is an example of this. She arrived in Guanajuato for the first time 13 years ago, from Terrero Venado, Guerrero. Her family continued migrating for a few more years to the fields of Melaque and Sinaloa; but six years ago, they returned to Guanajuato and settled permanently. In the state of Guanajuato, they have work throughout the year due to the variety of crops it offers, so it is no longer necessary to migrate constantly following the harvest seasons.

Settled migrant workers have found permanent places to live, but even so, these places are characterized by a lack of basic services and inadequate living conditions. For about a thousand pesos a month, they can find an unfurnished or sparsely furnished space, where they continue to sleep on the floor. Water supply tends to be inconsistent, so they tend to hoard it in drums to use on days when water is scarce. In addition, garbage collection service is extremely scarce, so they need to burn their waste to avoid accumulation.

Justifications given for the housing conditions experienced by migrant workers come from different angles. On the one hand, employers are oblivious to this situation, since they do not take responsibility for the living conditions of their workers under the argument that workers are itinerant and that their deal is with the contractor. On the other hand, the normalized discourse among the rest of the population is to acknowledge the precariousness of the situation these workers find themselves in but justify it by saying “they are like that” and “they are used to” these types of conditions.

For example, statements such as: “Why do you want water if you don’t bathe your children anyway?” or “Why do you want hot water if it’s hot right now?” reproduce the discrimination that migrant and indigenous workers face. The effect of such discourses is that, even among governing bodies, the precariousness and vulnerability in which they find themselves is minimized. The lack of criticism and questioning about the circumstances these workers find themselves in limits the possibilities of demanding changes from those who are responsible for these situations.



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## 4.4. CHILD LABORERS: EDUCATION, CARE, AND CHILD LABOR

The incorporation of labor standards and a focus on social responsibility in agriculture have been essential for reducing instances of child labor. In Mexico, agriculture is one of the labor activities that presents the greatest participation of children and adolescents. This is largely because this activity used to be carried out as part of the peasant economy or as work within the family unit. However, the growth and boom of commercial agriculture has changed the logic in which this activity is carried out. This is now intensive, physically strenuous work that puts the health of children and adolescents at risk. It is a space where occupational risks may arise due to exposure to the sun, the use of chemicals and heavy machinery.

In recent years, Mexico has adopted an approach to eliminate child labor. In 2015, Convention 138 of the International Labor Organization (ILO) was ratified, which establishes the minimum age to work as 15 years old and 18 years old for activities that are considered dangerous. That same year, the *Ley Federal del Trabajo* (LFT) [Federal Labor Law] was reformed, whereby all agricultural activities were classified as dangerous, and therefore 18 years old was established as the minimum age for working in agriculture.

Among the policies to support the elimination of child labor in the agricultural sector, the DEALTI was introduced. Although in recent years the presence of children in the fields has decreased, the reality is that the problem persists and has become worse in certain areas. This is the case of Guanajuato, where the presence of boys and girls in the fields is common. To a large extent, this is a consequence of the informality and lack of regulation that prevails in the agricultural sector of the state. Although the presence of child laborers occurs among both locals and migrants, it is among the latter where more cases occur. In addition, the conditions that migrant children work under are precarious and clearly violate their rights.

In the case of local children, many of them work in the fields during school holidays. This is the case of Fabiola, a 13-year-old girl from the municipality of Romita. This was the first year that Fabiola worked in the fields, motivated because the sister of a friend of hers invited her to work during the Easter holidays. During this time, Fabiola worked weeding onion, chili, and broccoli crops. For each day she worked, they paid her 240 pesos, the same as the adults who work with her. Fabiola's cousin, 11-year-old Ana, also worked weeding the chili crop. Ana decided to work in the field at the invitation of Fabiola. At first, her mother did not want to let her go, but Ana convinced her by telling her eloquently that they [her parents] "will not always be there to support her." Ana's nephew, who is younger than her, proudly shared with us that he also works in the lettuce field and in the grocery store during the holidays.

Even though child labor occurs both among local and migrant children, without minimizing the risks that this can have for a child, the implications for the two groups are different. While for many of the local children, work is presented as an alternative way to spend their vacation time and earn their own money, for migrant children, it becomes the only option given the lack of economic resources and lack of educational and daycare services. The children of farm



workers usually start participating in agricultural work at an early age. From a very young age, boys and girls are socialized into agricultural work as a family.

Due to the lack of employment opportunities in their communities of origin, families are forced to migrate in search of an income. In some cases, the children stay in the communities of origin under the care of a relative. However, this is not always a viable option, so farm worker families often choose to migrate as a complete family unit to the places where they find work. Economic necessity, the lack of educational options in the workplace and the absence of regulations in the fields are determining factors that lead to the incorporation of children into the workforce.

The case of Flor, a 12-year-old Mixtec girl is a clear example. She began working at the age of eight in the fields of Chihuahua and Sinaloa. She would go to work during the season along with her father and her sister Tere, two years her junior. At barely twelve years old, Flor has work experience picking chili, broccoli, and red tomato, as well as in weeding and setting irrigation hoses.

Currently, Flor and Tere continue working in the fields of Guanajuato. Three months ago, Flor's father migrated to the United States, where he is working in a restaurant. However, all of the man's salary is used to pay the debt he owes to the coyote who helped him cross the border. Flor's mother, Carmen, also tried to cross, but she was stopped at Piedras Negras border control. The family of Carmen's husband works in Guanajuato, which is why she decided to return to this state. In addition to Flor and Tere, Carmen has two girls, eight and three years old, and an eight-month-old baby. The family's current work strategies are defined by the care required by the two youngest children as well as the absence of the father's income.

During the low season, Flor and Tere go to work in the fields, while Carmen stays at home taking care of the children. During the high season, Carmen sells food in the fields to the workers, while Flor stays at home taking care of her younger siblings. Flor's case shows that lack of daycare services is another problem that affects the presence of child labor in the fields. Given the lack of daycare institutions, farm worker families choose to leave their eldest children to take care of their youngest or send them to work in the fields.

Unlike other regions such as Sinaloa, where companies have daycare and educational centers, in Guanajuato only a few formal companies have such spaces. The option of going to a Centro de Atención Infantil (CAI) [Child Care Center] is limited, since they belong to the Mexican Social Security Institute and are not an option for informal workers. In addition, even if they were insured, the CAIs are only located in the cities of León, Irapuato, Guanajuato and Celaya. Therefore, distance becomes another impediment for effective access to this service. Another option would be the Centros de Atención Infantil Comunitarios (CAIC) [Community Child Care Centers] of the DIF,<sup>19</sup> but the opening hours are an impediment. For example, in the municipality of Romita, the CAIC offers services from 9:00a.m. to 4:00p.m., which makes it incompatible with the farm workers' daily routines, especially during the harvest season when the duration of the workday is variable and can last until nightfall.

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<sup>19</sup> Desarrollo Integral de la Familia is the name of the municipal offices responsible for the care of vulnerable groups.



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Due to the type of migration, which is circular and familial, where all members of the domestic group seek to work, there are not always support networks they can use to solve the daycare problem. The need for income and the payment modality are variables that also come into play. Families prefer that all household members work in order to generate sufficient income. This situation is very different from that of other regions such as in the south of Jalisco, where migration occurs under other types of conditions and the prohibition of children in the fields has forced families to seek a solution to this problem, though this should be the responsibility of the companies, employers, and the government.

Given the lack of daycare services, taking children to the fields seems to be the only solution, otherwise they would have to leave them alone at home. Carla, a Mixtec migrant worker who has 6 children, the eldest being 15 and the youngest 5 years old, explains that although only her three eldest children work, she takes all of them with her to the fields because it is dangerous to leave them on their own.

This same situation is experienced by Bertha, a 38-year-old Mixtec farm worker who is responsible for five children and two grandchildren, all of whom are minors. Her two eldest daughters, aged 14 and 12, accompany her in the fields to work, while she takes the other five children as well even though they do not work. She takes them because there is no one who can stay at home to supervise them. When she cannot take the younger ones to the fields, one of the older daughters stays to take care of them. However, losing a worker during the day means losing income for the family.

The lack of daycare services where families can leave their youngest children has led to accidents in the fields. An official from the municipality of Romita whose job it is to attend to this population, shared that on one occasion they had to admit a baby with first-degree burns after being exposed to the sun all day while out in the field. In the absence of options, the mother took the baby to the field with her and left him asleep on the edge of the furrows.

As the testimonies show, the presence of children out on the fields is not only to accompany their parents due to a lack of daycare institutions or services. This is also a problem that involves older children and adolescents who start working at a young age. Their incorporation into paid work is a response to different factors. One of them is the problem they encounter to access education and the continuation of their studies, despite an interest in continuing school or learning being evident in many cases.

The first barrier that this population group encounters is the lack of documentation to prove identity, which is why many of the children cannot attend school in the regions where they migrate to. For example, Bertha states that she wants to send her youngest children to school, but she cannot do so because none of them have a birth certificate. She wants to do the corresponding paperwork, but she plans to wait until they return to Guerrero "because there is a lot". It is evident that Bertha does not know where to go or who to turn to in order to carry out this procedure. The difficulty she has in understanding and speaking Spanish may be one of the reasons that discourage her from processing the birth certificates in Guanajuato.

For the population that constantly migrates following the harvest, access to education becomes a challenge. It is not only about the lack of educational institutions in the communities of origin, but about the constant movement that makes it difficult for them to continue their



studies. This situation remains despite the Sistema Nacional de Control Escolar de Población Migrante (SINACEM) [National Control System for the Schooling of the Migrant Population], whereby children are registered and the periods they attend classes are validated. The reality is that the constant coming and going, the change of teachers and the uneven quality of the classes they receive in different places discourages many from continuing their studies.

An example would be Alma, a 19-year-old migrant worker who began working at the age of 11 in the chili fields of the municipality of Romita. She says that at first her plan was to miss school only during the five months that she was going to work, but when she returned to her town, she no longer wanted to continue her studies. According to Alma's story, before she had a teacher who knew how to teach them very well, but when she returned from Romita, that teacher was no longer teaching. She was replaced by a teacher who, according to Alma, did not teach them anything. Although Alma was a very good student, the change in teacher discouraged her and she decided not to go to school anymore but work instead. The young woman reached the fourth grade of primary school and admits that she liked to study but for her, continuing her education is no longer an option.

Between the journeys families make and the difficulties involved in following up on studies, it is evident that children are beginning to suffer from an educational gap that they themselves identify. In some of the workplaces, as is the case of Sinaloa, they have access to education offered by the companies. Despite this, the challenges implied by providing education for child laborers, which needs to serve children of different ages, origins, and educational levels, means that far from there being a study plan, it is rather a matter of supervising the children while they are at the workplace.

For example, when Flor went to Sinaloa, she studied in the on-site schools. However, she says that they were not taught anything, "they were only made to draw" and "they don't even learn literature." Flor studied until fourth grade and since then she has been working in the fields or taking care of her siblings. She wants to resume her studies when her family returns to Guerrero. However, her family is already settled in Guanajuato, and they only return to Guerrero once a year for vacations.

In Guanajuato, the Ministry of Education has a program focused on this population. Previously, it formed part of the Programa Federal de Inclusión Educativa [Federal Educational Inclusion Program] for children with disabilities, indigenous peoples, and migrants. However, given the cuts in federal programs under the current government administration, the Secretaría de Educación de Guanajuato (SEG) [Ministry of Education of Guanajuato] has chosen to manage this program with state resources. The program is administered and controlled from the central offices, but each delegation is in charge of its operation.

The state Ministry of Education is divided into seven regional delegations. Each region has a coordinator and its own teachers. The way in which education is provided to migrant child laborers is the decision of each region and is implemented by each municipality. According to the information provided by the Ministry of Education, the strategy for teaching classes depends on the needs detected in the municipalities receiving farm workers. To do this, a census is carried out where the number of boys and girls and their ages are identified. In general, the strategy is to bring teachers to the communities where the farm worker families

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reside. Each municipality manages a space where classes can be taught. In some of the municipalities, classes are given in the afternoons because, as already mentioned, families cannot leave their children alone at home and choose to take them all to the fields. One of the main objectives of this program is the reduction of child labor. However, teachers have realized that boys and girls work in the morning, so one of the strategies that they have implemented in some municipalities is to give classes directly in the fields. Although in some cases this option has been viable, in others they have met with reluctance from the employers. The reality is that effective access to education is made more difficult by the lack of interest on the part of the employers, the limitations of government institutions and the workers' individual situations.

A clear example of this is what happens in the municipality of San Francisco del Rincón. This municipality has a shelter managed by the municipal government where working families arrive every season. The unit that manages the shelter works in coordination with educational and health institutions so that they provide care to the population. The agreement for this season was that visits from the institutions would take place on Wednesday afternoons. The visits were scheduled to take place at six in the evening. However, during the harvest season, the days extend until nightfall. For this reason, those in charge of health and education decided not to go, since the shelter would be empty at the time when they had scheduled the visit.

The option of going directly to the fields is unfeasible in this municipality since those in charge of providing the service do not know where the fields are and do not have any information on the company or employer for whom the farm workers work. This situation results in a lack of access to educational and health services for the children of farm workers. Although the Ministry of Education shows its good intentions with the work it does, when it comes to the operation of these plans, great gaps arise. Being that it is a program focused on migrant agricultural workers, the workers' schedules should be taken into consideration as it is one of the main elements that characterize its dynamics.

This problem is also faced by other social organization initiatives. The clearest example is that of the Centro de Desarrollo Indígena Loyola (CDIL) [Loyola Indigenous Development Center], an organization that runs the Na'Vali project,<sup>20</sup> among its various programs, which is focused on supporting farm workers' children. Its activities are carried out mainly in the chili harvest season in the municipality of León from May to July. With the support of volunteers and social service people, the project takes breakfast to the fields and manages recreational activities directly in the furrows.

The work of CDIL is recognized by the laborers themselves, although the difference between these actors and the government is not always clear to them. In some cases, they think that they are state or federal authorities, or even that they are a service provided by SEDESOL, a secretariat that no longer exists. In various testimonies, they told us that CDIL usually come to the fields with tents to teach the children. Although the work of the CDIL is very valuable and represents a great strategy given the lack of educational and care options, the truth is that for the situation to change, the involvement of companies and producers is needed.

The informality that prevails in the fields blurs the responsibilities of companies and employers. Although there are efforts by civil groups and government institutions, the

20 Na'Vali means space for girls and boys in tu'un savi, which is the language of the Ñuu Savi Mixtec people.



involvement of the agricultural sector is also required. In the municipality of Dolores Hidalgo, it is clear how much difference it can make when producers take responsibility. In this municipality, the Ministry of Education works hand in hand with formal companies, whereby the prohibition of child labor has allowed educational options to be provided for the children of migrant farm workers.

Companies have built or adapted spaces so that children can be cared for and study while their parents go to work. The Ministry of Education is responsible for training the caregivers hired by the companies. In terms of basic education, the classes are taught by teachers from the Ministry of Education. The case of Dolores Hidalgo shows the differences that can be made to improve the living conditions of child laborers when employers take responsibility for their obligations.

The lack of regulations in the fields and the prevalence of child labor places boys and girls at constant risk, ranging from exposure to chemicals or small accidents to harassment and violence. For example, during our interviews, Tere, a 10-year-old worker, showed us a scar between her fingers when recounting one of the accidents she had in the fields. Her sister was cutting a broccoli plant and didn't notice that Tere had her hand in the bushes. As the sister passed the knife, it wounded Tere's finger. The field engineer washed the wound and put a bandage on it. Tere says that when there are more serious accidents, the field managers take them to the doctor. For example, a 13-year-old neighbor of hers also works in the fields. She had a more serious accident when a knife took off her nail and they had to sew her finger together.

The risks involved in child labor are not limited to accidents. Although children are often accompanied by their parents or other relatives, they remain highly vulnerable. A clear case of this is that of Margarita, who at the age of 12 went to work in the fields with her father. During a workday, one of her colleagues, a forty-year-old man, sexually abused her. Although the family sued, the abuser was the employer's right-hand man; he threatened the family with firing the father if he did not drop the lawsuit. This is a low-income family originally from Guanajuato that totally depend on income from the fields. Given their precarious situation and the limited labor options, the family was forced to withdraw the lawsuit.

Accidents at work and abuse while out on the fields are a reality for many of the children who arrive with their families each season. However, instead of presenting solutions that seek the eradication of child labor by providing options to farm worker families, one of the responses has been to criminalize it. What can be observed in the region is that employers do not take responsibility for the people they bring in, this should include offering decent housing and educational and daycare spaces. Although there are laudable efforts by some government agencies to address the problem, their limitations, and the complexity of farm work means that these efforts are not enough. These types of institutions are in charge of carrying out humanitarian work or campaigns to eradicate child labor, since the direct regulation of child labor is outside their jurisdiction.

For its part, the STPS, which should be able to make a direct impact on child labor, considers that this is not a generalized problem. They report that occasionally they receive complaints but that when they go to inspect the fields, they turn out to be "false alarms". However, during our visits to broccoli and chili fields in the municipality of Romita, we were

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able to observe minors working in the furrows. According to one of the officials interviewed at another government agency, there are children working in the fields, but when they see the authorities arrive, they start to play on the ground. As soon as the officials leave, they return to work in the furrows. The big problem is that rather than there being any proposals that have a real and substantive impact on the eradication of child labor, both the government as well as companies and employers resort to a discourse that centers around criminalization, where it is the children who will be most affected.

Although child labor can be found mainly in the informal sector, some minors have found a way to work in the formal sector, presenting documents from people they know or of adult relatives. An example is that of Brenda, who, although she is already 17 years old, is currently working formally for a blueberry company despite not having the correct paperwork. Her cousin lent Brenda her papers so they could hire her, and she could support her household's expenses.

Another blueberry field worker mentioned that next year her 13-year-old granddaughter Estefanía will also come to work. Estefanía's father left and now it is her mother and her grandparents who take care of the household expenses. However, they cannot cover all their expenses, so starting next year, Estefanía and her mother will go to Guanajuato to work in the fields, like her grandparents. They are just waiting for Estefanía to finish primary school and in September they will all return together. In her town, studying represents a great expense because to get to school it is necessary to take a taxi every day. Children are charged 40 pesos round trip. In addition, the cost of uniforms, supplies and special events such as Estefanía's graduation all add up, which is a great concern for her grandmother. While Estefanía works, her younger siblings will continue studying in her place of origin. This is a clear example of how the lack of educational options and the absence of regulations diminish the possibilities available to the children of farm workers.



## 4.5. DYNAMICS OF AGRICULTURAL PRODUCTION AND POVERTY IN BAJÍO GUANAJUATENSE

In Mexico, poverty measurement is a construction of the State and does not depend on any political party, which contributes to its legitimacy and autonomy (Escobar-Latapí, 2022). This multidimensional measurement consists of two large spaces or axes: well-being –income– and substantive deprivations –basic needs–. On the well-being axis, there are two lines of income: 1) the one that registers the cost of the basic food basket, or line of minimum well-being<sup>21</sup> and 2) the upper line that is based on the food and non-food basket, which includes expenses for housing, transportation, fuel, schooling, healthcare, and household articles.

According to the CONEVAL, in 2020, the state of Guanajuato ranked in 12th position for the lowest incidence of poverty at the national level. Poverty decreased moderately in the state by 4% between 2010 and 2020, from 48.5% to 44.5% while extreme poverty decreased more significantly from 8.4% to 5.5% (Figure 4.7). Traditionally, farm workers have lived in extreme poverty. Is the decline in extreme poverty related to the performance of capitalized agriculture?

Escobar-Latapí (2022) posits that agriculture is essential for understanding poverty in Guanajuato as, traditionally, it is the population living in extreme poverty that is hired to work in the fields. Here we analyze the five municipalities with the highest agricultural production –Abasolo, Irapuato, Pénjamo, Romita, Valle de Santiago– in addition to the municipality of Dolores Hidalgo Cuna de la Independencia Nacional, where extreme poverty has decreased significantly. The progress of export production in these municipalities allows us to assume that the changes towards formalization associated with export production may have impacted the conditions of the poorest population in this region. Likewise, our previous regional studies showed that as formal agriculture grows, deficiencies in housing, healthcare services and social security decrease. This section contributes to our assessment of changing labor conditions within agriculture by examining the changes that can be seen in the levels and dimensions of poverty.

As illustrated in figure 4.7, from 2010 to 2020, the proportion of the population in Guanajuato without social security decreased, as did the proportion of the population with educational deprivations, inadequate quality of housing and basic housing services and, finally, the proportion of the population with three or more social deprivations also decreased. This change may be related to an improvement in employment, even though income hardly changes.

In Guanajuato, we identified three different dynamics of poverty between 2010 and 2020 according to the type of settlement that predominates in a municipality: the main urban

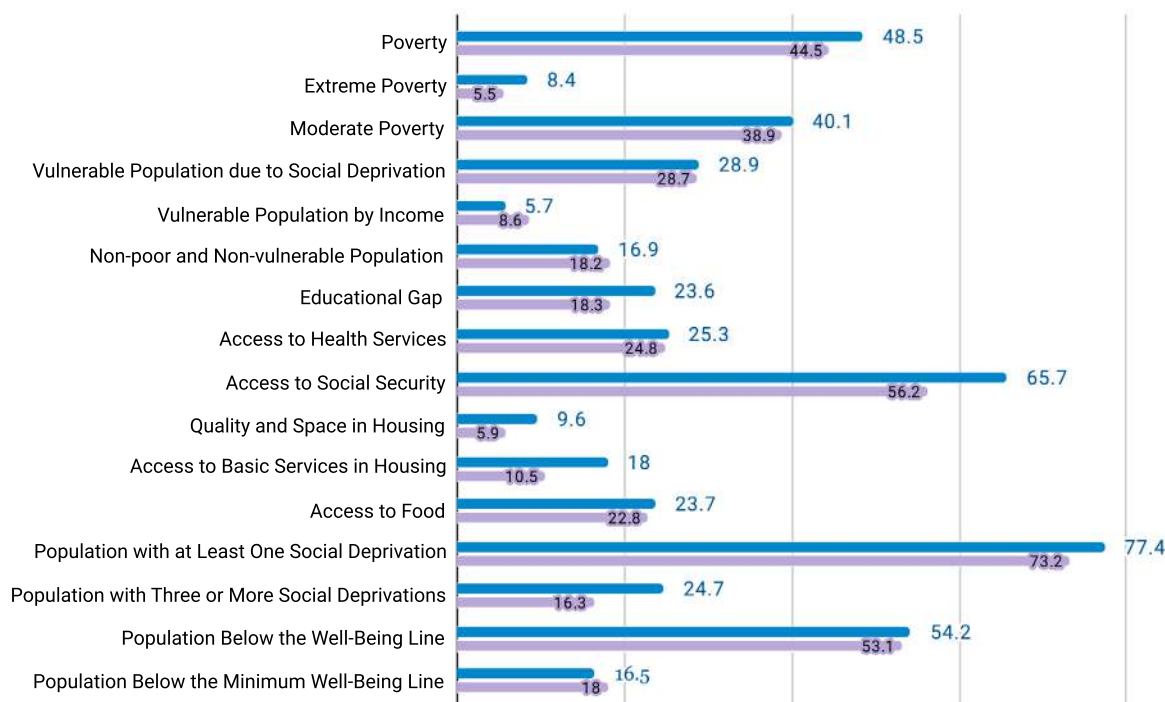
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21 According to Escobar-Latapí (2022), in Mexico, the value of the baskets depends on the observed consumption of households. That is, what people are able to buy with the income they have. Unlike other countries, the methodology used by Mexico is not based on the price of a basket that is “regulated” by experts, but, and as mentioned above, it is based on the observation of people’s typical daily consumption where the only adjustment is to ensure consumption is healthy and in the amounts that are nutritionally healthy, and that it provides nutritional value.



municipalities,<sup>22</sup> those that are distinguished by their manufacturing employment, and the main agro-export municipalities.<sup>23</sup> This section features a more detailed analysis of the municipalities with more agricultural production and exports.

**Figure 4.7.** Multidimensional Poverty Indicators for the State of Guanajuato, 2010-2020



**Source:** Authors' elaboration with data from the CONEVAL measuring poverty at the municipal level in 2010 and 2020.

22 The main urban municipalities in the state of Guanajuato are León, Irapuato and Celaya. In these municipalities, poverty has remained stable, although in the capital there is a significant increase in poverty from 36.8% to 45.9%. This increase is due to the rise in the number of people with incomes below the cost of the basic food basket—from 661,760 in 2010 to 1,020,408 in 2020—. Improvements can be noted in the categories of social security, housing quality and housing services. However, nutrition worsens because income and access to health care services have decreased. This negative dynamic can be explained by the increase in the population with incomes below the basic basket and below the food basket (Escobar-Latapi, 2022).

23 As would be expected, there are other types of municipalities that do not fit into this typology.



### *Dynamics of municipal agricultural production*

According to the SIAP, the municipalities with the highest agricultural production in the Bajío Guanajuatense valley are Abasolo, Irapuato, Pénjamo, Romita, Valle de Santiago and Dolores Hidalgo (SIAP, 2022). These municipalities are also important in terms of export agriculture, and they also account for most farm jobs. In this section, we will analyze the changes in the dynamics of poverty in each of these municipalities; however, before doing so, we will present the dynamics of their main crops as well as their participation in agricultural production at the state level (Table 4.9).

**Table 4.9.** Municipalities With the Highest Agricultural Production in Guanajuato by Planted Area and Production Value\*, 2020

Geographic area	Planted	%	Production Value (real values in thousands of pesos)	%
Abasolo	42,894.07	5.00	1,420,905.43	6.03
Irapuato	50,502.96	5.88	1,455,004.24	6.17
Pénjamo	74,680.00	8.70	2,146,448.06	9.11
Romita	16,547.00	1.93	759,645.66	3.22
Valle de Santiago	50,470.25	5.88	1,721,838.81	7.31
Dolores Hidalgo	26,617.90	3.10	783,470.89	3.32
<b>Guanajuato (Entity)</b>	<b>858,658.38</b>	<b>100</b>	<b>23,570,459.71</b>	<b>100</b>

**Source:** Authors' elaboration with data on agricultural production for 2020 from SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2020.

According to the data, this group of municipalities represents more than 30% of the agricultural production for the state of Guanajuato. Considering that there are 46 municipalities in the state, the contribution of these municipalities is significant. In Pénjamo, which heads the list of these municipalities, the main crops are white grain corn, tequila agave, barley —grain without classification—, red tomato, greenhouse saladette tomato, and soft grain wheat (SIAP, 2022) (Table 4.10). It is notable that sorghum grain disappears from production within the decade.

In the municipality of Abasolo, which in 2020 had a population of 90,117 inhabitants —0.6% more than in 2020—, we found similarities between its main crops and those in the municipality of Pénjamo, with tequila agave being its main crop. Other crops include asparagus and greenhouse strawberries, which are crops destined mainly for export (Table 4.11). In Irapuato, on the other hand, broccoli, asparagus, strawberries, white maize grain, sorghum grain and soft grain wheat have the highest agricultural production value. For example, asparagus increased its production by 346.85% in 2020, taking 2010 as a base (Table 4.12).



**Table 4.10.** Production Value in Thousands of Pesos\* of the Main Crops in the Municipality of Pénjamo, Guanajuato 2010-2020

Crop	2010		2015		2020	
	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted Area (Ha)	Production Value (thousands of pesos) Real Values
Tequila Agave	1,750.00	32,450.67	1,180.00		1,126.00	191,011.34
Barley Grain - Not Classified	575.00	15,151.13	980.00	23,096.59	4,700.00	125,366.49
White Maize Grain	21,366.00	448,071.42	19,999.84	445,378.48	35,400.00	965,926.39
Sorghum Grain - Not Classified	34,835.00	792,728.47	36,082.00	529,868.28	-	-
Red Saladette Tomato - Greenhouse	-	-	40.20	35,162.51	75.00	64,906.01
Soft Grain Wheat	14,770.00	358,616.51	16,832.00	351,930.44	5,850.00	166,854.61
Summary of Crops at Municipal Level	85,134.68	1,702,350.16	78,871.13	1,397,586.14	74,680.00	2,146,448.06
Change in Value <sup>1</sup> (%)	100.00	100.00	-7.36	-17.90	-5.31	53.58

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015 and 2020 from SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2020.

<sup>1</sup> The change in value is given based on 100% of the year 2010. Therefore, the change in value is given compared with the previous immediate value—for 2015 it is compared with 2010 and for 2020 with 2015—.



**Table 4.11.** Production Value in Thousands of Pesos\* of the Main Crops in the Municipality of Abasolo, Guanajuato 2010-2020

Crop	2010		2015		2020	
	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted area (Ha)	Production Value (thousands of pesos) Real Values	Planted Area (Ha)	Production Value (thousands of pesos) Real Values
Tequila Agave	290.49	663.76	244.00	2,519.59	640.00	128,582.69
Broccoli - Not Classified	745.00	49,683.94	1,331.00	80,001.16	1,277.00	108,175.09
Barely Grain - Not Classified	2,436.74	61,678.31	1,570.00	31,245.20	3,550.00	97,817.45
Asparagus - Not Classified	30.00	5,249.80	46.00	6,285.90	280.00	109,096.59
Greenhouse Strawberry	8.00	1,966.71	60.00	24,684.19	150.00	105,050.53
White Maize Grain	9,196.50	165,617.85	12,910.00	229,295.24	18,850.00	567,715.60
Sorghum Grain - Not classified	-	-	16,670.00	178,228.89	9,840.00	206,398.65
Summary of Crops at Municipal Level	40,636.87	658,853.95	45,126.53	799,362.93	42,894.07	1,420,905.43
Change in Value <sup>1</sup> (%)	100.00	100.00	11.05	21.33	-4.95	77.75

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015 and 2020 from SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2020.

<sup>1</sup> The change in value is given based on 100% of the year 2010. Therefore, the change in value is given compared with the previous immediate value—for 2015 it is compared with 2010 and for 2020 with 2015—.



**Table 4.12.** Production Value in Thousands of Pesos\* of the Main Crops in the Municipality of Irapuato, Guanajuato 2010-2020

Crop	2010		2015		2020	
	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted area (Ha)	Production Value (thousands of pesos) Real Values	Planted Area (Ha)	Production Value (thousands of pesos) Real Values
Green Alfalfa - Not Classified	1,450.00	107,484.31	1,160.00	78,379.25	1,204.00	68,814.58
Broccoli - Not classified	322.00	23,475.38	379.00	28,396.04	944.00	98,175.59
Barely Grain - Not Classified	5,611.25	151,614.22	2,381.00	57,434.17	3,222.00	96,940.21
Asparagus - Not Classified	519.00	87,895.42	512.00	77,223.31	862.00	304,871.52
Strawberry - Macro Tunnel	-	-	-	-	512.00	385,489.20
Strawberry - Not Classified	441.00	70,349.12	405.00	71,913.12	30.00	8,315.68
White Maize Grain	7,775.00	186,891.99	15,227.71	354,096.72	16,094.00	412,120.76
Sorghum Grain - Not Classified	21,528.00	575,424.83	25,449.00	358,890.53	22,993.00	539,981.38
Crystal Wheat Grain	580.00	14,484.39	2,321.00	54,473.70	1,870.00	66,593.73
Soft Wheat Grain	3,575.00	89,278.78	4,800.00	86,468.15	3,590.00	117,331.49
Nantes Carrot	184.60	10,736.04	41.10	2,768.16	122.00	10,047.78
Summary of Crops at Municipal Level	46,457.35	820,089.71	55,556.15	862,748.70	50,502.96	1,455,004.24
Change in Value <sup>1</sup> (%)	100.00	100.00	19.59	5.20	-9.10	68.65

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015 and 2020 from SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2020.

<sup>1</sup> The change in value is given based on 100% of the year 2010. Therefore, the change in value is given compared with the previous immediate value—for 2015 it is compared with 2010 and for 2020 with 2015—.



In the municipality of Romita, tequila agave is also the main crop, with a value of 1,524,520.89 in thousands of pesos –real values based on the year 2020–, but its production value increases by more than 1,000% in just five years. These highly significant increases indicate the importance of this crop for the region and the relevance it has gained for the economy in recent years. Other crops of great significance in the municipality include white onion, green bell peppers –which is usually an export product– and white maize grain. As in Baja California and other export states, in recent years the area planted with the main crops has decreased; however, the value has increased significantly for two reasons: change in crops, and intensification and modernization.

**Table 4.13.** Production Value in Thousands of Pesos\* of the Main Crops in the Municipality of Romita, Guanajuato 2010-2020

Crop	2010		2015		2020	
	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted area (Ha)	Production Value (thousands of pesos) Real Values	Planted area (Ha)	Production Value (thousands of pesos) Real Values
Garlic	110	12,010.52	-	-	21.00	6,670.87
Celery		0.00	256.00	30,746.94	-	-
Broccoli	780	24,648.92	2,894.37	178,820.15	2,843.00	274,967.95
Barely Grain	7,725.00	140,082.55	1,0487.27	201,883.74	8920	268,786.13
Onion	55.00	4,180.82	58.00	2,727.98	83.00	12,314.45
Green Chili	2.38	8,208.59	31.00	14,110.76	22.75	11,455.33
Bean	2,109.00	14,058.00	442.00	5,100.43	175.00	4,874.43
Lettuce	28.00	976.15	226.00	14,666.72	255.00	19,067.76
Maize Grain	14,049.00	190,124.93	15,595.66	250,816.50	19,211.00	419,904.16
Cucumber	115.00	4,485.98	790.00	111,372.01	984.50	251,339.80
Sorghum Grain	17,334.00	270,529.06	16,312.00	195,321.58	10650	170,608.05
Red Tomato	1.14	1,023.71	4.10	2,671.74	8.00	9,959.24
Wheat Grain	1,745.00	31,301.19	4603.73	81,535.84	7070	256,399.39
Summary of Crops at Municipal Level	48,387.12	735,648.50	55,741.13	1,210,735.82	50,470.25	1,721,838.81
Change in Value <sup>1</sup> (%)	100.00	100.00	15.20	64.58	-9.46	42.21

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015 and 2020 from SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2020.

<sup>1</sup> The change in value is given based on 100% of the year 2010. Therefore, the change in value is given compared with the previous immediate value –for 2015 it is compared with 2010 and for 2020 with 2015–.





In Valle de Santiago, the main crops are broccoli, barley grain, maize grain, cucumber, sorghum, and wheat grain. Lettuce, cucumber, tomato, and wheat grain have increased their production value greatly from 2010 to 2020. Other crops such as garlic, beans and sorghum have lost ground in the municipality. However, total production value has increased by more than 230% in a decade, which shows the importance of agriculture for this municipality's economy.

**Table 4.14.** Production Value in Thousands of Pesos of the Main Crops in the Municipality of Valle de Santiago, Guanajuato 2010-2020

Crop	2010		2015		2020	
	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted Area (Ha)	Production Value (thousands of pesos) Real Values
Broccoli	985	33,793.71	1785	159,410.66	3177.5	327,802.85
Onion	30	2,566.35	104	9,338.11	118.5	18,958.65
Green Chili	1201.3	51,588.32	1052.5	96,204.78	969.2	138,289.63
Spinach	-	-	177	11,121.18	-	-
Bean	4100	32,102.72	3630	27,485.21	3401	50,204.51
Lettuce	512	23,686.95	415	17,497.13	553.5	33,825.11
Maize Grain	16000	62,758.48	18126	71,835.11	16835	83,301.14
Red Tomato	70.92	28,710.12	98.30	41,984.83	104.50	83,737.53
Green Tomato	154	15,871.81	54.00	1,330.40	70.50	6,697.54
<b>Summary of Crops at Municipal Level</b>	<b>26,131.58</b>	<b>280,682.03</b>	<b>27,551.80</b>	<b>478,410.02</b>	<b>26,617.90</b>	<b>783,470.89</b>
<b>Change in Value<sup>1</sup> (%)</b>	<b>100.00</b>	<b>100.00</b>	<b>5.43</b>	<b>70.45</b>	<b>-3.39</b>	<b>63.77</b>

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015 and 2020 from SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2020.

<sup>1</sup> The change in value is given based on 100% of the year 2010. Therefore, the change in value is given compared with the previous immediate value —for 2015 it is compared with 2010 and for 2020 with 2015—.



Finally, Dolores Hidalgo shows the greatest increase in the value of agricultural production from 2010 to 2020 of all the municipalities analyzed here with a rise of almost 280%. The main crops found in this municipality are broccoli, green chili, maize grain, tomato, and beans.

**Table 4.15.** Production Value in Thousands of Pesos of the Main Crops in the Municipality of Dolores Hidalgo, Guanajuato 2010-2020

Crop	2010		2015		2020	
	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted Area (Ha)	Production Value (thousands of pesos) Real Values	Planted Area (Ha)	Production Value (thousands of pesos) Real Values
Broccoli	985	33,793.71	1785	159,410.66	3177.5	327,802.85
Onion	30	2,566.35	104	9,338.11	118.5	18,958.65
Green Chili	1201.3	51,588.32	1052.5	96,204.78	969.2	138,289.63
Spinach	-	-	177	11,121.18	-	-
Bean	4100	32,102.72	3630	27,485.21	3401	50,204.51
Lettuce	512	23,686.95	415	17,497.13	553.5	33,825.11
Maize Grain	16000	62,758.48	18126	71,835.11	16835	83,301.14
Red tomato	70.92	28,710.12	98.30	41,984.83	104.50	83,737.53
Green tomato	154	15,871.81	54.00	1,330.40	70.50	6,697.54
<b>Summary of Crops at Municipal Level</b>	26,131.58	280,682.03	27,551.80	478,410.02	26,617.90	783,470.89
<b>Change in Value<sup>1</sup> (%)</b>	100.00	100.00	5.43	70.45	-3.39	63.77

**Source:** Authors' elaboration with data on agricultural production for 2010, 2015 and 2020 from SIAP.

\* Value of production expressed in real pesos based on the INPC, base year 2020.

<sup>1</sup> The change in value is given based on 100% of the year 2010. Therefore, the change in value is given compared with the previous immediate value—for 2015 it is compared with 2010 and for 2020 with 2015—.

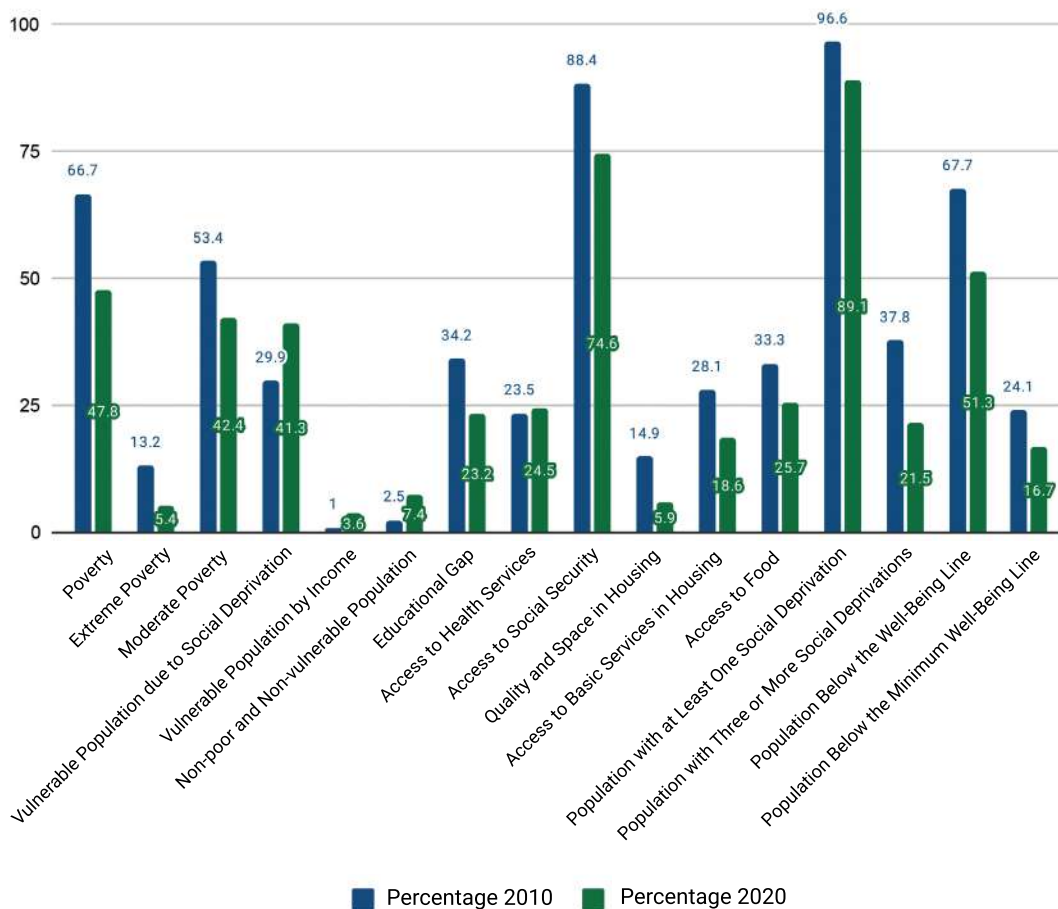
In summary, from 2010 to 2020, the value of agricultural production in these municipalities has grown from 26% in Pénjamo, 115% in Abasolo, 126% in Romita, 234% in Valle de Santiago and up to 279% in Dolores Hidalgo. However, is the rise in production value reflected in the well-being of the poorest workers in these municipalities?



### Evolution of poverty in the main agricultural municipalities

In relation to the measurement of poverty, improvements in social security and in educational deprivation can be seen in these municipalities. Likewise, there is a decrease in poverty and extreme poverty and the population with incomes below the well-being line and the minimum well-being line decrease. These indicators allow us to deduce that the dynamics of agricultural work in these municipalities has been an important factor in poverty reduction.

**Figure 4.8.** Multidimensional Poverty Indicators for the Municipality of Abasolo, Guanajuato, 2010-2020 (%)

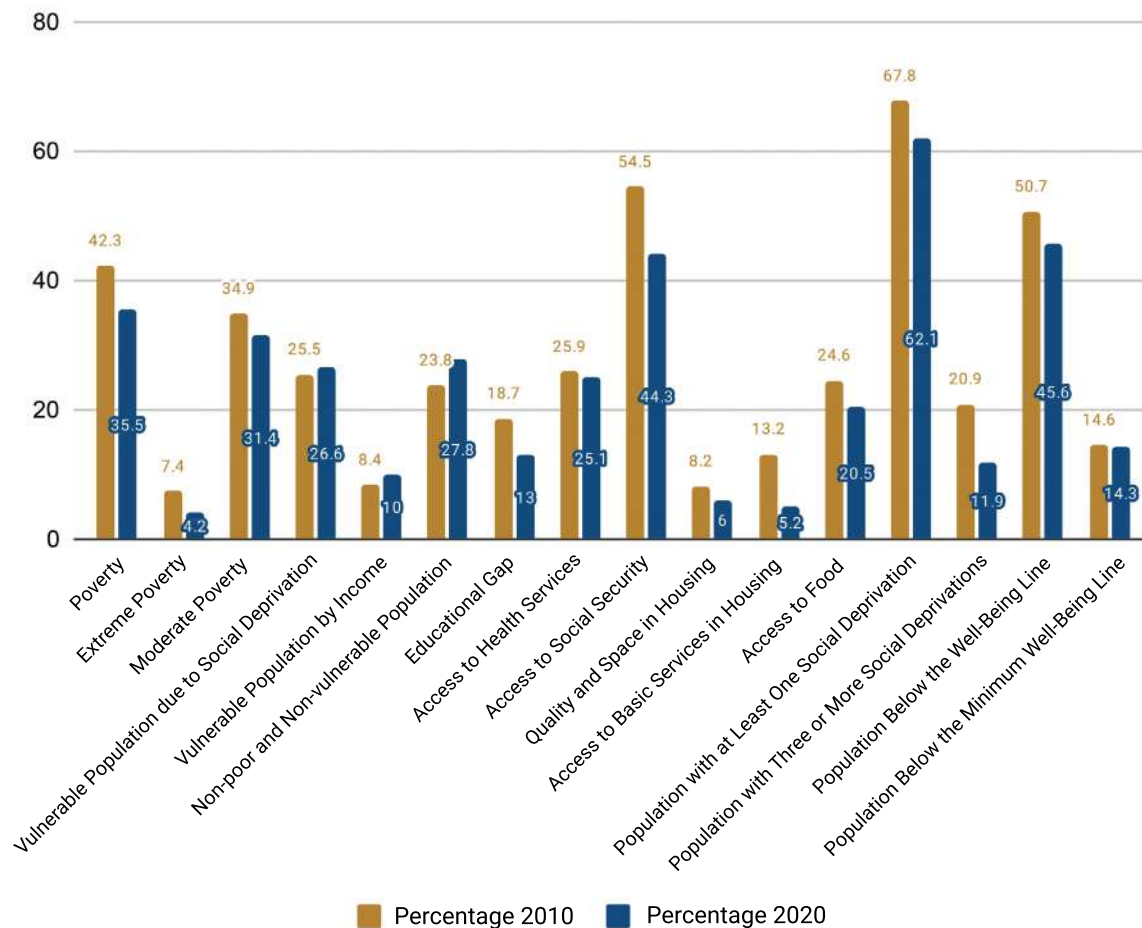


**Source:** Authors' elaboration with data from the CONEVAL measuring poverty at the municipal level in 2010 and 2020.



In Abasolo, we observed a significant decrease in extreme poverty of 7.8 percentage points over a period of ten years. This represents a reduction of around 60% in the population living in extreme poverty. Total poverty –the sum of extreme poverty and moderate poverty– also dropped 18.9 points, which means a very substantial improvement for the municipality. On the other hand, the population that is vulnerable due to social deprivation increased by 11.4 percentage points. This means their income increased but they are still deprived of other needs. The improvements are reflected in education, healthcare services to some extent, social security significantly, the quality of housing, basic housing services, and in food.

**Figure 4.9.** Multidimensional Poverty Indicators for the Municipality of Irapuato, Guanajuato, 2010-2020 (%)

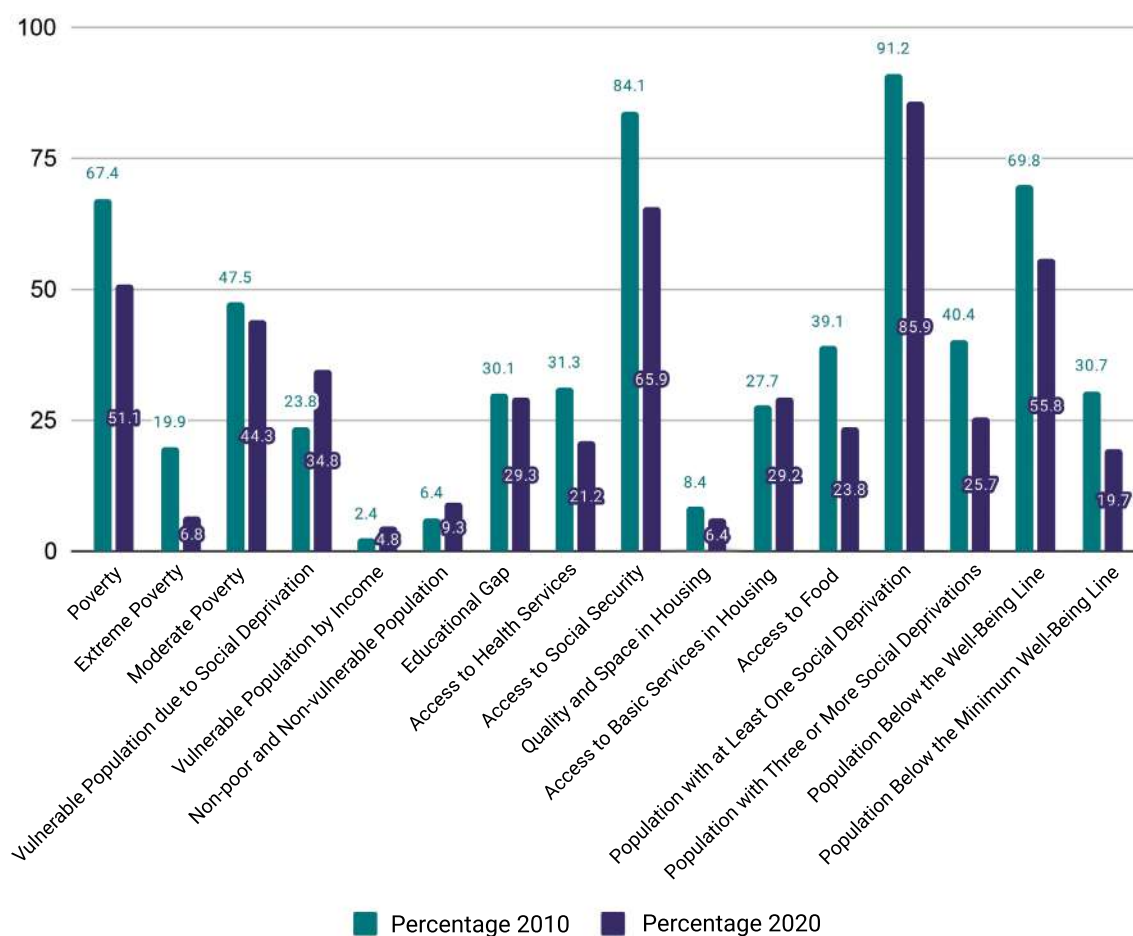


**Source:** Authors' elaboration with data from the CONEVAL measuring poverty at the municipal level in 2010 and 2020.



Despite its relevance for agricultural production, the municipality of Irapuato has a large urban population whose dynamics carry much more weight than agricultural employment in terms of poverty. In this municipality, improvements are modest. Lack of social security has decreased, housing and basic services have improved, and the educational gap has decreased. An improvement in labor formality in the municipality has brought about great improvements for the population over the ten-year period. However, there is hardly any decrease in population with income below the minimum well-being line.

**Figure 4.10.** Multidimensional Poverty Indicators for the Municipality of Pénjamo, Guanajuato, 2010-2020 (%)

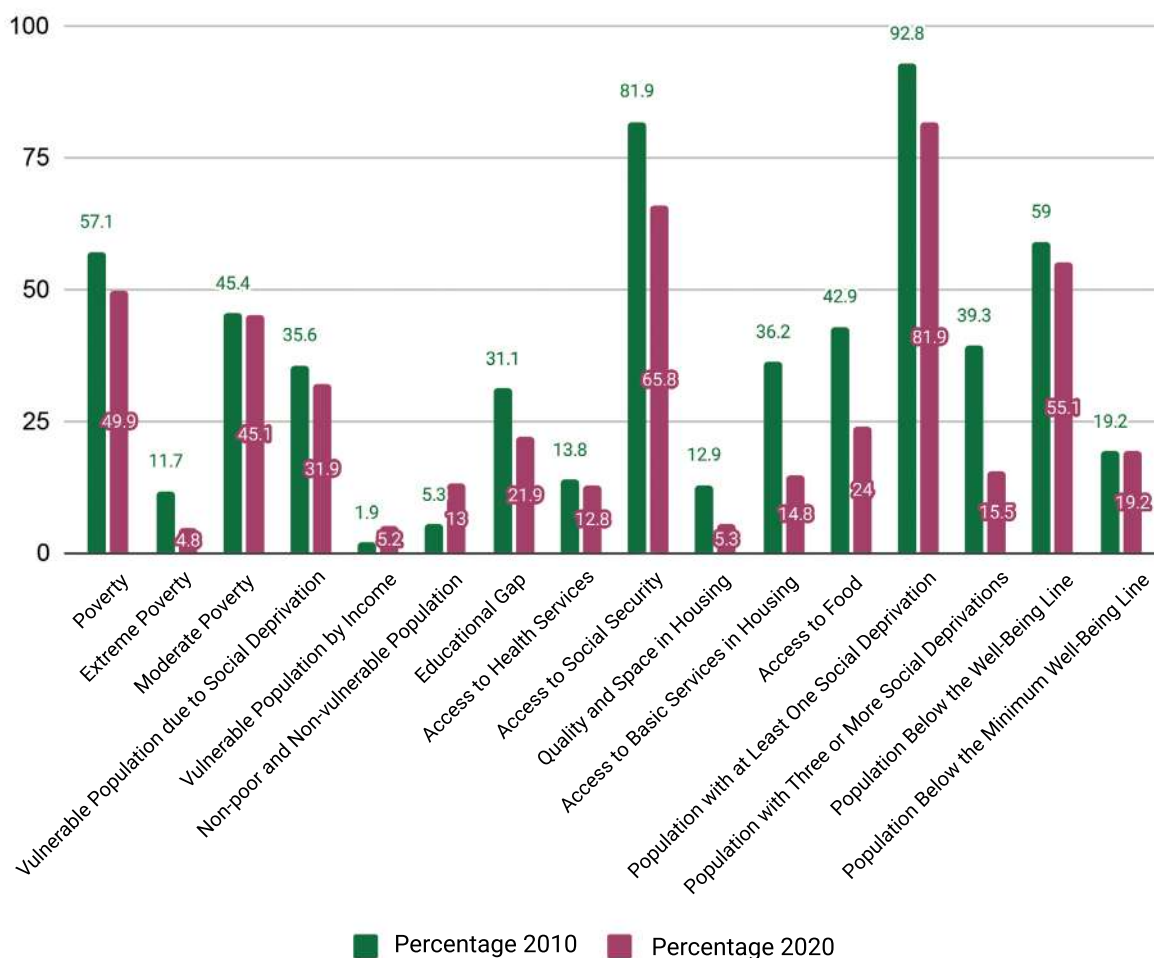


**Source:** Authors' elaboration with data from the CONEVAL measuring poverty at the municipal level in 2010 and 2020.



Pénjamo is renowned for being the main agricultural producer and the main agro-export municipality. Here, the decrease in poverty and its various components is the greatest of all the agricultural municipalities. As can be seen in figure 4.10, the levels of poverty and extreme poverty drop very significantly, 16.3 and 13.1 percentage points respectively. Extreme poverty has decreased by two thirds, more than 60%. Total poverty decreases due to multiple factors, but the improvement in the quality of employment is evident, both in terms of income and social security. Healthcare also improves remarkably.

**Figure 4.11.** Multidimensional Poverty Indicators for the Municipality of Romita, Guanajuato 2010-2020 (%)

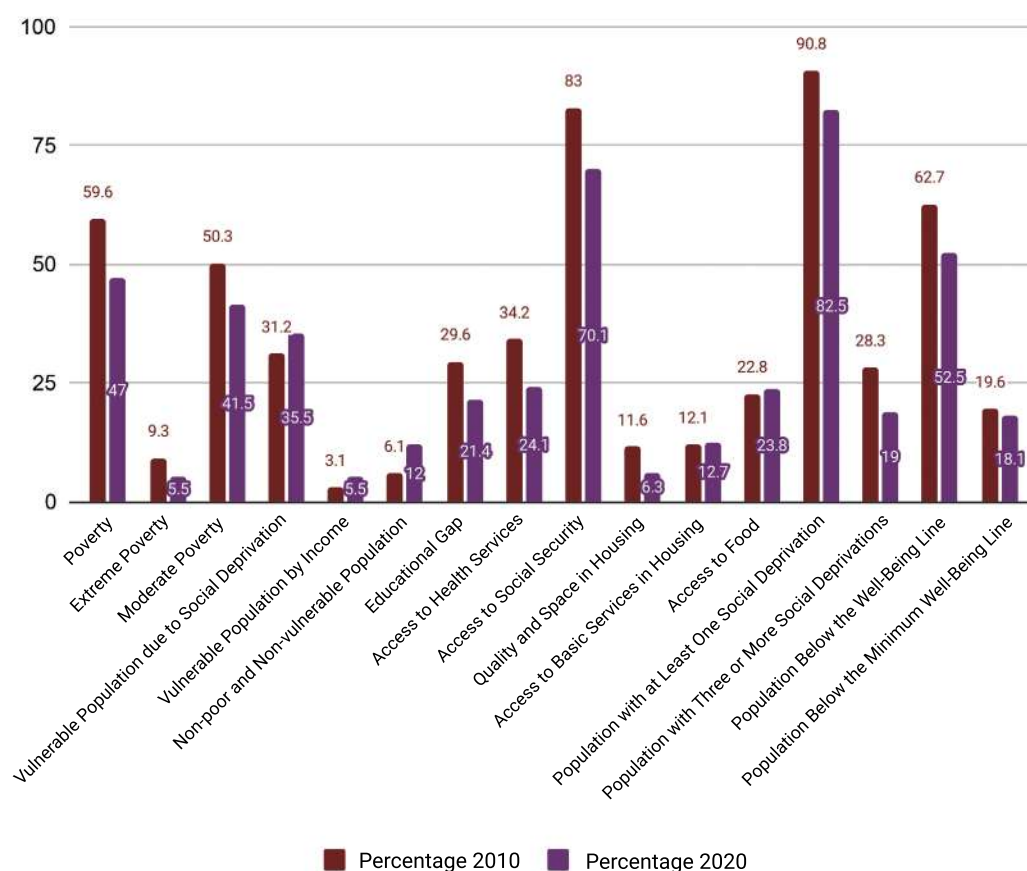


**Source:** Authors' elaboration with data from the CONEVAL measuring poverty at the municipal level in 2010 and 2020.



In the municipality of Romita, agricultural employment plays an even more significant role than in Pénjamo. However, the decrease in the various poverty indicators is smaller, although the drop in the population living in extreme poverty is notable, as is the drop in the population with food shortages. However, the population with income below the minimum well-being line does not fall. From 2010 to 2020 there is an increase of over 20% of workers in the agricultural sector affiliated with IMSS. There seem to be improvements in working conditions, although more modestly than in Pénjamo or Abasolo. In our opinion, the reason that Romita shows less improvement in terms of poverty, extreme poverty, and its components is related to the persistence of a large informal labor market for farm work there and, in particular, to the poor conditions seen in terms of child labor.

**Figure 4.12.** Multidimensional Poverty Indicators for the Municipality of Valle de Santiago, Guanajuato, 2010-2020 (%)

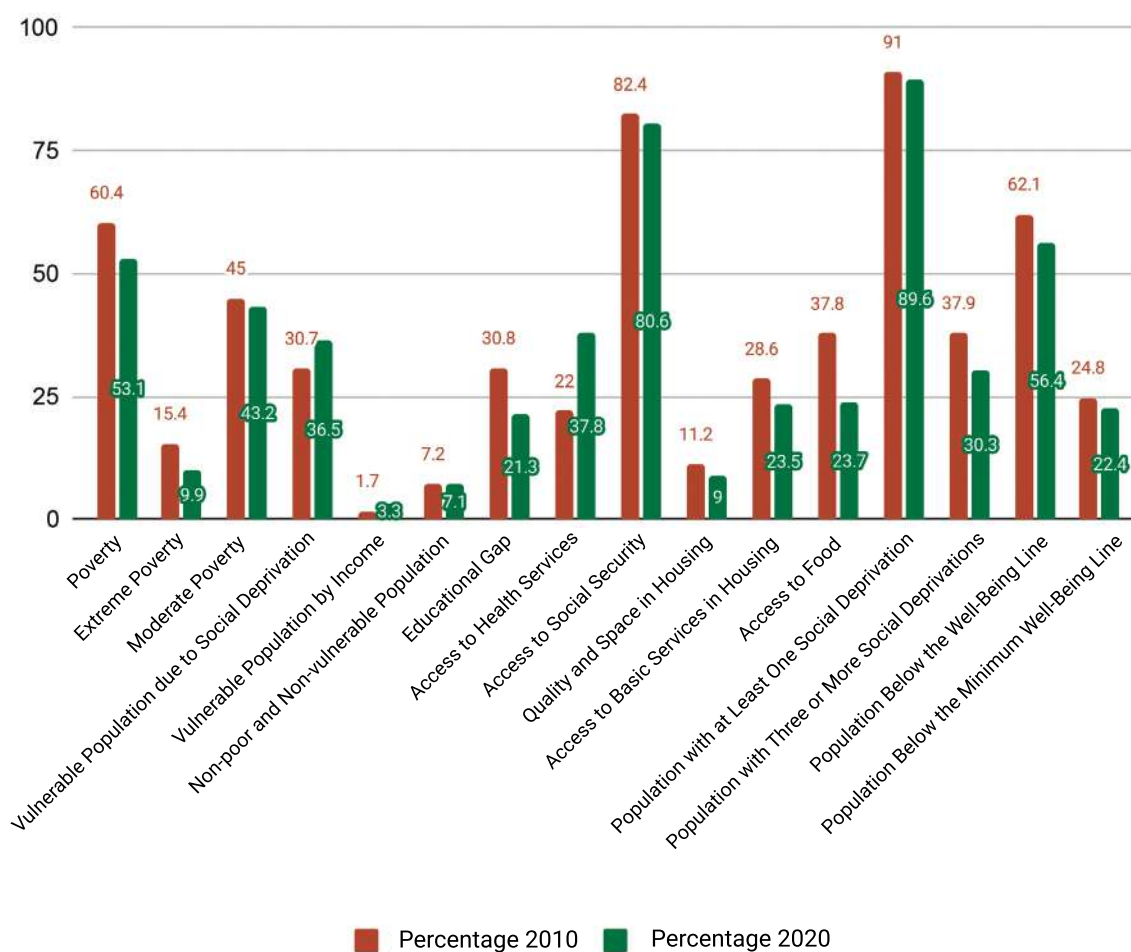


**Source:** Authors' elaboration with data from the CONEVAL measuring poverty at the municipal level in 2010 and 2020.



In the municipality of Valle de Santiago, the same dynamic is observed as in the other municipalities with capitalized agriculture. Poverty and extreme poverty are reduced even more, as well as those living without social security; the quality of housing improves, but not its services, and the population with an income below the well-being line falls, but the population with a lack of food does not fall, nor does the population with an income below the minimum well-being line.

**Figure 4.13.** Multidimensional Poverty Indicators for the Municipality of Dolores Hidalgo, Guanajuato, 2010-2020 (%)



**Source:** Authors' elaboration with data from the CONEVAL measuring poverty at the municipal level in 2010 and 2020.





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Finally, in Dolores Hidalgo, we see a similar pattern. Poverty and extreme poverty are decreasing, not as significantly as in other municipalities, but even so, a significant decrease. Deficiencies in relation to food, housing and its services drop significantly, as does the educational gap. Let us remember that of all the municipalities analyzed here, Dolores Hidalgo is the municipality where agricultural production grew the most (270%) and the decrease in these indicators may be a consequence of the increase in agricultural production.

The above shows that, in the municipalities with the largest agricultural production and agricultural exports, economic dynamics in 2010–2020 have reduced poverty and many of its components to a significant extent. Among those municipalities, those with the largest reductions have export agriculture as their main economic engine, while those with smallest gains are either mostly urban, or mostly informal.



## 4.6. THE ABSENCE OF A WELFARE STATE: HEALTH SERVICES AND SOCIAL PROGRAMS

In agricultural work, employment regulations and formal contracts provide farm workers with the opportunity to exercise their labor rights and oblige employers to fulfil their responsibilities. One of the obligations that employers have is to provide legal benefits; under Mexican law, these include access to social security. The right to social security in Mexico covers benefits such as pension savings, housing credit, access to childcare centers, disability coverage and the right to medical care.

The most important benefit in the social security package is medical care. Historically, farm workers have been denied this right. However, the formalization that has occurred in agricultural work in recent years has meant that farm workers are now eligible for social security affiliation. In some agro-export states in Mexico, there is a clear upward trend in the right to this labor benefit. For example, in Baja California and Jalisco, the affiliation of agricultural workers has increased significantly (Escobar-Latapí, Martínez-Rubio & López-López, 2023; Escobar-Latapí, Martínez-Rubio & Judd-de la Luz, 2023). Nationally, the growth in social security affiliation among farm workers is 3.7% annually for permanent workers, and 10% annually for temporary workers (Canché, 2022). In Guanajuato, while the formalization of agricultural work is also evident, there continues to be a widespread informal labor market that deprives a good number of workers, both local and migrant, of this right.

The options for farm workers are limited to open population health care services or private services. Before the current government administration, the population without access to social security could turn to the Seguro Popular that provided universal medical care. In 2020, this program was replaced by the Instituto de Salud para el Bienestar (INSABI) [Institute of Health for Well-being]. The change was marked by a lack of clarity and inadequate implementation. Given the problems involved in the operation of INSABI, the government's commitment then turned to the IMSS-Bienestar program, which emerged in 1973 with the aim of providing medical services in rural areas where there are higher rates of poverty and marginalization.

The position of Guanajuato's state government when faced with the abolishment of Seguro Popular was not to join INSABI but to maintain its own healthcare system. The state government then signed a coordination agreement without joining INSABI. Since then, this state has administered its own healthcare system for the open population where services are provided in community hospitals, general hospitals, specialty hospitals, Centros de Atención Integral en Servicios Esenciales de Salud (CAISES) [Comprehensive Care Centers for Essential Health Services], Centros de Salud con Servicios Ampliados (CESSA) [Health Centers with Expanded Services], Unidades Médicas de Atención Primaria a la Salud (UMAPS) [Primary Health Care Medical Units] and mobile units.

According to data from the 2020 Population and Housing Census, currently 79% of the total state population is entitled to some type of health system. This includes the service



provided by the state aimed at the open population. If we only consider the populations that are affiliated to employment-based social security (IMSS, and ISSSTE), State ISSSTE and the services provided to employees of *Petróleos Mexicanos* (PEMEX) [Mexican Petroleum Company] Defense and Navy), 42% of the population has coverage. The scope of IMSS social security coverage relates to the importance that economic sectors such as industry and services have, as they are sectors characterized by formal hiring practices. Affiliation to IMSS is greater than affiliation to open population healthcare services in the municipalities with the most populated cities. On the contrary, affiliation to universal healthcare services is greater in the municipalities with the smallest populations.

**Table 4.16.** Welfare Rights in the State of Guanajuato and Bajío Guanajuatense, 2020\*

	IMSS	ISSSTE <sup>1</sup>	Pemex, Defense or Marines	Instituto de Salud para el Bienestar <sup>2</sup>	IMSS- Bienestar	Private institution	Other institution <sup>3</sup>	Total Population With Rights to Social Security Programs	No Affiliation
Bajío Guanajuatense	2 021 998	223 288	44 331	1 563 258	17 534	78 501	20 001	3,926,573	1,015,617
Guanajuato	2,259,062	296,330	45 080	2 181 882	22 771	93 767	25 720	4 874 661	1,275,190

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

\* The sum of affiliates across the different institutions may be greater than the total because of those who can access services through more than one health institution.

<sup>1</sup> Considers the affiliates of the ISSSTE and the State ISSSTE.

<sup>2</sup> Includes the population that declared being affiliated with Seguro Popular. Since the state manages its own health care system for the open population, even though INEGI has cataloged it as INSABI, we consider that it is state health care coverage.

<sup>3</sup> Includes public and private health institutions.

The data for Social Security entitlement in the municipalities with greatest significance in terms of agriculture in the state —based on production value and number of agricultural workers— clearly exemplifies the assertions above. In the municipalities of Irapuato and Salamanca, which have large urban centers, the number of people affiliated to IMSS is greater than those who access healthcare services for the open population. In these municipalities, there is significant participation in manufacturing, industry, commerce, and service industries. On the contrary, in rural municipalities with a high concentration of agricultural workers, such as Pénjamo and Valle de Santiago, higher numbers of the population are affiliated to universal healthcare services.

This is a clear reflection of the informality that prevails in the agricultural sector. Although the state health services provide care to the non-eligible population that requests it, the truth is that for certain population groups, access to healthcare has greater complications. Such is the experience endured by the state's rural and farm worker population. Although the healthcare system includes second and third level medical care, this is usually concentrated in the municipal capitals or urban centers.



For example, it is in the municipalities of Silao and Irapuato where second level care is provided and in León where there are specialty services. In the small rural settlements only host primary care clinics, provided by UMAPS. Commuting to large or medium sized cities is part of daily life for Guanajuatenses who need specialized services. Likewise, the same medical units transfer patients if they require a higher level of care. For example, when there are complications during childbirth.

**Table 4.17.** Welfare Rights in the Main Agricultural Municipalities by Production Value and Number of Workers, 2020\*

Municipality	IMSS	ISSSTE <sup>1</sup>	Pemex, Defense or Marines	Instituto de Salud para el Bienestar <sup>2</sup>	IMSS-Bienestar	Private institution	Other institution <sup>3</sup>	Total Population With Rights to Social Security Programs	No Affiliation
Abasolo	13 369	3 400	115	57 648	586	360	82	75 258	16 749
Irapuato	283 558	32 360	14 857	142 271	1 530	7 621	3 538	480 249	112 281
Pénjamo	30 274	7 740	172	86 087	1 303	780	452	125 581	29 291
Romita	11 220	2 728	40	42 964	131	259	468	57 516	8 224
Salamanca	109 398	12 116	24 786	79 999	977	2 389	1 302	228 159	45 024
Santa Cruz Juventino Rosas	17 574	3 602	104	41 797	457	431	943	64 494	17 808
Valle de Santiago	27 769	6 751	273	81 285	1 384	663	284	117 911	32 044

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

\* The sum of affiliates across the different institutions may be greater than the total because of those who can access services through more than one health institution.

<sup>1</sup> Considers the affiliates of the ISSSTE and the State ISSSTE.

<sup>2</sup> Includes the population that declared being affiliated with Seguro Popular. Since the state manages its own health care system for the open population, even though INEGI has cataloged it as INSABI, we consider that it is state health care coverage.

<sup>3</sup> Includes public and private health institutions.

Local farm workers use this healthcare system. They report that to receive healthcare they go first to UMAPS in their localities or neighboring localities. When they require more specialized medical attention, they go to the cities of Romita, Irapuato, Silao or León. Due to the type of activities carried out when performing agricultural work, farm workers are susceptible to certain work-related risks or illnesses, for example, from the use of chemicals, injuries caused by machinery or from intense physical activity. Despite this, there are no health care programs specifically focused on the farm worker population. The only program focused on this population is aimed at temporary migrant workers. This is because they are considered a priority population given the precarious conditions in which they find themselves.



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The program offers healthcare services one day per week from April to September. These sessions are held in the towns where the farm workers live or in the fields where they work. When held in the towns, the services are usually provided on weekdays after 6:00 p.m., after the workers have returned from the field. The days of the week, the hours, and the place where the service is provided are decided by each municipality according to the needs of the population. To provide suitable care, a census is first carried out to identify the priority population, such as pregnant women, the elderly, and adults of reproductive age.

Farm workers are informed that they have the right to receive free medical attention without any type of affiliation on these days. The activities carried out include vaccinations, information on contraceptive methods, dental care, and free medical consultations. In addition, guidance is provided on hygiene measures and how to protect against common infections or conditions such as diarrhea, dengue or COVID-19. According to staff, psychological care, and counseling on issues such as domestic violence are provided. Although this program aims to cover the entire farm worker population, it is not always possible for them to have effective access to healthcare services.

Despite the efforts made by the institutions or the people who work in them, bureaucracy, lack of resources or personnel, and the dynamics of the workers' lives make the operation of the program difficult. For example, in San Francisco del Rincón, according to comments by officials and the person in charge of the shelter, medical attention is provided weekly in the shelter managed by the municipality. However, during our fieldwork, the healthcare personnel assigned to care for this population did not attend because the farm workers did not return from the fields until later at night. At the time assigned for them to provide the services, they did not find any workers, so they decided to suspend the visits. However, the person in charge of the shelter commented that they would also come to provide healthcare services focused on the child population and for vaccinations, though at that time the service was suspended.

Another problem faced by migrant farm workers is their identity documents. Although program officials stated that they do not request any documentation from this population to provide healthcare, as they are a priority population, in practice, this can be an obstacle when follow-ups or other treatments are required. According to different officials, civil registration campaigns have been carried out focused on this population. However, the information collected during our fieldwork shows that the registration of this population is one of the most pressing needs, not only to receive medical attention, but also to access any educational services other than those provided for farm workers.

The language barrier is another hindrance. Although it is known that most of the indigenous migrant population is Tu'un Savi-speaking Mixtec, there are not enough translators to support medical institutions when providing healthcare and information. The officials who provide medical care usually rely on a family member who speaks Spanish so that they can translate. From our perspective, there is a generally held idea that this population speaks and understands Spanish without any problem. The truth is that many of them are monolingual or speak only a little Spanish, which makes it difficult to understand consultations or informative talks. This situation not only causes the service provided to be ineffective, but also reflects a



lack of empathy on the part of government institutions. This situation is not limited to healthcare but extends to other aspects such as education and work.

The most common diseases identified in the migrant farm worker population are diarrheal diseases, skin diseases, conjunctivitis, and eye infections, especially in children. These are often related to their housing conditions. There have also been cases of animal bites and oral diseases. Although they have treated intoxication due to exposure to harmful chemicals, an official from the Romita healthcare services affirms that these are not so frequent.

Despite these efforts to give farm workers some access to medical care, when they need these services, farm workers come up against barriers of time, distance, lack of documentation and language. The case of Magnolia provides a clear example. She is an informal migrant worker who is already settled in a small town in the municipality of Romita

Magnolia usually goes to the UMAPS that is very close to her home. Access to UMAPS is free of charge, but she has to get there at 6:00 a.m. to get a ticket to be attended as they only give out three tickets a day. Moreover, she then has to wait a long time to be seen. Therefore, sometimes she prefers to go directly to the Romita health center, which is part of the state health system. The problem is that it is hard to find the time to go because a day at the health center means a workday lost. Magnolia reports that she has been feeling pain in her womb for a while and sometimes feels so tired that she cannot get up, but due to lack of time she has not gone to be checked.

Although in Guanajuato there are also formal agricultural workers affiliated with IMSS Social Security, effective access to healthcare services is not all that different from what informal workers report about the healthcare service for the open population. The IMSS clinics are located in the municipal capitals or in the cities, which means that farm workers have to find transport from the towns where they live. In addition, the opening hours of the clinics are usually incompatible with those of the working day, so it is necessary to ask for the day off work.

For example, Néstor's crew working at the blueberry company all have IMSS coverage. However, Néstor states that access to healthcare services is inadequate because, even though his workers have the right to receive IMSS healthcare, the health center in León closes at 3:00 p.m. Therefore, if something happens after that time, they have to go elsewhere. For example, recently a worker began to feel bad outside of IMSS service hours, so Néstor had to take him to a private doctor.

It is true that the healthcare services received by migrant farm workers in the state of Guanajuato are better than those in their communities of origin. However, it is also clear that there are gaps and inadequacies in the healthcare for this population. The most obvious is the need to have workers affiliated with IMSS and to strengthen this healthcare system. This issue is not limited to migrant farm workers but also affects local farm workers.



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### *Social programs*

Access to healthcare services was affected by the change from Seguro Popular to INSABI to the detriment of the people who needed it most. Changes to social programs have been one of the characteristics of the new government. Not only was Seguro Popular transformed into INSABI, but other programs that had a positive impact on families were reconfigured or completely abolished. This is the case of the Prospera program, which was replaced by the Benito Juárez educational scholarships. Although it was a monetary transfer program where the educational component was a priority, it also had an impact on the health and nutrition of families. Prospera provided medical services, nutritional supplements, health care talks, and other services. An official from the Guanajuato healthcare system explains that although it continues to function and serve the population, the elimination of Prospera led to budget cuts in their own health care services, for example for workshop supplies and medicines. Furthermore, these programs had a captive population in the field of prevention.

Workers' testimonies show the impacts of the abolishment of the Prospera program. For Cristina, a local worker, the end of the Prospera program meant greater difficulties in receiving healthcare services, in addition to a decrease in her bimonthly income. She explained to us that the medical appointments required by the program "were good for the children." The doctors checked that they were healthy and that they were not malnourished and that they, as beneficiaries, were also provided with medical attention. Cristina says that now the program does not exist, it is more difficult to get medical appointments because the health center asks for more things: "more paperwork". For this reason, Cristina prefers to go to private doctors, even though she has to pay. She prefers to cover the expense than spend the whole day at the health center, which also means that she misses a day of work.

The end of the program not only affected her access to healthcare services, but also meant a decrease in the financial support she received for her children's education. When she had Prospera, they used to provide support that ranged between 4,000 and 5,000 pesos for all her children every two months. Now with the Benito Juárez scholarship, with three children in primary school, she receives only 1,680 pesos in total every two months, money that has to support the three of them.

On the other hand, Magnolia, a migrant worker, used to be a beneficiary of the Prospera program in Guerrero. When she migrated to Jalisco to work, her support was taken away from her and since then she has not been able to keep up with the changes that have happened to the program. She says that her children have never had the Benito Juárez scholarship, despite having three children studying in primary school. However, she has not done any of the corresponding procedures to request it, because she does not know what she needs to do. For her, the information about the program is unclear. Magnolia states that she only knows that her support was called Prospera, that it later changed its name and that it was taken from her when she migrated. This is an example of how the social programs are not compatible with the migratory dynamics of farm workers, so there is a need to create operating rules that allow this specific population to be beneficiaries of these programs.



In addition to scholarships, another program is the Bienestar pension for people with disabilities. Margarita, a local worker from the municipality of Romita, recently went to request this support. She has psychiatric problems and needs to buy very expensive medication. Through the support, she will receive 2,500 pesos every two months. The pension is one of the federal government's programs from the Secretaría de Bienestar [Welfare Department]. When Margarita's mother told us about it, she told us that they had gone to "Morena's offices" —Morena is a political party— to request it. In actuality, they went to the welfare offices and the check they were given had no political party information on it anywhere. However, this shows the proselytizing tinge that the social programs of the current government administration have. Furthermore, the relationship between the state administration and the federal administration in Guanajuato seems like a direct confrontation with partisan overtones that ends up having a direct impact on the quality of life of the people of Guanajuato.

Lastly, it is important to emphasize that another of the programs that was abolished was the PAJA. This is a great setback in guaranteeing the rights of this population. This program explained the nature of the work contracts to workers at their community of origin; it often paid for their transport, and two days' food; and in addition, it subsidized 50% of the cost of building and operating child care centers, schools, and farm worker housing. Although, it was a program that had room for improvement, the farm worker population is now completely unprotected, without any kind of support. It is urgent that the federal government renew its commitment to the protection of this population group. On the one hand, it needs support from the STPS) [Ministry of Labor and Social Welfare] to guarantee that employers comply and provide employees with their rights, while on the other, support from the Secretaría del Bienestar with programs that promote well-being and reduce inequality gaps.





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## FINAL REMARKS

The state of Guanajuato is one of the main agricultural producers in the country. Not only is it a primary producer to supply food for the national and international markets. The geographical, climatic, sociodemographic, and historical characteristics make this entity a propitious space for agro-industrial growth. Such are the favorable conditions that even in recent years as other economic sectors have experienced very significant growth, particularly the industrial and manufacturing sector, agriculture has maintained its relevance.

In recent years, its production value has increased, as have the varieties cultivated there and the production spaces. Given the flourishing export agro-industry that exists in the state, an improvement in workers' lives is to be expected. However, wages and working conditions in Guanajuato are below those of other export states.

Guanajuato's agricultural history has configured a structure where the participation of actors in the supply chain is very diverse. Not only are there many actors involved, but the scope of the supply chain is very diverse. The participation of small producers in Guanajuato's agriculture, both small owners and *ejidatarios*, continues to be strong. This can be an advantage in many ways, for example, it encourages the participation of local producers in agriculture. However, one of the problems that this presents is the lack of supervision and control over small production.

Agricultural production in Mexico is in a period of transformation, where large and medium-sized companies are incorporating labor standards and a socially responsible approach, which, among its objectives, include the improvement of the working and living conditions of farm workers. The lack of resources for small producers means that they cannot comply with the standards that ensure compliance with labor rights and adequate conditions. Although large companies monitor these aspects, the participation of small producers throughout the supply chain means that these standards are somewhat blurred throughout the chain.

As a consequence of this agricultural structure, in the state of Guanajuato we see the predominance of a fairly widespread informal labor market, which is found mainly among small and medium producers who are often the same producers who sell to large companies or intermediaries. The labor informality that prevails in Guanajuato agriculture translates into the absence of formal contracts for farm workers and a lack of labor benefits. This not only places the workers in a more precarious or vulnerable condition, but also has a direct impact on their living conditions.

Informal hiring not only means the absence of benefits such as bonuses or vacations, but also deprives workers of social security coverage. In a country like Mexico where government institutions have serious deficiencies, this translates into less access to healthcare, pensions, and childcare. In addition, the lack of formal contracts can lead to abuses of power, as well as increases in flexibility and segmentation of the market. This means that farm workers are at the mercy of fluctuations in the market or the seasons of the crops.



The flexibility that persists in the agricultural labor market is clearly demonstrated by job instability, piece-rate pay modalities, and alternating work schedules. Labor segmentation in this state can also be noted by origin, ethnicity, and migratory status. The increasing labor shortages in the agricultural sector have forced many employers to hire workers from other states. Likewise, the crisis that the farmlands in Mexico have suffered since the 1980s, mainly small-scale peasant production, has left a large portion of the population in the south of the country without land and without job options, living in poverty. This is why contingents of workers from states such as Guerrero, Oaxaca, Veracruz or Chiapas leave their communities each season to work in the agro-export states of northern or western Mexico.

The state of Guanajuato has long been characterized by its local rural workforce that has traditionally fed the agricultural labor market. However, the growth of other sectors in the state and migration to the United States has made it necessary to hire workers from other places. The lack of regulation and vigilance that prevails on the entity's farms have caused farm workers from other states to find themselves in a more precarious situation than that of local workers, both in terms of labor as well as living conditions.

This clearly shows the persistence of a highly segmented labor market that is divided into formal and informal workers on the one hand and then by those who come from other states on the other. The latter are hired for the most intensive jobs with piece-rate pay, under the premise that they can endure more or that they are more suitable to that job due to abilities attributed to their social and geographical origin. It is important to emphasize that employers who hire workers from other states are responsible for their workplace conditions. Informal employment, which makes use of verbal contracts and recruiters, allows employers to free themselves from all these responsibilities.

The image of migrant and indigenous families arriving without anywhere to stay, looking for a space where they can spend the night sleeping on the ground with blankets and cooking with firewood has become commonplace in the state. This demonstrates the urgency there is for the Guanajuato agricultural sector to work for greater formalization and supervision throughout its supply chain, efforts that need to be carried out hand in hand with the State.

Despite laudable efforts by some state government institutions, the truth is that their efforts are reduced to immediate and humanitarian care. Although these efforts can resolve serious situations that arise, for any real change to happen, deeper transformation is needed to bring about a change in the agricultural structure that guarantees the rights and effective access to health, education and social services.



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## EPILOGUE

In closing, the regional study carried out in Guanajuato in 2022 shows remarkable specificities concerning commercial and export agriculture, and its corresponding labor conditions.

These conditions vary along several different dimensions. One that has already been repeatedly mentioned relates to formal and informal jobs. Another one, often combined with the above, is migration. The worst working and living conditions are found among temporary migrant workers. Gender deepens this contrast. Although the gender pay gap is very small in the state in general, among temporary migrant workers it is large, meaning the average income of temporary migrant women is far below average. It is a small population, since most of the farms' labor needs are supplied by in-state workers, but this does not make them less relevant in any way.

In the overall context of the main producing and exporting municipalities, extreme poverty—which has characterized farm workers—, total poverty, and a number of its dimensions, have been substantially reduced during the last decade. This achievement is an outcome of the improvement of the real incomes and working conditions of ample groups of farm workers. It mostly benefits natives, or migrants who have settled in the state. Although improvements are still necessary, their labor and living conditions have improved substantially. The survey shows that workers in two contrasting exporting companies enjoy conditions that comply with the law, and offer significant labor stability.

These improvements are not observed among temporary migrant workers. Not even in the case of Alfonso, a formal worker whom we described in some detail, do labor and living conditions satisfy all legal requirements. On the other hand, in the municipality of Romita, the No. 1 in production in the state, our researchers repeatedly observed child workers, unhealthy living quarters, insecure jobs, and dangerous forms of transport. The responsibility for improving them falls squarely on employers' shoulders. To that end, however, it is necessary to revise the production and sale contracts covering a large share of the state's farm exports. The way these contracts are implemented robs growers of a significant share of their income, and they thus routinely turn to workers to increase their margins, thus affecting the health, security and income of their workers. Other sections delve into the details of these labor conditions in multiple municipalities and crops.

Responsibility for these conditions is not exclusively the employers', nor does it correspond to the supply chain only. There are three factors that fall clearly within the federal government's purview. They are either long-standing omissions, or spring from recent cuts in government services.

Firstly, employers and workers are paying increasing amounts into social security, as well as to the housing fund. These payments, however, are not reflected into access to their promised benefits. If, in the past, the small number and great geographical dispersion, of farm workers made the construction and operation of these services unaffordable, the constant increase in the number of IMSS-affiliated farm workers, and of their fees, demands the effective operation of these services.



Secondly, federal programs aimed specifically at farm workers have stopped operating: the former Programa Nacional de Apoyo a Trabajadores Agrícolas [National Program for the Support of Farm Workers, according to its first name], and the PAJA, until 2018, provided direct and indirect services to farm workers that translated into better formal and effective access to their rights. These programs operated together with the federal Labor Secretariat's Subprograma para la Movilidad Humana –Subprogram for Human Mobility–. Jointly, they ensured labor contracts, long-distance transport, and the living and working conditions at their destinations complied with the law. They also provided workers money for their food during transport.<sup>24</sup> These programs were not perfect, but they performed a significant positive function. Their dismantling, at least as far as their operating budget is concerned, means hiring, long-distance transport, debts, and working conditions upon arrival at their destination, are no longer verified by the government, which leads to rising violations. Lastly, these programs operated jointly with others subsidizing the construction and operation of child care centers, schools, housing, and health clinics. Inexplicably, while export agriculture is growing and employs an increasing volume of migrant workers, the funds for these programs have disappeared. This means more workers have no access to them, and that existing infrastructure has to be subsidized and operated by the growers or by local governments, as we saw in Guanajuato. Their disappearance directly affects the working and living conditions of migrant farm workers. It is positive that the state government is funding some of these services. But it is insufficient. Comprehensive federal-level actions are required to provide these services to temporary migrant workers, if only because they are mostly out-of-state workers, entailing the fact that no single state government can operate a program from the workers' hometowns to their work destinations and back.

One more factor responsible for the working conditions we observed pertains to the state's labor secretariat. The reduction in effective inspections, recommendations, and sanctions no doubt also plays a role in the persistence of labor violations. State and federal labor secretariats, as well as state and federal human rights commissions, must play a role in enforcement of the law.

In all, the regional study of Guanajuato's Bajío concludes that working and living conditions in the state's agriculture must be a priority for all stakeholders in the sector, who must come together to agree on specific, effective actions leading to their improvement.

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24 Making sure the workers were not charged for hiring, for transport, nor for their food during transport also served to lessen the risk of an "original debt" for the workers, thus reducing the risk of forced labor (CONEVAL, 2019).



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# APPENDIX







## APPENDIX

### Appendix A. Basic Geohydrographic Data for the Zapotlán Valley Selected indicators (%)

Municipality	Gómez Farías	Zapotlán el Grande
<b>Area</b>	363 sq. km	316 sq. km
<b>Altitude</b>	1506 m (municipal seat)	1529 m
<b>Average Annual Temperature</b>	16.1 °C.	17.4 °C.
<b>Climate</b>	Semi-warm, semi-humid	Semi-warm, semi-humid
<b>Average Annual Precipitation</b>	1174 mm	871 mm
<b>Average Annual Evaporation</b>	600 mm	600 mm
<b>Groundwater Availability</b>	Lagunas (18.57 Mm <sup>3</sup> ), Aguacate (-0.76 Mm <sup>3</sup> ), and Ciudad Guzmán (-20.95 Mm <sup>3</sup> )	Ciudad Guzmán (-20.95 Mm <sup>3</sup> )

**Source:** Authors' elaboration using data from the municipal hydrological specifications for Gómez Farías and Zapotlán el Grande, CEA Jalisco, 2015.

### Appendix B. Water Use in the Zapotlán Valley, 2015

Municipality	Zapotlán el Grande	Gómez Farías
<b>Availability of the Hydrological Basins</b>	Quito (253.44 Mm <sup>3</sup> ) and Laguna de Zapotlán (16.67 Mm <sup>3</sup> )	Laguna de Zapotlán (16.67 Mm <sup>3</sup> ), Quito (253.44 Mm <sup>3</sup> ), and Laguna de Sayula A (0.00 Mm <sup>3</sup> )
<b>Surface Water</b>		
	<b>Total 22 users</b>	<b>Total 38 users</b>
<b>Use</b>	<b>Quantity</b>	<b>Volume (Mm<sup>3</sup>)</b>
		<b>% (Volume)</b>
<b>Urban Public</b>	10	0.739258
<b>Agricultural</b>	5	0.210702
<b>Domestic</b>	2	0.004103
<b>Livestock</b>	2	0.0027375
<b>Services</b>	2	0.60876
<b>Multiple</b>	1	0.001261
<b>Total</b>	22	1.5668215
		<b>% (Volume)</b>
<b>Aquaculture</b>	5	47.18
<b>Agriculture</b>	24	13.45
<b>Livestock</b>	3	0.26
<b>Urban Public</b>	4	0.17
<b>Services</b>	2	38.85
<b>Total</b>	38	100
<b>Groundwater</b>		
	<b>Total 330 users</b>	<b>Total 218 users</b>
<b>Use</b>	<b>Quantity</b>	<b>Volume (Mm<sup>3</sup>)</b>
		<b>% (Volume)</b>
<b>Agriculture</b>	292	55.365405
<b>Urban Public</b>	21	19.147863
<b>Services</b>	4	0.354603
<b>Other</b>	1	0.384
<b>Livestock</b>	8	0.084631
<b>Multiple</b>	1	0.12
<b>Industrial</b>	3	0.07043
<b>Total</b>	330	75.526932
		<b>% (Volume)</b>
<b>Aquaculture</b>	5	0.782374
<b>Agriculture</b>	24	2.934112
<b>Livestock</b>	3	0.005974
<b>Urban Public</b>	4	0.089345
<b>Services</b>	2	0.00076
<b>Total</b>	38	3.812565

**Source:** Authors' elaboration using data from the municipal hydrological specifications for Gómez Farías and Zapotlán el Grande, CEA Jalisco, 2015.



## Appendix C. Agricultural Production\* by Crop in Gómez Farías in 2010 and 2019

Crop	2010			2019		
	Area Planted (hectares)	Production (metric tons)	Value of Production (thousands of pesos)	Area Planted (hectares)	Production (metric tons)	Value of Production (thousands of pesos)
Agave	226	8,040	13,190.09	378.63	6,073.2	144,865.88
Avocados	342	2,886	77,152.15	1,541.33	15,405.5	274,272.58
Green Alfalfa	-	-	-	35	3,490.55	1,383.21
Blueberries	-	-	-	50	662	24,224.72
Fodder Oats	90	2,201	1,226.66	8	258.64	159.72
Eggplant	-	-	-	-	-	-
Broccoli	20	260	1,455.91	-	-	-
Canola	-	-	-	-	-	-
Sugar Cane	4	440.4	392.17	-	-	-
Zucchini	-	-	-	-	-	-
Safflower	-	-	-	-	-	-
Grain Barley	55.5	333	1,364.40	30	180	902.12
Onions	-	-	-	-	-	-
Chia	-	-	-	-	-	-
Green Chile	9.5	120.5	1,321.38	-	-	-
Cilantro	5	50	341.44	-	-	-
Cabbage	-	-	-	-	-	-
Cauliflower	20	360	1,229.19	-	-	-
Peaches	-	-	-	2	9.12	150.12
Corn	18	152.1	457.01	-	-	-
Asparagus	-	-	-	5	31	1,007.75
Raspberries	-	-	-	25	219.75	4,844.39
Fodder garbanzos	-	-	-	-	-	-
Desi Garbanzos	31.5	62.53	271.10	-	-	-
Pomegranates	-	-	-	3	16.65	188.08
Guavas	3.5	12.27	50.29	-	-	-
Lettuce	-	-	-	-	-	-
Key Limes	-	-	-	-	-	-
Fodder Corn	70	1841	1,382.91	700	31,570	18,277.44
Grain Corn	3,370	19,568.16	78,840.33	2,700	14,765.1	44,415.56
Grasses	930	11,160	3,353.23	1,310	37,413.6	14,632.09
Radishes	-	-	-	-	-	-
Grain Corn Seed	90	720	2,851.72	23	189.36	712.59
Grain Sorghum	120	624	2,258.43	-	-	-
Tomatoes	7	850.5	8,695.15	1	107.88	810.40
Tomatillos	16	200	1,371.23	-	-	-
Wheat	60	237.5	883.49	10	55.3	267.65
Carrots	-	-	-	-	-	-
Blackberries	-	-	-	20	149.9	3,642.36
<b>Total</b>	<b>5,488</b>	<b>50,998.96</b>	<b>198,088.29</b>	<b>6,841.96</b>	<b>11,0597.55</b>	<b>534,756.66</b>

Source: Authors' elaboration with data for 2019 from SIACON.

\* Value of production expressed in real pesos based on the INPC, base year 2018.



**Appendix D. Agricultural Production\* by Crop in iZapotlán el Grande in 2010 and 2019**

Crop	2010			2019		
	Area Planted (hectares)	Production (metric tons)	Value of Production (thousands of pesos)	Area Planted (hectares)	Production (metric tons)	Value of Production (thousands of pesos)
Swiss Chard	30	334	315.49	-	-	-
Agave	50	5,180	5,648.41	170.23	1,764	42,300.85
Avocados	2,300	9,000	122,918.98	5,031.9	43,669.16	791,495.18
Artichokes	-	-	-	-	-	-
Dried Alfalfa	-	-	-	-	-	-
Green Alfalfa	405	39,285	30,582.86	300	29,301	11,755.07
Blueberries	26	0	-	669.45	1,0394.37	382,591.21
Fodder Oats	250	7,690	5,293.30	56	1,898.4	1,190.67
Beets	20	413	2,160.85	-	-	-
Broccoli	105	1,316	7,730.03	-	-	-
Sugar Cane	118	12,980	11,558.43	-	-	-
Zucchini	70	1,394.4	8,310.96	1	20.2	126.69
Onions	20	510	4,744.85	-	-	-
Green Chiles	47	680.4	8,504.55	-	-	-
Cilantro	36	477.3	3,173.77	-	-	-
Cabbage	35	940	2,805.28	3	132	229.51
Cauliflower	8	180	639.18	3	62.1	509.33
Peaches	74	307.2	1,632.36	7	34.56	606.62
Corn	120	1,843	4,479.51	-	-	-
Raspberries	-	-	-	1,970.71	30,353.05	604,154.96
Strawberries	-	-	-	-	-	-
Strawberry Plants	140	22,579,200	30,529.54	75	45,000,000	52,105.47
Beans	10	21	358.51	-	-	-
Desi Garbanzos	-	-	-	-	-	-
Pomegranates	-	-	-	58	392.4	4,606.86
Guavas	-	-	-	-	-	-
Key Limes	14	109.2	313.20	-	-	-
Limes	-	-	-	2	21.8	103.38
Fodder Corn	2,000	30,800	27,342.65	370	17,005.9	10,055.51
Grain Corn	6,449	37,445.36	150,775.57	150	661.5	2,182.87
Apples	4	23.2	190.11	-	-	-
Grasses	4,950	119,250	48,622.45	1,053	30,431.7	11,616.12
Cucumbers	10	200	764.83	-	-	-
Pears	2	13	106.53	-	-	-
Radishes	55	1,001.25	3,423.88	4	153.2	532.17
Grain Corn Seed	150	1,215	4,895.25	-	-	-
Grain Sorghum	1,320	7,863.2	28,701.56	16	92.8	358.18
Tejocote	8	30.4	124.56	-	-	-
Tomatoes	315	16,122.6	239,173.11	115	17,250	153,308.95
Tomatillos	160	1968	13,439.14	-	-	-
Wheat	45	157.5	645.46	-	-	-
Carrots	55	1,597.5	7,201.00	-	-	-
Blackberries	-	-	-	120	1,576	38,315.89
<b>Total</b>	<b>19,401</b>	<b>22,879,547.51</b>	<b>777,106.16</b>	<b>10,175.29</b>	<b>45,186,511.34</b>	<b>2,108,145.49</b>

**Source:** Authors' elaboration with data for 2019 from the SIACON.

\* Value of production expressed in real pesos based on the INPC, base year 2018.



**Appendix E. Indicators of Gaps in Social Support by Municipality, 2010 and 2015**

	Gómez Farías		Zapotlán el Grande	
	2010	2015	2010	2015
<b>Total Population</b>	14,011	14,278	100,534	105,423
<b>Indicators (percentages)</b>				
<b>Age 15 and Older, Illiterate</b>	4.22	2.92	4.22	2.92
<b>Age 6-14, Not Attending School</b>	4.28	3.01	3.49	2.64
<b>Age 15 and Older, Has Not Finished Junior High School</b>	54.84	48.29	35.67	31.99
<b>Not Enrolled in Social Security Health Services</b>	28.01	10.69	27.58	12.55
<b>Housing With Dirt Floor</b>	9.98	4.96	3.04	1.3
<b>Housing Without Toilet</b>	2.61	1.56	0.63	0.38
<b>Housing Without Running Water</b>	4.94	1.59	1.86	0.41
<b>Housing Without Drainage</b>	2.33	1.65	0.54	0.15
<b>Housing Without Electricity</b>	1.21	0.32	0.41	0.17
<b>Housing Without Washing Machine</b>	30.64	23.73	17.91	16.33
<b>Housing Without Refrigerator</b>	19.24	11.79	6.96	5.77
<b>Index of Gap in Social Support (<i>rezago social</i>)</b>	-0.80083	-	-1.43685	-1.2745
		0.79056		
<b>Degree of Gap in Social Support</b>	Very low	Low	Very low	Very low
<b>Rank Among Municipalities Nationally</b>	1,852	1,860	2,366	2,340

**Source:** Authors' elaboration based on 2015 national, state, and municipal data for the *índice de Rezago Social*, CONEVAL (2015a).



**Appendix F. Indicators of Multidimensional Poverty in Gómez Farías, 2010 and 2015**

Indicators	Percentage		No. of Persons		Average No. of Gaps	
	2010	2015	2010	2015	2010	2015
<b>Multidimensional Poverty</b>						
Population in Multidimensional Poverty	55.8	53.8	9,609	7,718	2.6	2.3
Population in Moderate Multidimensional Poverty	45.6	47.5	7,847	6,817	2.3	1.8
Population in Extreme Multidimensional Poverty	10.2	6.3	1,763	901	3.7	3.5
Vulnerable Population due to Social Deprivation	32.6	26.0	5,608	3,723	2.2	1.8
Vulnerable Population by Income	3.8	9.5	649	1,357		
Non-poor and Non-vulnerable Population	7.8	10.8	1,343	1,550		
<b>Social Deprivation</b>						
Population With at Least One Social Deprivation	88.4	79.7	15,217	11,441	2.4	1.9
Population With at Least Three Social Deprivations	35.8	20.0	6,166	2,873	3.7	3.4
<b>Indicators of Social Deprivation</b>						
Educational Gap	29.5	27.7	5,076	3,968	3.1	2.5
Access to Health Services	18.3	11.4	2,156	1,633	3.2	2.8
Access to Social Security	72.2	58.5	12,429	8,396	2.6	2.1
Quality and Space in Housing	19.6	17.4	3,365	2,503	3.7	2.7
Access to Basic Services in Housing	31.1	26.7	5,352	3,837	3.4	2.6
Access to Food	43.9	11.6	7,560	1,666	3.2	2.8
<b>Welfare</b>						
Population Below the Well-being Line	59.6	63.2	10,258	9,075	2.4	1.7
Population Below the Minimum Well-being Line	21.5	19.1	3,695	2,738	2.6	2.0

**Source:** Authors' elaboration based on a dynamic search of results from the 2010 and 2015 Municipal-Level Assessment of Poverty, CONEVAL, 2017.



**Appendix G. Indicators of Multidimensional Poverty in Zapotlán el Grande, 2010 and 2015**

Indicators	Percentage		No. of Persons		Average No. of Gaps	
	2010	2015	2010	2015	2010	2015
<b>Multidimensional Poverty</b>						
Population in Multidimensional Poverty	35.2	35.0	33,544	35,721	2.0	1.7
Population in Moderate Multidimensional Poverty	31.9	33.2	30,438	33,888	1.8	1.6
Population in Extreme Multidimensional Poverty	3.3	1.8	3,106	1,833	3.5	3.3
Vulnerable Population due to Social Deprivation	26.3	20.4	25,077	20,798	1.8	1.5
Vulnerable Population by Income	10.3	14.6	9,839	14,849		
Non-poor and Non-vulnerable Population	28.2	30.0	26,935	30,574		
<b>Social Deprivation</b>						
Population With at Least One Social Deprivation	61.5	55.4	58,622	56,519	1.9	1.6
Population With at Least Three Social Deprivations	12.7	7.0	12,100	7,118	3.4	3.3
<b>Indicators of Social Deprivation</b>						
Educational Gap	18.1	16.2	17,231	16,545	2.3	2.0
Access to Health Services	25.5	11.3	24,333	11,543	2.5	2.4
Access to Social Security	44.3	38.7	42,229	39,433	2.2	1.8
Quality and Space in Housing	6.7	7.2	6,364	7,334	2.9	2.4
Access to Basic Services in Housing	5.0	2.6	4,815	2,684	2.6	2.9
Access to Food	17.6	14.3	16,786	14,595	2.5	1.9
<b>Welfare</b>						
Population Below the Well-being Line	45.5	49.6	43,384	50,570	1.5	1.2
Population Below the Minimum Well-being Line	14.3	11.5	13,672	11,749	1.8	1.5

**Source:** Authors' elaboration based on a dynamic search of results from the 2010 and 2015 Municipal-Level Assessment of Poverty, CONEVAL, 2017.



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The Mexico Institute at the Wilson Center has partnered with CIESAS and TPT in order to provide fresh, rigorous analysis of labor conditions in Mexico's export agriculture. Starting in 2019, Mexico's government has prioritized labor, wages, and working conditions, and enacted substantial reforms to its labor laws. These reforms should lead to improvements in pay and benefits, as well as a wide-ranging transformation of Mexico's labor unions. In addition, the new North America trade agreement that entered into effect July 1st, 2020 has, for the first time, made compliance with labor standards a binding condition for its partners.

In 2019, the Wilson Center, Migration Dialogue and CIESAS published the first representative study of working conditions in Mexico's export agriculture. This second volume provides four in-depth studies of the history of agriculture and labor in four of the most significant regions in export agriculture. Mexico's recent boom has transformed the economies, populations, migration flows, urban life, poverty levels, service delivery, and land and water use in many Mexican regions.

The book explores the shift to berries and avocados in Southern Jalisco; the surge in tomato exports in Sinaloa; the recent labor movements and production arrangements in Baja California; and the Bajío's highly diversified fresh and frozen produce boom. It also describes precarious employment in each region, to understand the extent to which it is linked to exports.

*Agustín Escobar Latapí*  
CIESAS Occidente

Over the past two decades, the dramatic expansion of export agriculture in Mexico has entailed a similar growth in the demand for labor, which itself has triggered individual and family migration from poorer areas in search for better life opportunities. This important book presents the results of a long-term collective study based on ethnographic, documentary, statistical and survey research in five leading export regions, which thoroughly examines the relationships between employment in export agriculture and access to better salaries, work benefits, social security and services, and living conditions in general. Without doubt, it will become a necessary source of information and ideas for public policies and both entrepreneurial and civil society strategies.

*Guillermo de la Peña Topete*  
CIESAS Occidente

This study's main achievement lies in providing the ground-level analysis that explains the good and bad news coming out of Mexico's export agriculture: The rise in formal employment, pay, and reduced poverty levels in export agriculture states, together with the informality and precariousness of jobs that are usually –but not exclusively– aimed at the domestic market. The reader will understand how social and economic conditions vary across various regions.

*Gerardo Otero*  
Professor of International Studies, Simon Fraser University  
Past President, Latin American Studies Association

These four survey and ethnography-based studies provide unique insights into the socioeconomic conditions of farmworkers in the horticultural export sector in the Mexican States of Jalisco, Sinaloa, Baja California, and Guanajuato. Because official statistics on this topic are scant, these regional studies greatly advance our knowledge in this area.

*Steven Zahniser*  
Agricultural economist



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