

Human Rights Impact Assessments: Oranges in Brazil

October 2025

Contents

1 Executive Summary	
2 About Us	3
3 Methodology	4
3.1 Impact Assessment Approach	4
3.2 Limitations	g
4 Context & Industry Landscape Review	11
4.1 Oranges in Brazil Supply Chain	11
4.2 Key Players and Human Rights Context in Brazil	12
4.3 Lidl's Sourcing Policies & Practices for Oranges	14
5 Impact Assessment Findings	15
5.1 Findings and Saliency Determination	15
5.2 Other Considerations	22
6 Recommendations	24
Appendix 1: Cited Sources	27

1 Executive Summary

Background & Objectives

Through a combination of on-site evaluations and stakeholder interviews, this Human Rights Impact Assessment (HRIA) seeks to evaluate the human rights impacts associated with orange harvesting for juice production in Brazil. Brazil is a major player in this industry, supplying approximately three-quarters of the world's orange juice supply. Lidl works, via its suppliers, with several of the country's major orange juice exporters to source orange juice from Brazilian oranges for its European markets. This assessment focuses on orange harvesting and processing at farms that supply for some of these processors. Based on findings from this research, this report outlines key issues affecting orange workers on farms and plantations and provides recommendations to improve working conditions. With this project, Lidl sought a comprehensive view of human rights impacts in the sector, both to better assess the impact its engagement has had over the years and to guide priorities for future work.

Scope and Focus

This HRIA focuses on two levels of orange juice production in Brazil: the farms (also referred to as plantations) where workers pick orange fruits and processors, where those oranges are processed. A range of inputs informed the findings and recommendations presented below, including desktop research, interviews with expert stakeholders, risk intelligence from LRQA's proprietary EiQ platform, and visits to sites within the orange juice supply chain. These in-person assessments took place on sites of various sizes in the Brazilian states of Minas Gerais and São Paulo, which is the heart of Brazil's citrus belt and responsible for 80% of the country's orange juice output.²

2 About Us

About Lidl

Being part of the companies of Schwarz Group, Lidl is a major international retailer and operates around 12,600 stores in 31 countries in Europe and the United States. As a result of their highly complex supply chains, Lidl faces diverse sustainability-related challenges, specifically on human rights. This is why Lidl has taken steps to address human rights in its supply chains by conducting Human Rights Impact Assessments (HRIA) in specific prioritised high-risk supply chains.

About LRQA & Expertise

Lidl engaged LRQA to complete this impact assessment as an independent organization. LRQA is the industry leader in ESG risk management and assurance services worldwide, with business activities in over 100 countries. We are engaged at all levels of the supply chain: from consultancy at corporate level to engagement with managers and workers in factories to assess risk, support improvement, and drive impact. LRQA has conducted HRIAs across multiple industries and around the world. The LRQA team for this project brings a combined 35+ years of relevant industry experience to this work and has conducted many engagements related to human rights in global supply chains.

¹ Citrus Industry. "Brazilian Orange Juice Trade." Citrus Industry, January 31, 2025. https://citrusindustry.net/2025/01/31/brazilian-orange-juice-trade.

² Adrià Budry Carbó, Public Eye. "Bitter Oranges." *Public Eye*, June 2020. <u>https://stories.publiceye.ch/oranges-brazil</u>.

For this Human Rights Impact Assessment (HRIA), LRQA worked in conjunction with Lidl with support from other subject matter experts to conduct research and interviews to frame the contents of this report.

Acknowledgements

The HRIA process could not have been completed without the time, effort, and expertise provided by all participating key experts, rightsholders, and other stakeholders that participated throughout the process. LRQA would like to graciously thank all parties who contributed to this research and acknowledge the critical role they played in completing this work.

We also want to acknowledge and thank the suppliers who participated in this impact assessment and enabled third-party access to the sites, managers, and workers for site visits and interviews. LRQA would also like to thank Marcel Gomes at Reporter Brasil, Sandra Dusch-Silva at Christliche Initiative Romero, and stakeholders who preferred to remain anonymous for providing key background and insight into this industry and the broader human rights landscape.

Some parties' identities within this HRIA remain confidential to ensure that experiences and information shared were expressed candidly. We expressed our appreciation to these anonymous contributors during interviews and want to acknowledge their valuable input here.

Most of all, we thank the workers who participated in the site visits. Their time and input were invaluable in drafting this report and will hopefully lead to better working conditions in the future.

3 Methodology

3.1 Impact Assessment Approach

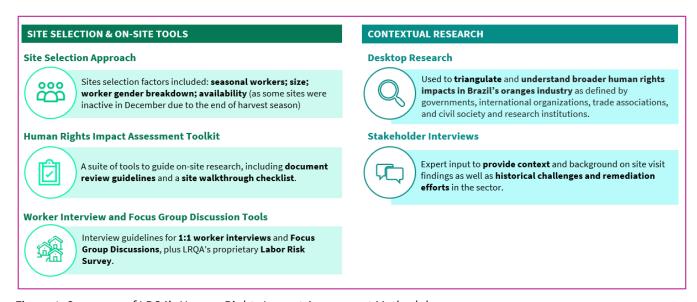


Figure 1. Summary of LRQA's Human Rights Impact Assessment Methodology.

Determining the Scope and Focus of this HRIA

Lidl conducts yearly risk assessments and therein identified oranges – especially in supply chains for processed goods – as a high-risk raw material for its Brazilian origin. Brazil is the largest origin for orange juice sold at Lidl in Germany. So far, other HRIAs have been conducted in fresh fruits and vegetables but not for Lidl's juice supply chain. Lidl therefore decided to dive deeper into its orange juice supply chain from Brazil to understand the risks in the ground and based on the assessment work on preventative measures to address the risks identified.

Project Team

LRQA's team of human rights experts led this project. The project team included an expert in global human rights, senior-level advisors specialized in human rights and agriculture, and consultants with expertise in agriculture and supply chain investigations.

LRQA's field research team was responsible for conducting the on-site assessments, described in more detail further down in this section. This team was comprised of two experienced social compliance experts with deep human rights experience in Brazil. The lead researcher has 15+ years of social compliance experience in the agricultural sector, with specific experience in migrant worker experience, Occupational Health and Safety, and Rainforest Alliance certification standards. The secondary researcher also brings experience with social compliance in the agricultural sector (with a focus on coffee) and Rainforest Alliance standards. The research team members spoke Brazilian Portuguese, the workers' primary language. The project team ensured that one of the researchers was a woman to ensure female workers felt comfortable participating in the assessment.

Stakeholder Engagement & Desktop Research

The desktop research component of the project involved a comprehensive review of existing literature, reports, and data on the orange industry in Brazil. Key sources included academic papers, NGO reports, and industry publications that provided insights into the human rights and environmental impacts of orange production. This research helped to identify the main issues and contextual factors affecting workers and communities involved in the orange supply chain.

Leveraging Oxfam's HRIA guidance, the project team identified and mapped a variety of stakeholders with in-depth knowledge of the orange industry and human rights issues in Brazil. LRQA reached out to a prioritized subset of these stakeholders to request virtual interviews. LRQA requested interviews from stakeholders at industry associations, certification bodies, and NGOs, as well as journalists and industry experts. The project team conducted remote interviews with responsive stakeholders. LRQA then employed a "snowball method" approach to identifying additional stakeholders: at the end of each interview, the project team asked the interviewee whether there were any other individuals they would recommend we speak with. Wherever possible, LRQA secured additional introductions or references through this approach. Ultimately, LRQA conducted interviews with investigative journalists and commodity experts at a non-profit. The interviews provided valuable context and helped to validate findings and recommendations.

Site Selection

Lidl maintains direct contractual relationships with orange juice bottlers in Europe. These bottlers source their orange juice from any of three major suppliers in Brazil. Those three suppliers – Louis Dreyfus Company (LDC), Citrosuco, and Cutrale – source from networks of farms (or "plantations") to produce orange juice and orange juice concentrate for export to Europe. Lidl's orange juice sourcing is described in more detail in section 4.3, beginning on

page 13. For the purpose of this project, we sought to visit orange farms (where oranges are grown and harvested) and processors (where picked oranges are processed into juice or concentrate) that supplied to any of the three major exporters.

With Lidl's support, we contacted two out of the three exporters to see if they would be willing to participate in the project by sharing their site lists so we could randomly select farms and processors to visit. After an extended back and forth over several months, one exporter declined to participate in the HRIA, instead offering a one-day "institutional visit" several months in the future (which LRQA did not pursue). The other exporter agreed to participate in the project and shared a site list of the orange farms and processors that they sourced from in Brazil.

This list included information about the total number of workers on site, including a gender breakdown; whether the site employed foreign migrant workers and from which countries; the main languages spoken on the site; the site size (including number and type of buildings); and basic contact and location information. In consultation with Lidl, LRQA selected a subset of farms and processors from this list based on a number of factors: annual spend; presence of foreign migrant or seasonal workers; worker gender breakdown; and Rainforest Alliance certification, with the aim of using a diverse sample of sites for this assessment. Given that the visits would take place towards the end of harvest season (see Limitations section below), LRQA then asked the supplier which of these shortlisted sites would be active during the site visit period. This indicator significantly reduced the number of eligible sites. Based on these factors, LRQA selected and visited two orange farms and one processor. The processor had approximately 400 workers, while the farms had between 150 to 250 workers.³

Site Visit Methodology

LRQA used its proprietary framework for the site visits. This framework is based on the HRIA guidance documents provided by the United Nations Guiding Principles for Business and Human Rights, the Danish Institute for Human Rights, and Oxfam. The framework is designed to capture all potential human rights risks as defined by the UNGPs, the International Bill of Human Rights and the International Labor Organization (ILO) conventions as well as the various experiences of rightsholders. LRQA has deployed versions of this framework in previous HRIAs and further tailored the guidance document to the Brazil/oranges context. This adaptation included incorporating approaches from LRQA's Responsible Sourcing Assessment for Agriculture (ERSA Ag), ILO conventions, and industry standards. Gender considerations were embedded throughout the toolkit, including specific questions on violence and harassment and discrimination during recruitment and hiring.

The HRIA framework included a suite of tools to guide the researchers' site visits. It included guidance for:

- Conducting a tour of the physical site (heavily adapted from an audit checklist)
- Reviewing key documentation (i.e., policies, pay slips, etc.)
- Conducting 1:1 interviews with workers and focus group discussions (conversations with 10-15 workers at a time)

Before the site visits, LRQA led informational, context-setting virtual meetings with each supplier's management team. These meetings aided site selection and provided additional background information about the agenda,

³ Given that these site visits took place towards the end of the harvest season, it is likely that the full cohort of workers was not present on each site. The majority of the workforce are seasonal workers and would likely have rotated to other farms as the harvest season wrapped up.

duration, and focus of the site visits. The research team then coordinated directly with site management in the days and weeks leading up to the visits.

Site visits were conducted in December 2024. Each site visit included a tour of the different facilities (including fields, packaging houses, offices, worker housing and rest areas, and other facilities), worker and management interviews, focus group discussions, and a critical review of the human rights and labor environment and experiences of workers. Researchers took steps to ensure that the sample of consulted workers included a balanced gender representation, with particular attention to vulnerable groups such as women and migrant workers.

Finally, as part of these site visits, the research team deployed LRQA's proprietary Labor Risk Survey to a subset of workers at each site. This survey consists of approximately 30 multiple choice questions to gauge workers' risk of forced labor. Most questions utilize a Likert scale. Questions focus on worker demographic information and their experience on the work site related to forced labor indicators (i.e., freedom of movement, documentation retention, working hours, etc.). The survey was available in Portuguese, the workers' primary language. While the survey can be – and often is – deployed digitally, there were concerns around connectivity and literacy on these sites. As a result, the research team instead utilized paper surveys for the site visits of this HRIA and, in some cases, verbally asked workers questions and documented answers separately.

Profile of Stakeholders Consulted During Site Visits

The findings in this report reflect data from direct consultations with 66 participants at the two orange farms and one processor in Brazil. These interviews represent conversations with approximately 8 percent of workers across the three sites. All participants were consulted either directly or in small group discussions (~10 participants). Approximately 53% of directly consulted participants were women. An additional 25 workers (50% of which were women) completed the Labor Risk Survey referenced above⁴.

Re	search Method	Number of Stakeholders Engaged Across All Three Site Visits	Gender Breakdown
Individual	Supplier/Site Management	11 management staff	7 men, 4 women
Interviews	Workers	39 workers	20 men, 19 women
Focus Group Discussions	Workers	16 workers	4 men, 12 women
Total		66 employees	31 men, 35 women

Saliency Determination

The project team collated and analyzed the findings from the site visits, stakeholder engagement, and desktop research. During this data analysis period, the project and research teams worked collaboratively to process and contextualize the findings from the site visits. This approach involved a weeks-long dialogue, conducted both in writing and over phone calls, between the research team and the project team to fully understand the findings and

⁴ Note that, due to time constraints during the site visits (as referenced in Section 3.2), this number is lower than LRQA would typically use.

limitations from the site visits. This iterative process was especially important given the limited scope of the site visits, which necessitated trade-offs in the research approach.

Based on this analysis, LRQA identified the human rights risks that emerged and then reviewed every risk through the lens of saliency, in alignment with the UNGP guidelines. Salient human rights issues are topics that pose the most severe negative impact through a company's activities and business relationships. Saliency can be determined by identifying the severity and likelihood of each issue:

Severity reflects how grave and widespread the negative human rights impact would be on people (not on the business) and how difficult it would be to put right the resulting harm. In alignment with the UNGPs, three factors inform severity:

- Scale of the impact: How serious is the impact as an infringement on people's human rights?
- Scope: How many people would be impacted?
- Irremediability: If the impact occurred, would it be possible to reverse the harm done, and how quickly?

Likelihood considers the potential for the human rights impact to occur in the future, recognizing that these are often, though not limited to, impacts that have occurred in the past. Likelihood is informed by two factors:

- Operating context: The geography, area and associated potential impact on human rights
- Business relationships: Relationship with e.g., supplier, and connection to the issue through the value chain

For this assessment, impacts were given a high likelihood score if they were identified in any of the site visits and corroborated by stakeholders and/or desktop research. Issues that were identified by one source (stakeholder interview or desktop research) and not confirmed by any site visit or worker interviews were given a lower likelihood rating.

The findings from the site visits informed this analysis and helped to indicate the potential of the risk occurring across the industry (i.e., the potential likelihood). This data was triangulated with, and supported by, findings from stakeholder engagement and desktop research. The team used these inputs to determine the severity and likelihood of each identified issue to understand its saliency.

The Impact Assessment Findings section includes an overview of each finding, the saliency of the issue, and recommendations for remediation or mitigation.

Safety Measures and Protocols

The following safety measures were taken to ensure that the HRIA research was conducted safely, responsibly, and effectively:

- All HRIA visits were announced to site management at least one week prior to the visit.
- LRQA's project team was in close contact with the research team throughout the site visit period to monitor safety and troubleshoot emerging issues.
- Worker confidentiality was strictly enforced through processes and procedures by the research team. Steps
 to address worker confidentiality include ensuring that no worker names were collected at any point and
 that sites remain anonymous in this report.
- Workers were briefed on non-retaliation policies prior to participating in the research.

- Researchers verbally shared an informed consent statement and purpose of the research with everyone interviewed.
- Interviews took place in private locations.
- Worker communication and interviews took place in the workers' preferred language, Brazilian Portuguese.
- Photos were limited to the farm or processing site premises.
- No photos were taken without prior permission from the site and individuals were not included in any of the photos.

3.2 Limitations

Despite efforts to make this assessment as robust and representative as possible, certain limitations on the scope of the research are unavoidable. The following limitations should be taken into consideration when reviewing the results:

- The scope of the site visits does not fully represent the entire Brazilian orange industry, as two of the three major Brazilian exporters were unwilling to participate in this project (see the "Site Selection" section, above, for more detail). As such, LRQA was not able to visit sites that supply all major orange processors in Brazil.
- Challenges with responsiveness from the three major Brazilian exporters and willingness to participate in
 the project significantly delayed the assessment planning process. As a result, the onsite visits were
 planned toward the end of harvest season and on short notice, leading to reduced site availability, smaller
 worker sample sizes, and shorter duration of site visits:
 - o Since the site visits were planned at the very end of harvest season, fewer sites were active and therefore able to participate.
 - Further delays in supplier responses and limited research availability shortened the assessment time from 4 to 5 days (LRQA's preferred duration) to just 1 to 2 days per site. With this limited time, the research team was not able to conduct as many interviews as usual and was not able to engage with community members in any capacity.
 - o Deployment of the Labor Risk Survey was also significantly more limited: LRQA collected responses from 25 workers across the three sites, which is a relatively low percentage of the total number of 827 workers employed across the sites (again, noting that it was unlikely that all 827 workers would be physically present on site, given the timing during the harvest season). On a more typical, longer (i.e., 4-5 day) site visit, we would expect to survey a significantly higher percentage of the workers present on-site. As a result, survey results cannot be considered representative of widespread worker sentiment.
 - o Journalists have previously documented challenges gaining access to orange farms and their workers. In a report by Public Eye, a Switzerland-based non-profit organization focused on human rights, multiple orange farms refused to grant researchers access to the farms. When Public Eye journalists did receive access to the farms, some site managers followed the researchers to prevent them from speaking to the workers⁵. While LRQA encountered reticence from the suppliers to schedule the visits, our research did not report difficulty accessing the sites or workers. Still, these historical cases and our own interactions with suppliers suggest that transparency and challenges with conducting assessments might point to widespread issues.

⁵ Adrià Budry Carbó, Public Eye. "Bitter Oranges." *Public Eye*, June 2020. https://stories.publiceye.ch/oranges-brazil.

- Findings reflect only a point in time measure of working conditions since we were not able to conduct multiple visits over the course of a year.
- Since these visits took place at the end of harvest season, these findings do not present a comprehensive
 picture of the working conditions on the sites. In particular, given their timing, they do not reflect the
 conditions of the sites during peak production periods. The timing also meant that fewer workers were
 onsite, meaning our researchers had a smaller sample size of individuals to speak with.
- This research was conducted across multiple languages, as the onsite researchers work in Portuguese and the LRQA project team in English. While efforts were made to ensure accurate interpretation and analysis, some nuances in the information collected may have been missed during translation.
- The sites required advance notice about site visits in order to retrieve worker documentation, which is stored in data centers. Providing advance notice can result in greater risk of falsification of data or other "coaching" activities.
- Site managers accompanied the researchers throughout the assessment, as the sites' safety protocol does not permit visitors to be left unaccompanied. The site managers stepped away during interviews. Although the researcher did not perceive ill intent from the site managers, their presence nearby may have limited workers' willingness to share information out of fear of retaliation.

For a more comprehensive view of the human rights impacts in orange production, we recommend that future researchers visit sites in multiple orange companies' supply chains throughout the harvest season, including visits to independently owned and vertically integrated sites.

4 Context & Industry Landscape Review

4.1 Oranges in Brazil Supply Chain

Market Overview of Commodity

Brazil is the world's largest producer of oranges, accounting for nearly 22% of global production⁶. In 2024, Brazil's citrus industry exported \$196M of citrus; the three largest destinations were the Netherlands, the United Kingdom, and Spain.⁷ According to USDA estimates, Brazil's orange harvest for the 2025/26 season is expected to reach 13 million metric tons, a 15% decrease from the 2023/2024 season. In the last 2-3 years, Brazil's orange production has seen its lowest yield since 1988.⁸ This industry is vital to Brazil's economy, especially in the state of São Paulo, which is the hub of national production. The Citric Belt, which encompasses São Paulo and the western part of Minas Gerais (Triângulo Mineiro), is responsible for over 80% of Brazil's orange production. This sector generates thousands of direct and indirect jobs, from farmers and pickers to processing factories and logistics companies.⁹

Brazil's orange industry is crucial not only domestically but also internationally. The country is the leading exporter of orange juice, with major export destinations including the European Union and the United States. Brazil is the world's leading exporter of orange juice and accounts for 75% of orange juice marketed in the world. With the recent Mercosur-European Union agreement, Mercosur (the South American Trade Bloc), driven by Brazil's substantial production volume, is projected to supply half of the EU's orange juice imports. This will boost Brazil's competitive standing in the global market.¹⁰

Brazil's orange industry is a major job generator, with the 2023 harvest creating 54,232 jobs and contributing to 35% of the 154,462 new hires in agricultural support services. ¹¹ The citrus belt accounted for 87% of citrus farming jobs. This growth persisted despite challenges like citrus greening, a bacterial disease that significantly reduces orange production (see Section 5.2, below, for more details), and high temperatures. ¹² However, precarious working conditions, including wage non-compliance, remain concerns.

 $\underline{https://econatur.net/en/crops-and-countries/the-brazilian-orange-queen-of-citrus-fruits.}$

⁶ WorldOStats. "Orange Production by Country 2025." *WorldOStats*, n.d. <u>https://worldostats.com/orange-production-by-country-2025</u>.

⁷ OEC - The Observatory of Economic Complexity. 2024. Citrus in Brazil. https://oec.world/en/profile/bilateral-product/citrus/reporter/bra.

⁸ U.S. Department of Agriculture (USDA), Foreign Agricultural Service (FAS). "Brazil Citrus Annual." *U.S. Department of Agriculture*, March 2025. https://www.fas.usda.gov/data/brazil-citrus-annual-7.

⁹ EcoNatur. "The Brazilian Orange: Queen of Citrus Fruits." *EcoNatur*, n.d.

¹⁰ FreshPlaza. "Mercosur-EU Agreement to Phase Out Tariffs on Brazilian Orange Juice Exports." *FreshPlaza*, March 11, 2024. https://www.freshplaza.com/latin-america/article/9690591/mercosur-eu-agreement-to-phase-out-tariffs-on-brazilian-orange-juice-exports.

¹¹ Revista Cultivar. "Job Creation in Citrus Growing by 8% in 2023." *Revista Cultivar*, January 2025. https://revistacultivar.com/news/job-creation-in-citrus-growing-by-8-in-2023.

¹² Fresh Fruit Portal. "Citrus Sector Drives Brazil's Ag Employment Even as Inventory Remains Low." Fresh Fruit Portal, March 11, 2024. https://www.freshfruitportal.com/news/2024/03/11/citrus-sector-drives-brazils-ag-employment-even-as-inventory-remains-low.

Commodity Supply Chain

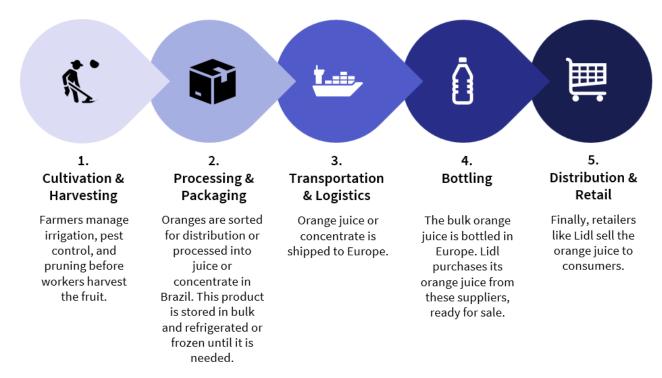


Figure 2: Overview of Brazilian Supply Chain for Orange Juice.

4.2 Key Players and Human Rights Context in Brazil

Political Economy and National Context

Brazil, home to 203 million people, had an inflation-adjusted GDP per capita of US\$9,032 in 2023. As a large federal nation, it consists of the union (federal government), 26 states (plus the Federal District), and over 5,500 municipalities. Despite its diversity, systemic racial and gender discrimination remain significant barriers, restricting opportunities for many to escape intergenerational poverty.

The country faces stark economic disparities and high poverty levels. Although it is one of South America's largest economies, a significant portion of the population lives below the World Bank's poverty threshold of US\$6.85 per capita per day¹³. The minimum wage often fails to cover basic needs, contributing to widespread economic insecurity. Gender inequalities persist, with women – especially those of African descent – experiencing higher unemployment and lower wages than men.

Brazil participates in trade agreements such as Mercosur, promoting regional commerce. However, limited worker mobility agreements restrict labor movement across borders, hindering access to better job opportunities.

Regulatory Overview: National Law

We heard from multiple stakeholders that Brazil's regulatory environment is weak, with inadequate enforcement of labor laws and protections. Significant gaps in state inspections, limited funding for regulatory bodies, and weak

¹³ World Bank. "Brazil Overview." World Bank, n.d. https://www.worldbank.org/en/country/brazil/overview.

legal safeguards leave many workers vulnerable. Issues such as wage theft, poor working conditions, and lack of proper housing are not effectively addressed by existing regulations. Additionally, alternative resources for reporting violations and seeking assistance are scarce. Companies must take greater responsibility for compliance and worker support to bridge these enforcement gaps and improve labor conditions.

Human Rights Conventions

Brazil is a signatory to several key international human rights treaties, including the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social, and Cultural Rights (ICESCR), the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), and the Convention on the Rights of the Child (CRC). Additionally, Brazil has ratified most core conventions of the International Labour Organization (ILO), which safeguard fundamental labor rights such as freedom of association, collective bargaining, and the eradication of forced and child labor¹⁴.

Key Human Rights Challenges

Brazil faces significant human rights challenges, particularly in labor rights and environmental protection. In the orange industry, working and living conditions for pickers – mostly migrants from the impoverished northern regions – are often considered harsh. Many workers receive wages below the legal minimum, further affected by an opaque and strenuous payment system, and substandard housing. As these workers may have to travel as far as 3,000 kilometers from the northeast to the worksites, they rely on employer-provided accommodation. Employers or labor brokers who facilitate their migration often deduct excessive fees from their earnings for this travel¹⁵.

Brazil's economy has rapidly expanded, rising from the ninth to the sixth-largest globally over the past decade. ¹⁶ Yet according to social and environmental organizations, this growth has come at a cost. The country has the highest deforestation rate in the world, and pollution increasingly threatens its drinking water supply. Although national greenhouse gas emissions have recently declined, emissions from agriculture and energy consumption continue to rise¹⁷.

Gender inequality remains a pressing issue, limiting women's opportunities and rights across various sectors. Women play a crucial role in Brazil's agricultural sector, although they remain underrepresented. However, in the first quarter of 2023, the number of women employed in agribusiness grew by 1.3%, adding almost 140,000 more women to the sector. The country ranks second to last in Latin America on the gender gap index, with discriminatory labor laws further exacerbating workplace inequality. The country ranks second to last in Latin America on the gender gap index, with discriminatory labor laws further exacerbating workplace inequality.

Brazil has seen a sharp decrease in its percentage of unionized workers over the last decade. In 2022, 9.2% of workers in the country were members of a union, down from 16.1% in 2012.²⁰ The decrease is largely attributed to a 2017 labor reform law in Brazil, which made union dues optional and subsequently led to a sharp decrease in union budgets and therefore influence. While the agricultural sector has the country's highest unionization rate, at

_

¹⁴ Social Watch. "Treaties." Social Watch, n.d. https://www.socialwatch.org/node/97/treaties.

¹⁵ Adrià Budry Carbó, Public Eye. "Bitter Oranges." Public Eye, June 2020. https://stories.publiceye.ch/oranges-brazil.

¹⁶ GeoRank. "Economy of Brazil." *GeoRank*, n.d. https://georank.org/economy/brazil.

¹⁷ World Resources Institute (WRI). "Ensuring Economic Growth and Environmental Sustainability in Brazil." *World Resources Institute*, n.d. https://www.wri.org/insights/ensuring-economic-growth-and-environmental-sustainability-brazil.

¹⁸ Brazilian Farmers. "A New Record: 28 Million Brazilians Work in Agribusiness." *Brazilian Farmers*, September 13, 2023. https://brazilianfarmers.com/news/a-new-record-28-million-brazilians-work-in-agribusiness/.

¹⁹ Oliver Wyman. The Gender Gap Lifecycle. August 2018. https://www.oliverwyman.com/our-expertise/insights/2018/aug/the-gender-gap-lifecycle.html.

²⁰ IBGE. 2023. "Taxa de sindicalização cai a 9,2% em 2022, menor nível da série." *Agência de Notícias do IBGE*, September 15, 2023.

16.5%²¹, there are no specific figures for unionization amongst workers on orange farms. The nature of that workforce as largely informal and/or seasonal suggests that union participation is low.

Note that additional findings from the desktop research can be found in Section 5, below.

4.3 Lidl's Sourcing Policies & Practices for Oranges

Lidl is several steps removed from the farms and processing sites assessed as part of this project. The company purchases ready-to-use orange juice (not raw oranges) from its suppliers, which are bottlers in Europe. These bottlers in turn purchase orange juice from the three main suppliers in Brazil. Lidl signs 12-month contracts with these suppliers (bottlers); every year, the company issues a new tender and renegotiates new terms with its suppliers.

Despite the fact that contracts only operate for one year at a time, Lidl maintains long-term relationships with most of its suppliers. Lidl reports that its supplier relationships are, on average, ten years long. Some relationships have lasted 20-30 years; the newest relationships are more than five years.

In its supplier selection, Lidl's tenders do not specify any requirements for human rights activities, although Lidl does require that the orange juice suppliers' source from Brazil is Rainforest Alliance certified. Lidl's direct business partners are also required to sign Lidl's Supplier Code of Conduct and Sustainable Purchasing Policy. Lidl conducts annual audits of its direct suppliers and expects that those suppliers audit their own facilities every 12-18 months. Lidl does not participate in any monitoring or engagement of its downstream suppliers in Brazil.

Like most other retailers, Lidl has seen its margins for orange juice shrink dramatically over the past several years. Lidl indicated that the price per ton for orange juice from concentrate has more than tripled in the last three years due to shrinking crop outputs and consistent or increased demand for the product.

This Human Rights Impact Assessment supports compliance with the German Due Diligence Act (LkSG) and the Corporate Sustainability Due Diligence Directive (CSDDD). The LkSG and the CSDDD require companies to identify, prevent, and mitigate human rights and environmental risks in their supply chains. Lidl follows these requirements by taking a risk-based approach, assessing suppliers, and implementing measures to address potential issues, including in the Brazilian orange juice industry. Findings from this HRIA support ongoing efforts to enhance Lidl's responsible sourcing strategy and, together with further due diligence measures, supplier engagement programs, participation in multi-stakeholder initiatives, and continued stakeholder dialogue in Brazil, contribute to meeting regulatory requirements. The EU Forced Labor Ban, which prohibits products linked to forced labor from entering the EU market, reinforces this need for robust due diligence.

-

²¹ IBGE. 2023. "Taxa de sindicalização cai a 9,2% em 2022, menor nível da série." *Agência de Notícias do IBGE*, September 15, 2023.

5 Impact Assessment Findings

Note: LRQA arrived at the saliency ratings in the table below using the methodology outlined in Section 3.1, beginning on page 7. Please refer to this section for more details on the approach.

5.1 Findings and Saliency Determination

Impacted Rights	Sectoral findings from desktop research and expert interviews	Findings from site visits	Saliency
Harassment & Abuse	Stakeholders we spoke to said that "threats and intimidation" of workers are common on orange farms. During their own visits to farms, they reported that workers would not speak openly with them and stared down at their feet, as site managers lingered nearby.	 Several, seemingly isolated cases of harassment were reported at the sites. At one site, verbal abuse was reported by one worker through the Labor Risk Survey. At another site, one worker reported physical abuse and unwelcome physical contact. During interviews at the same site, sexual harassment between two employees was reported. At that same site, psychological and verbal abuse was reported in one survey response and during interviews. Site managers could not share information on how these cases were handled, as these cases are handled by senior management and proceedings are kept confidential. 	Medium

Grievance Mechanisms	Research on the usage of grievance mechanisms is limited. One stakeholder with years of experience visiting orange farms said that worker trust in grievance mechanisms was very low, even when the mechanism is third-party operated. This stakeholder recommended that it is more useful to connect workers to unions or the local labor inspectorate to raise and mitigate concerns.	The third-party grievance mechanism in place at the two farm sites was insufficient. Both farms had a sign about the grievance mechanism posted in one location. This meant that workers who wanted to file an issue had to return to the sign and note the contact information, rendering the hotline relatively inaccessible. Farm workers our researchers spoke to reported not knowing the number to call to file a grievance. In select instances where workers were able to file complaints, they do not ever hear back from the hotline about the resolution of their case. In contrast, workers at the processor plant have the hotline number on their individual badges.	Medium
Forced Labor	The sector has a history of forced labor conditions on farms. Between 2019-2020, researchers found forced labor conditions on two farms. Conditions included no contracts, debt bondage, no access to drinking water and/or toilets, and no PPE. 22 Reporters have also heard directly from suppliers that they use unregistered teams, without PPE. 23 Desktop research and interviews corroborated that debt bondage	No evidence of forced labor was found on-site. Some of the key indicators that previous research had identified were not found during our site visits: • Workers on all three sites receive written employment contracts prior to employment. • Our researcher confirmed that bathrooms and drinking water were provided at every site. No evidence of exploitative labor practices was found amongst the workers interviewed during the site visits.	Medium

 $^{^{\}rm 22}$ Sucupira, Fernanda, ed. From Brazilian Farms to European Tables. March 2021. https://reporterbrasil.org.br/wp-content/uploads/2021/03/From-brazilian-farms-to-european-tables-EN.pdf. ²³ Adrià Budry Carbó, Public Eye. "Bitter Oranges." *Public Eye*, June 2020. https://stories.publiceye.ch/oranges-brazil.

is widespread among migrant Two of three sites - both farms workers. employed domestic migrant Migrant workers are common workers. These workers did not on orange farms. Most of report paying any recruitment these workers rotate to fees. different farms in Brazil There were no foreign migrant based on the harvest seasons. workers onsite. for various commodities (i.e., oranges, coffee, etc.). Broadly, these workers are not unionized and are largely illiterate²⁴. Most commonly, this debt bondage occurs when workers owe a labor broker or recruitment agent for their travel costs and housing. In some cases, workers also take out loans to buy food from kiosks that the agent maintains – with inflated prices. Workers often do not earn enough during the harvest season to pay back the labor agent, so they remain trapped in a cycle of debt. Reporters found that labor brokers "make promises they never keep"25. **Worker Health & Safety** Orange harvesting is still largely a Our research team did not find any Medium manual process, with significant, health and safety issues onsite. inherent health and safety risks. Workers on the farm sites Workers climb 5-meter-high reported that they were not ladders to handpick oranges required to work in the rain and and, at one site, must fill and still received a minimum wage carry 100 to 120 27-kilogram on those days. boxes each day.26 The work is The PPE that workers used was highly repetitive. in good condition. Our researcher reviewed records

²⁴ Ibid.

²⁵ Ibid.

²⁶ Adrià Budry Carbó, Public Eye. "Bitter Oranges." *Public Eye*, June 2020. <u>https://stories.publiceye.ch/oranges-brazil</u>.

	D 1 (1 1 1 1		
	Reports of workers being	indicating that deliveries of new	
	forced to work in the rain	PPE were regularly scheduled.	
	appeared in both desktop		
	research ²⁷ and in interviews.		
	One stakeholder noted that		
	even if workers are not forced		
	to work in the rain, they have		
	certain daily and monthly		
	output targets that they must		
	meet. These targets do not		
	change due to bad weather		
	so workers effectively do not		
	have the option to stay home.		
	Researchers have found		
	inadequate PPE at multiple		
	sites. At one site, workers		
	were responsible for		
	purchasing their own gloves		
	and hats. At another, workers		
	had boots with holes and		
	used spatter guards to		
	protect themselves against		
	snake bites ²⁸ .		
	Silano 21333 V		
	Healthcare benefits are limited,		
	especially for migrant workers.		
	Workers for one of the three		
	major suppliers do not get		
	access to the company's		
	health benefits. ²⁹		
	Desktop research and expert	While the sites pay workers well	Medium
	interviews both confirmed that workers are routinely paid below	above Brazil's minimum wage, most	
	a living wage.	workers' pay did not meet an indicative <i>living wage</i> .	
Wassa O Danielli	 Investigative journalists 	 Amongst the sample of reviewed 	
Wages & Benefits	found that workers on farms	pay slips, average wages at the	
	that supplied to multiple	sites visited ranged from	
	exporters earned less than	R\$2,149-3,438/month. Average	
	minimum wage. ³⁰	pay was highest at the processor	
	millioni wage.	pay was ingliest at the processor	

²⁷ Dallabrida, Poliana. "In the Midst of the Pandemic, Cutrale Fires Pregnant Employees and Suspends Meal Vouchers." *Reporter Brasil*, November 22, 2021. https://reporterbrasil.org.br/2021/11/in-the-midst-of-the-pandemic-cutrale-fires-pregnant-employees-and-suspends-meal-vouchers.

28 Adrià Budry Carbó, Public Eye. "Bitter Oranges." *Public Eye*, June 2020. https://stories.publiceye.ch/oranges-brazil.

²⁹ Ibid.

³⁰ Ibid.

• After a change to Brazilian labor law in 2017, suppliers have largely stopped paying their workers for travel time to and from the fields. Stakeholders reported that this travel time can take at least four hours a day.

Structural issues with productivity-driven wages and inaccurate payments make it difficult for workers to earn fair wages.

- Journalists found that workers at multiple sites did not have ready access to their pay slips, which were only available online – while many workers did not have Internet access.³¹
- One interviewee noted that because workers are paid by their output and must carry heavy bags of the oranges they collect, female workers typically make less than men.
- We heard from stakeholders that it was not uncommon for supervisors to incorrectly count workers' outputs, leading to reduced and inaccurate wages ³².
 Stakeholders said that approaches to measuring worker output varied in formality and accuracy across sites.

site. As of January 2025, the minimum monthly wage in Brazil is R\$1,518³³. Estimates of a living wage in Brazil are R\$3,332,³⁴ meaning that most workers on the sites we visited were not making enough money to provide a "basic but decent" living for a family of four in non-metropolitan Sao Paulo.

Workers did not report issues with payments or pay slips.

- Workers received fixed payments each month, and a bonus if they meet targets. It did not appear that workers were paid based on output.
- All three sites used digital pay slips that workers could access on a company app via their smartphones. Pay slips followed a standard format in Brazil. Workers did not report issues viewing and understanding their pay slips.
- All workers on site received social security as stipulated by Brazil law.

³¹ Dallabrida, Poliana. "In the Midst of the Pandemic, Cutrale Fires Pregnant Employees and Suspends Meal Vouchers." *Reporter Brasil*, November 22, 2021. https://reporterbrasil.org.br/2021/11/in-the-midst-of-the-pandemic-cutrale-fires-pregnant-employees-and-suspends-meal-vouchers.

³² Ibid.

³³ Inter-Union Department of Statistics and Socio-Economic Studies (DIEESE). Basic Basket Analysis - Nominal and Necessary Minimum Wage - January 2025. January 2025.

³⁴ Global Living Wage Coalition. "Living Wage for Non-Metropolitan Brazil." *Global Living Wage*, 2024. https://www.globallivingwage.org/living-wage-benchmarks/living-wage-for-non-metropolitan-brazil."

	T	T	
Freedom of Association	Seasonal workers and internal migrant workers are employed on a temporary basis and therefore are ineligible for benefits such as unemployment insurance and social security coverage. Access to unions varies by worker status and the practice is not encouraged. Stakeholders told us that labor brokers often informally forbid or discourage temporary workers from accessing unions. These brokers leverage workers' fear of losing their jobs or not getting the next job to inhibit their willingness to participate in union activity. Permanent workers generally have fewer barriers to joining unions. In general, stakeholders reported that most unions they speak with have found it increasingly difficult to approach workers.	Unions were present on all three sites visited, although it was hard to determine how active or empowered they were. • All three sites had signed agreements between suppliers and worker representatives about wages. • Our research team interviewed a union member at each site. None of these workers reported any type of discrimination or retaliation for their union participation. • The rest of the workers interviewed or surveyed were not union members.	Medium
Livelihoods	Workers are unable to afford proper accommodations near sites and often end up in substandard housing or housing far from their work site. Stakeholders reported that workers were often not paid enough to afford proper housing. They spoke of visiting worker accommodations where workers slept in hammocks, unable to afford mattresses.	Our research team did not find any issues with housing during the site visits. • Both farm sites offered housing for workers as well as buses to transport them to the work sites. Workers were not required to live in the offered housing. • The processing site, which was located closer to an urban center, did not offer accommodations for workers. That site did provide free	Low

Working Hours	One investigation found that the supplier deducted accommodation costs from worker pay; the supplier noted that this was a "symbolic" contribution. Upon review, each worker contributed more to their housing costs than the supplier did. 35 Both desktop research and interviews confirmed that workers routinely work long hours and, in many cases, excessive or forced overtime in order to meet targets. 36	transportation (buses) to take workers to the site. This site also offered free meals on-site. The supplier has an administrative department dedicated to managing accommodations for temporary/seasonal workers across all sites. We did not find any evidence of excessive working hours or forced overtime during the site visits. Across the three sites, the normal work week was 44 hours with workers typically working 8-9 hour shifts. In a review of timesheets, there was no evidence that working hours exceeded 60 hours/week. Overtime is voluntary; workers reported no retaliation for refusing overtime.	Low
Impacts on Local Communities	One investigative report found that Brazilian farms employed widespread use of pesticides that had been banned in Europe due to their link to serious health risks. • After these pesticides were sprayed on sugar and orange plantations, local communities complained about health issues including breathing problems, watery	The sites we visited had strong agrochemical management practices in place. • The farm sites provided annual trainings and PPE for workers who handle pesticides. These workers also received annual medical examinations and had access to their examination results. Our researcher also reviewed the sites' pesticide usage protocols and confirmed safe disposal of empty pesticide	Low

³⁵ Adrià Budry Carbó, Public Eye. "Bitter Oranges." *Public Eye*, June 2020. <u>https://stories.publiceye.ch/oranges-brazil/</u>.

Dallabrida, Poliana. "In the Midst of the Pandemic, Cutrale Fires Pregnant Employees and Suspends Meal Vouchers." *Reporter Brasil*, November 22, 2021. https://reporterbrasil.org.br/2021/11/in-the-midst-of-the-pandemic-cutrale-fires-pregnant-employees-and-suspends-meal-vouchers/.

- eyes, headaches, and blisters and irritated skin^{37 38}.
- Stakeholders reported that there are often tensions over environmental impacts between plantations and neighboring communities.

containers and designated pesticide loading and mixing areas that are well ventilated and equipped with spill management systems.

Due to time constraints (see Section 3.2), our researcher was unable to speak with the surrounding communities about any potential effects of pesticide exposure.

5.2 Other Considerations

Child Labor

Child labor did not emerge as a salient risk across the various research streams. In the desktop review, past reports about child labor in the oranges industry dated back a couple decades, without violations referenced in the more recent articles. One interviewed stakeholder noted that child labor had been a more prevalent issue several decades ago, as sugarcane harvesting was largely mechanized and many workers found themselves without jobs – leading to an uptick in child labor and young workers in orange harvesting. In more recent years, he noted that child labor has become much less common, largely due to increased federal enforcement (including inspections), an uptick in certifications, and company awareness of the reputational risk of child labor.

Our research team did not find any instances of child labor or young workers during the site visits. The youngest worker across the three sites was 19 years old, which is older than the young worker age prescribed in the ILO Minimum Age Convention.

Discrimination

One investigation conducted by journalists found that women on one site had been fired due to pregnancy.³⁹ In interviews for that investigation, multiple workers reported that they or other workers had been fired or "sent away" when they became pregnant.

Our site visits found no evidence of discrimination against pregnant workers (although it must be noted that these instances of discrimination often go unreported and can be very difficult to surface). At all sites, pregnancy tests were not required as a condition of employment and pregnant workers were reassigned to other tasks to avoid health risks such as pesticides.

Citrus Greening

³⁷ Nils Klawitter. "Gefährliche Pestizide: EU-Export von BASF und Syngenta." *Zeit Online*, April 2023. Translated from German. https://www.zeit.de/wirtschaft/2023-04/gefaehrliche-pestizide-eu-export-basf-syngenta.

³⁸ Business & Human Rights Resource Centre. "Brazil: Nestlé supplier farms allegedly spraying carcinogenic pesticides and affecting communities, says investigation." *Business & Human Rights Resource Centre*, April 25, 2023.

 $[\]frac{\text{https://www.business-humanrights.org/en/latest-news/brasil-fazendas-fornecedoras-da-coca-cola-e-nestl\'e-estariam-pulverizando-agrot\'oxicos-cancer\'i genos-e-afetando-comunidades-diz-investigaç\~ao/.}$

³⁹ Dallabrida, Poliana. "In the Midst of the Pandemic, Cutrale Fires Pregnant Employees and Suspends Meal Vouchers." *Reporter Brasil*, November 22, 2021. https://reporterbrasil.org.br/2021/11/in-the-midst-of-the-pandemic-cutrale-fires-pregnant-employees-and-suspends-meal-vouchers/.

Citrus greening, also known as Huanglongbing, is a disease that affects citrus trees, reducing both the number of oranges in each harvest and the amount and quality of their juice. There is currently no effective solution or treatment for the disease.

According to data from September 2024, the average incidence of orange trees with greening in Brazil's Citrus Belt was 44.35%, affecting approximately 90.36 million trees. This region includes the northwest of São Paulo and the western part of Minas Gerais, known as Triângulo Mineiro. The incidence rate increased by 16.5% from 2023, when it was estimated at 38.06%. Florida in the United States, another major producer of oranges, has seen its orange harvest plummet by 75% since greening emerged in the state approximately 20 years ago. As supply becomes so much more limited, suppliers see their costs increase and retailers see their margins decrease. Stakeholders reported that these cost pressures are frequently passed down the supply chain to workers.

Climate Change

Climate change has significantly impacted citrus production in Brazil. Prolonged drought and extremely high temperatures have led to decreased orange yields, particularly in fields lacking robust irrigation systems. Even irrigated areas have faced challenges due to reduced well water availability. The Citrus Belt has experienced reduced fruit production for five consecutive seasons due, in part, to dry weather conditions.⁴²

⁴⁰ Citrus Industry. "Citrus Greening, Production, and Plantings in Brazil." *Citrus Industry*, January 15, 2025. https://citrusindustry.net/2025/01/15/citrus-greening-production-plantings-brazil.

⁴¹ Luscombe, Richard. "Florida Orange Industry Faces Crisis as Production Drops and Greening Spreads." *The Guardian*, December 22, 2024. https://www.theguardian.com/us-news/2024/dec/22/florida-orange-industry.

⁴² Citrus Industry. "Citrus Greening, Production, and Plantings in Brazil." Citrus Industry, January 15, 2025. https://citrusindustry.net/2025/01/15/citrus-greening-production-plantings-brazil. Ibid.

6 Recommendations

Focus Area	Target Stakeholder(s)	Action		
Recommendations for Lidl	Recommendations for Lidl			
Build stakeholder relationships to inform targeted support	Rightsholders	Establish multi-year partnerships with NGOs in major sourcing regions to support their efforts. • Focus on environmental impacts of plantations, engage with communities (directly or by supporting local NGO partners with longstanding relationships in these communities) to address these issues. Engage on Just Transition conversations around ecological impact on communities near plantations and worker livelihoods as greening and climate change lead to sharp declines in the number of orange cultivation jobs available.		
Enhance supply chain visibility and vendor engagement	Suppliers; workers	Improve traceability efforts in the orange supply chain. As a first step, seek to ensure that every shipment has a clear declaration of origin. Expand monitoring efforts beyond certifications (i.e., Rainforest and Fairtrade) to ensure sufficient working conditions: Proactively engage with stakeholders to collect their experiences and feedback on which approaches are working and which are not. Conduct annual visits to farms and processors in Brazil to view working conditions firsthand. Include conversations with union.representatives during those visits. Utilize the Brazilian Ministry of Labor's vast database of information on labor violations to inform sourcing decisions.		

Leverage partnerships to improve worker wellbeing

Workers

Support unionization efforts, including buying from suppliers that buy from farms with unions.

- Lidl could also require that its suppliers ensure that the Brazilian exporters they buy from sign collective bargaining agreements with local unions at their supplier sites.
- Future research should engage more proactively with unions to get the most up to date and transparent information.

Ensure functional, accountable grievance mechanisms are in place.

- Where possible, ensure gender-specific grievance mechanisms and support systems have been established.
- Strengthen collaboration with certification bodies like Rainforest Alliance to push for more effective grievance mechanisms.

Adopt a more public stance on living wage commitments, in order to set an example and a standard for upstream suppliers.

- For instance, sign on to the UN Global Compact's <u>Faster Forward Initiative</u>, which outlines concrete actions towards a living wage.
- Work with suppliers to adopt a stance on living wage as well, with the expectation that workers on their plantations receive a living wage.

Recommendations for Other Stakeholders

Suppliers: Bottlers in Europe

- Expand transparency: require that processors compile and share a list of all their suppliers, updated annually.
- Ensure that each bottled orange juice that is sold includes a declaration of origin.
- Require that processors buy from farms that have collective bargaining agreements in place.
- Develop a policy around living wage expectations and require that exporters adhere to those same standards.
- Conduct annual visits to the processors and farms in Brazil to review social compliance standards on-site.

Suppliers: Processors/Exporters in Brazil

- Expand accountability and transparency efforts. Seek to ensure that all farms that supply oranges meet basic certification standards.
- Participate in projects such as this HRIA or other human rights research projects, to collaboratively engage with efforts to understand drivers of human rights issues in the orange supply chain.

Farmers

• Strengthen accountability mechanisms for workers to surface issues early enough to respond. Wherever possible, use hotlines that connect workers to the local labor inspectorate or union representatives.

Appendix 1: Cited Sources

Adrià Budry Carbó. (2020, June). Bitter oranges. Public Eye. https://stories.publiceye.ch/oranges-brazil/

Brazilian Farmers. (2023, September 13). *A new record: 28 million Brazilians work in agribusiness*. https://brazilianfarmers.com/news/a-new-record-28-million-brazilians-work-in-agribusiness/

Business & Human Rights Resource Centre. (2023, April 25). *Brazil: Nestlé supplier farms allegedly spraying carcinogenic pesticides and affecting communities, says investigation.*

https://www.business-humanrights.org/en/latest-news/brasil-fazendas-fornecedoras-da-coca-cola-e-nestlé-estaria m-pulverizando-agrotóxicos-cancerígenos-e-afetando-comunidades-diz-investigação/

Citrus Industry. (2025, January 31). *Brazilian orange juice trade*. https://citrusindustry.net/2025/01/31/brazilian-orange-juice-trade

Citrus Industry. (2025, January 15). *Citrus greening, production, and plantings in Brazil*. https://citrusindustry.net/2025/01/15/citrus-greening-production-plantings-brazil/

Dallabrida, P. (2021, November 22). *In the midst of the pandemic, Cutrale fires pregnant employees and suspends meal vouchers*. Reporter Brasil.

https://reporterbrasil.org.br/2021/11/in-the-midst-of-the-pandemic-cutrale-fires-pregnant-employees-and-suspends-meal-vouchers/

EcoNatur. (n.d.). *The Brazilian orange: Queen of citrus fruits*. https://econatur.net/en/crops-and-countries/the-brazilian-orange-queen-of-citrus-fruits/

Fresh Fruit Portal. (2024, March 11). *Citrus sector drives Brazil's ag employment even as inventory remains low*. https://www.freshfruitportal.com/news/2024/03/11/citrus-sector-drives-brazils-ag-employment-even-as-inventory-remains-low/

FreshPlaza. (2024, March 11). *Mercosur-EU agreement to phase out tariffs on Brazilian orange juice exports*. https://www.freshplaza.com/latin-america/article/9690591/mercosur-eu-agreement-to-phase-out-tariffs-on-brazilian-orange-juice-exports/

GeoRank. (n.d.). Economy of Brazil. https://georank.org/economy/brazil

Global Living Wage Coalition. (2024). *Living wage for non-metropolitan Brazil*. https://www.globallivingwage.org/living-wage-benchmarks/living-wage-for-non-metropolitan-brazil

IBGE. (2023, September 15). *Taxa de sindicalização cai a 9,2% em 2022, menor nível da série*. Agência de Notícias do IBGE.

Inter-Union Department of Statistics and Socio-Economic Studies (DIEESE). (2025, January). *Basic basket analysis - Nominal and necessary minimum wage*.

Luscombe, R. (2024, December 22). Florida orange industry faces crisis as production drops and greening spreads. The Guardian. https://www.theguardian.com/us-news/2024/dec/22/florida-orange-industry

OEC - The Observatory of Economic Complexity. (2024). *Citrus in Brazil*. https://oec.world/en/profile/bilateral-product/citrus/reporter/bra

Oliver Wyman. (2018, August). *The gender gap lifecycle*. https://www.oliverwyman.com/our-expertise/insights/2018/aug/the-gender-gap-lifecycle.html

Revista Cultivar. (2025, January). *Job creation in citrus growing by 8% in 2023*. https://revistacultivar.com/news/job-creation-in-citrus-growing-by-8-in-2023

Social Watch. (n.d.). *Treaties*. https://www.socialwatch.org/node/97/treaties

Sucupira, F. (Ed.). (2021, March). *From Brazilian farms to European tables*. https://reporterbrasil.org.br/wp-content/uploads/2021/03/From-brazilian-farms-to-european-tables-EN.pdf

U.S. Department of Agriculture (USDA), Foreign Agricultural Service (FAS). (2025, March). *Brazil citrus annual*. https://www.fas.usda.gov/data/brazil-citrus-annual-7

World Bank. (n.d.). Brazil overview. https://www.worldbank.org/en/country/brazil/overview

World Resources Institute (WRI). (n.d.). *Ensuring economic growth and environmental sustainability in Brazil*. https://www.wri.org/insights/ensuring-economic-growth-and-environmental-sustainability-brazil

WorldOStats. (n.d.). *Orange production by country 2025*. https://worldostats.com/orange-production-by-country-2025/

Zeit Online. Klawitter, N. (2023, April). *Gefährliche Pestizide: EU-Export von BASF und Syngenta*. https://www.zeit.de/wirtschaft/2023-04/gefaehrliche-pestizide-eu-export-basf-syngenta