

2019



Producing
Juice Fairly &
Sustainably
in Brazil

Contributing to the United Nations' Sustainable Development Goals

Empowering Our People



Protecting the Environment



Growing With Partners



Supporting Local Communities



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Looking Back on 2019

As a global merchant and processor of agricultural goods, LDC's vision is to work toward a safe and sustainable future by contributing to the global effort of providing sustenance for a growing population.

To realize this vision, we work to influence positive change for more sustainable practices across our sector, value chains and markets, locally and globally.

And recognizing that no single organization can realize our vision alone, we work increasingly in partnership with a wide range of stakeholders, looking for shared solutions to common challenges.

We structure our efforts around four pillars - People, Environment, Partners and Communities - and this report outlines our work and progress in these areas within our Juice business during 2019.

As part of continuous investment in developing our people, we dedicated more than 81,000 hours to training employees on a wide variety of topics. Along with many other initiatives and efforts geared toward the growth and wellbeing of our people, this effort placed LDC among the '150 best companies to work for' in Brazil for the second consecutive year, based on the outcomes of one of the country's most respected work environment surveys, conducted by *Você S/A* magazine and *Fundação Instituto de Administração*.

We also continued to work closely with partners and customers, understanding their needs and expectations in order to offer tailored or specialty products and services. For instance, in 2019 we continued our project with several partners to provide full orange juice supply chain traceability for end-consumers in the Netherlands using blockchain technology.

As part of LDC's global strategy to move further downstream in the value chain through vertical integration and strategic partnerships, getting closer to customers and end-consumers, we signed a joint venture agreement to bring high quality not-from-concentrate citrus juices to consumers in China.

We also continued to work toward our global targets to reduce LDC's environmental impact by 5% between 2018 and 2022 in each of four key performance indicators: CO₂ emissions, electricity and energy consumption, water usage and solid waste sent to landfill. Among other steps in this direction, our Juice Platform signed charter agreements for a new, modern bulk transport fleet due to be operational in 2020, increasing transportation capacity while reducing fuel consumption and emissions.

We also signed a green finance agreement for the first time, linking our Juice business financing with environmental, safety and certification performance, and the *Sustainable Agriculture Initiative (SAI) Platform* verified new farms as Gold Grade, bringing the total to 32 out of 38 farms.

As United Nations Global Compact signatories, we are committed to observing ten universally accepted principles in relation to human rights, labor, the environment and anti-corruption across our activities.

Our Group Code of Conduct sets high standards in this sense, both for our own practices and for those of our business partners.

Over more than 30 years in the juice business, LDC has been guided by this code, operating in accordance with all applicable safety, quality and sustainability laws, regulations and standards, and striving to go beyond these wherever possible.

As we work to drive positive change in our value chain, we will continue to work this way to assure customers and consumers that we source, process and transport our products responsibly, and to fulfill LDC's purpose to create fair and sustainable value for the benefit of current and future generations.





Highlights

84%

of LDC-managed citrus farms
certified by the *Rainforest Alliance*

32

out of our 38 citrus farms verified
as Gold Grade by the *SAI Platform*

US\$250 million

pre-export financing agreement
with a sustainability-linked interest
rate mechanism, signed in 2019

5th anniversary

of LDC's Programa Compartilhar

35,000+

native trees planted at LDC-managed
citrus farms in 2019

Our Products at a Glance

Juices

- Frozen concentrate orange, lemon and lime juices
- Not-from-concentrate orange, lemon and lime juices



Citrus By-Products

- Citrus pulp pellets (for cattle feed)
- D-limonene
- Dry peel
- Essential oils and aromas (water and oil phases)
- Pulp cells
- Terpenes

Our Value Chain

As one of the world's largest producers and merchandizers of juice, LDC cultivates, processes, transports, stores and distributes orange, lemon and lime juices and their by-products.

By maintaining control over our entire value chain, we offer full supply chain traceability, from farm gate to our customers' doorstep.



Originate & Produce

We grow citrus fruits ourselves, mostly at certified fruit farms in Brazil, and also source from third-party producers.



Process

We process fruits at plants located close to fruit groves, to save energy in transit and preserve quality and freshness. We store fruit in silos, and later wash and sample it for quality control.

We press fruits and extract their juice to produce concentrated or not-from-concentrate (NFC) juices, and remove peel, seeds and pulp as by-products used as ingredients in perfume, cosmetics, food products and more.

No part of the fruit is wasted.



Store & Transport

NFC juices are pasteurized and stored in conditioned tanks to maintain quality, taste and vitamin C content, while concentrated juices are dehydrated and frozen for transport to maximize space and energy use, and later re-hydrated at destination.



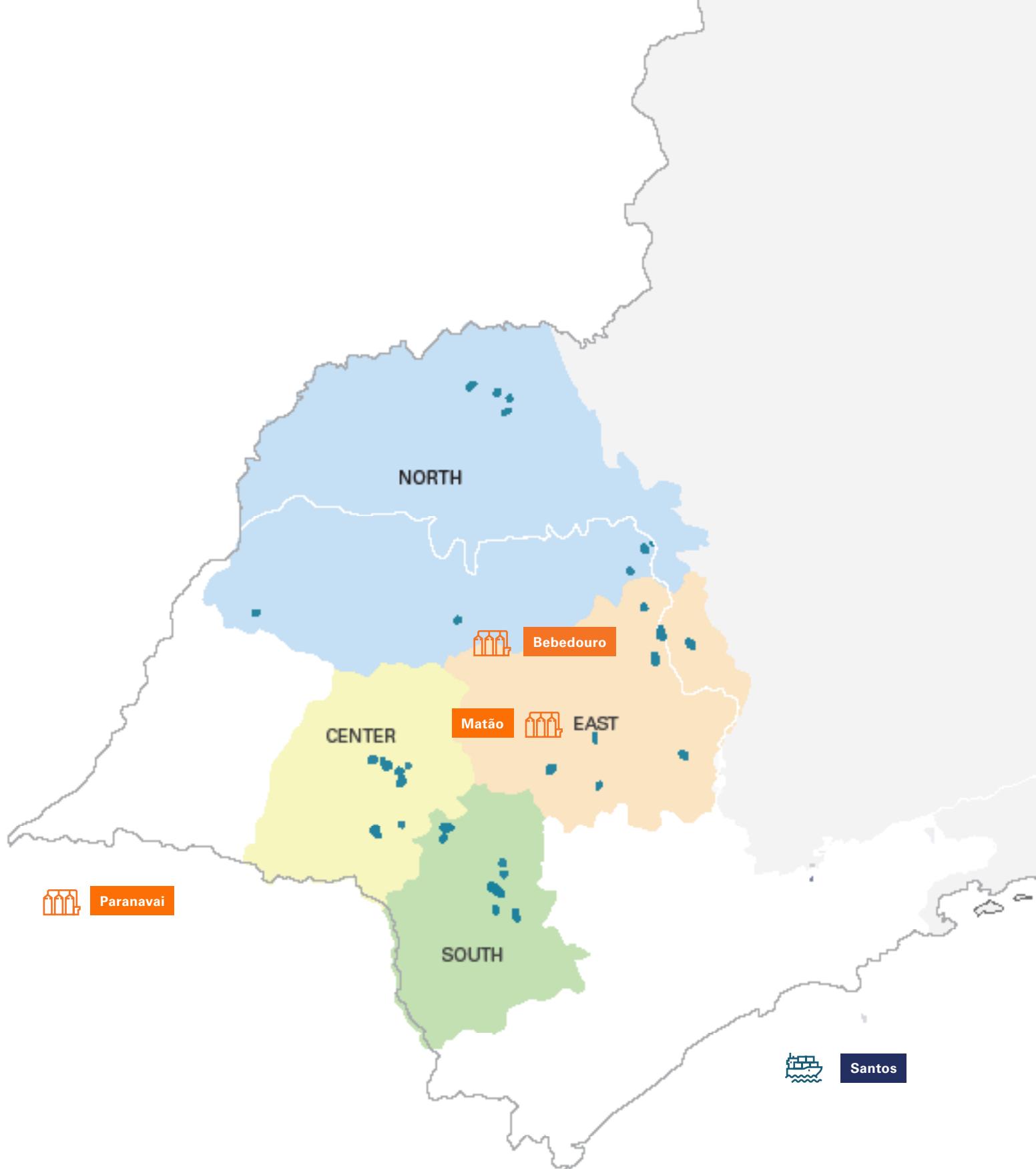
Research & Merchandise

Relying on our market knowledge, we ensure responsive supply to our customers around the world.



Customize & Distribute

We transport products in drums or conditioned tank trucks, mostly from our destination terminal in Belgium, to bottler customers who package and distribute them, either to retailers or directly to end consumers.



● LDC-managed farms

■ Processing plants

■ Export terminal



Building on a global company heritage, experience and know-how dating back to 1851, LDC has grown to be one of the largest citrus juice producers in the world, with over 30 years in the juice business.

In Brazil, where we have been active for almost 80 years, our juice operations include orange and lemon cultivation, processing and exports.

Fruit Farms

We own or manage 38 citrus farms spread across Brazil's Citrus Belt, relying on Geographic Information System (GIS) and satellite imaging to map and monitor growers and groves, with detailed technical and commercial information facilitating analyses, forecasts and decision-making.

Processing Plants

Our processing units in Paranavaí (Paraná State), Bebedouro and Matão (both in São Paulo State) are strategically located close to Brazil's main citrus-producing areas, for maximum logistic efficiency.

Each unit is equipped with control parameters that guarantee product excellence and compliance with quality certification standards such as SQF (Safe Quality Food), SGF (Sure Global Fair), GMP (Good Manufacturing Practices) and others, as well as with sustainability certification standards set by Sedex, the *Rainforest Alliance* and *Fairtrade*, among others.

In addition, effluent treatment stations ensure the responsible management of wastewater at each plant, with ongoing investments to improve this process, such as a new equalization pond in Matão and a new ventilation system in Paranavaí.

Export Terminal

In addition to a high level of automation, with up to 90% of processes fully automated, our terminal in Santos, São Paulo State, is equipped with high-yield pasteurizers and large-volume storage facilities, and has a high hourly capacity to receive and transship product volumes, while complying with rigorous process safety management standards.

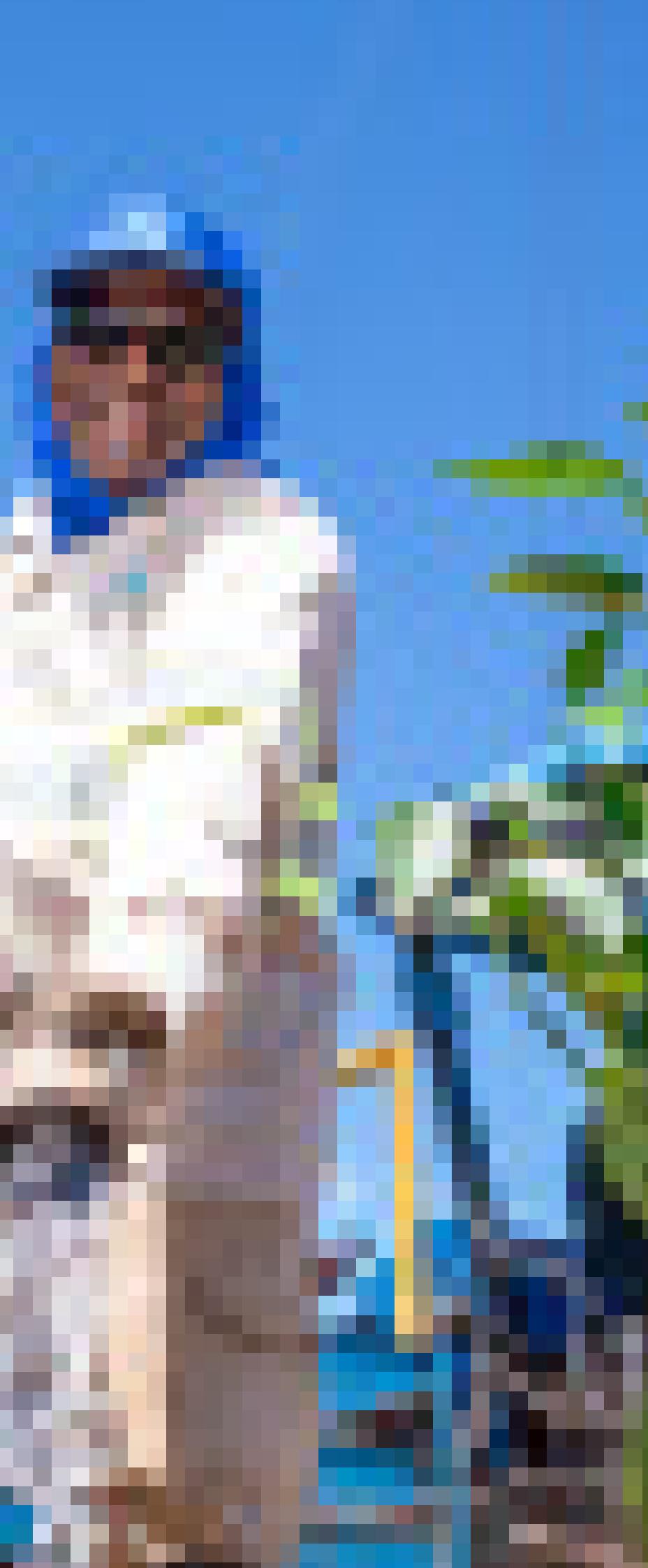
The site also has ISO 9001, ISO 14001, OHSAS 18001, SQF and *Rainforest Alliance* certifications.

Dedicated Vessels

Dedicated to orange juice transportation in bulk, these vessels ship juice products in conditioned tanks from our export terminal in Santos to our destination terminal in Ghent, Belgium, which handles our juice products before onward distribution to customers in Europe and beyond.

Empowering Our People





Recognizing that LDC's success and growth depends on our people, we continually invest in their safety, health and wellbeing, equip and train them to conduct their duties safely and apply high standards of sustainability, and engage them in the pursuit of our shared purpose to create fair and sustainable value.

We directly employ around 8,000 people at peak season, all of them on our payroll, adhering to Brazilian labor legislation as a baseline and very often going beyond legal obligations as part of our commitment to drive positive change and lead by example.

As such, LDC was once again ranked among the '150 Best Companies to Work For in Brazil' by *Você S/A* in 2019, based on responses to the magazine's annual survey of 500 Brazilian companies and their employees, run with *Fundação Instituto de Administração*.



Our People at a Glance

The total number of employees increased slightly in 2019, due to a bigger orange crop compared to 2018.

Employee Breakdown by Gender & Contract Type

	2018 total	2019 total	Female	Male
Permanent contract	3,061	2,840	591	2,249
Seasonal contract	4,941	5,379	1,254	4,125
Total	8,002	8,219	1,845	6,374

Employee Breakdown by Gender & Seniority

	2018 total	2019 total	Female	Male
Managers	38	40	9	31
Supervisors / Technicians	108	107	12	95
Seasonal workers	4,941	5,379	1,254	4,125
Other employees	2,915	2,693	570	2,123
Total	8,002	8,219	1,845	6,374

Permanent Employee Breakdown by Gender & Worktime

As part of our efforts to increase reporting detail year-on-year, for the first time in 2019 we reported on the breakdown of full and part-time work arrangements among our permanent employees.

	2019 total	Female	Male
Full time	2,814	579	2,235
Part time (worktime less than 100%)	26	12	14
Total	2,840	591	2,249



Health and Safety in 2019

At LDC, our Safety, Health & Environment (SHE) vision is to protect our people and the communities we touch by providing a safe and healthy work environment, wherever we operate. To achieve this, we continually strive to enhance our processes and invest in safety equipment to ensure that every employee goes home healthy and with no injuries, every day.

Despite our efforts, in 2019 we lost an employee who was struck by lightning while performing duties in an open field. Another two employees nearby were injured in the accident, though both are now fully recovered. Having noticed the oncoming rain, the employees were in the process of stopping their activity, in line with LDC procedures requiring them not to work in the rain, but the lightning unfortunately struck before they were able to reach the nearest weather shelter. All three employees received immediate medical attention.

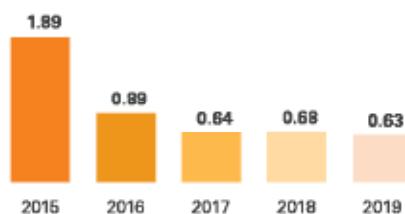
This accident shows that continuous efforts are necessary to achieve our shared goal of zero accidents and incidents, ensuring that no other family suffers a loss.

Following the accident investigation, our engineering team tested several weather forecast systems, such as meteorological stations and mobile weather scanners. We invested in a third-party weather forecast system and implemented a new solution to notify field workers and management of the risk of lightning near their location.

Despite this tragic event, which contributed to a higher accident severity index year-on-year, overall safety results continued to show a positive trend, with accident frequency and gravity indexes maintained at low levels.

Frequency Index

The Frequency Index shows the relation between the number of workplace injuries requiring medical attention, and hours worked. The ratio expresses the number of employees in every 100 that experienced an injury needing medical attention during the year.



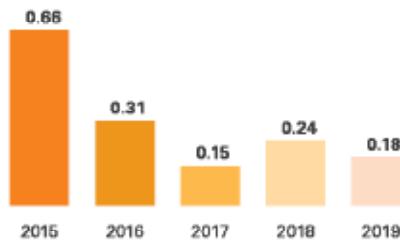
-67%

reduction in the frequency of injuries since 2015



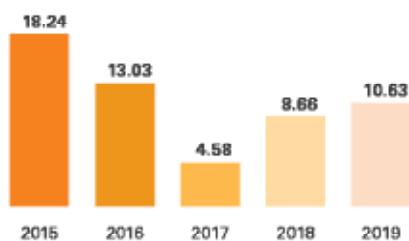
Gravity Index

The Gravity Index shows the relation between the number of workplace injuries serious enough to result in time away from work, and hours worked.



Severity Index

The Severity Index shows the relation between the number of employee days of absence due to an incident, and hours worked. The ratio expresses the number of days away per hours worked.



-73%

reduction in the gravity of injuries since 2015

-42%

reduction in the severity of injuries since 2015



Innovating for Safety

LDC's innovation program in Brazil started in 2010, aiming to encourage employees from all units and sites in the country to propose solutions to improve their daily activities. From simple changes to more complex initiatives, all ideas are evaluated based on safety, quality and environmental criteria and then presented for further evaluation to a committee of directors from various business areas, to encourage replication across platforms.

119 ideas for improvements were proposed in 2019, of which 20% by Juice units, with some of these outlined below.

Description	Benefits
Portable fruit picker to clear fallen oranges and lemons in the truck parking area - quickly, safely and effectively.	Increased cleaning efficiency, improved employee posture and reduced physical stress during the workday.
Safety valve to prevent tractors from moving during fruit loading.	Reduced risk of accidents (such as orange bag falling) due to unexpected movement by hydraulic failure.
Safety lock for drum unloading mat to avoid drum tipping in the event of human distraction.	Reduced risk of tipping, with resulting injuries and product losses.
Ammonia leak indicator using phenolphthalein to identify leaks in cooling line valves and pipes.	Reduced risk of resulting pollution and employee health hazard.
Atmospheric lightning forecast system to forecast lightning near our sites and alert workers and management of possible hazards via mobile phone text message or application notifications, allowing time to move to a safe place.	Reduced risk of accidents due to lightning strikes thanks to real-time lightning risk map of our farms and ongoing weather monitoring.
Motorcycle telemetry at farms to monitor inspection round speed and routes.	Motorcycle accident rate down to almost zero within our farms.
Bus wheel safety for employee transport vehicles, using indicator clamps fixed on wheel screws to help identify loose screws needing to be tightened.	Reduced risk of accidents on the road.



LDC
LDC



SHE Training and Culture

Training employees and celebrating progress and achievements is a key part of LDC's efforts to build a global culture where safety, health and the environment (SHE) are priorities in everything we do.

SHE Day

2019 marked our 10th annual SHE Day, which brings together LDC employees and contractors around the world to highlight the importance of safety, health and the environment in our day-to-day.

Organized around the theme 'SHE 365', our 2019 event reached over 2,600 Juice Platform employees across farms, processing plants and port terminals.

Participants connected with other employees worldwide through a global video showing SHE routines across all LDC regions, and heard about our SHE progress and priorities through presentations, contests and many other interactive activities like a drawing contest inviting employees' children to draw "SHE" from their perspective.

"Planting trees is very important for the environment and for human beings to breathe", wrote Livia, the daughter of one of our employees at Bonin Farm, São Paulo State, in the drawing that made her one of the contest winners.

Teams who went more than two months without any recordable injury on the farm were treated to a celebration breakfast and prize in recognition of the difference they make to SHE.

Training & Development

Recognizing that training is key to develop employees' potential and improve safety performance, we once again offered a variety of training sessions to increase risk awareness and management - at all levels of our business.

We held almost **1,600 training sessions in 2019**, covering for example:

- Process safety.
- Agricultural quality management (for over 3,200 people).
- Industrial quality management (for almost 1,100 people).
- Work accident prevention (for more than 900 people), covering subjects such as wellness, personal protection equipment, chemical handling, safe behaviors, etc.
- Regulatory and technical topics, to ensure compliance with regulatory requirements and industry best practice for activities conducted at our farms, processing plants and export terminal.

We also continued to organize Safety Toolbox Talks - meetings conducted with industry and farming teams to reinforce safety procedures and best practices. 16,000 of these sessions took place in 2019.

Conducted since 2014, the Safe Harvest program saw its sixth year in 2019, aiming to drive safety and productivity improvements in our juice operations. 430 employees were trained to teach best practices to fruit pickers, for instance to prevent falls during harvest activities, as this is one of the main causes of accidents.

+81,000

hours dedicated to developing employee skills

+55,000

hours dedicated to regulatory and technical training



Driving Continuous Improvement

Our management model is designed to drive continuous improvement and productivity increases, placing people at the heart of our efforts in this sense.

Field Day

Organized since 2016, Field Day brings together workers from farms and industrial sites with the objective to create synergies between teams working at different stages of our juice value chain in Brazil.

During a citrus plantation tour, farm employees share their challenges, bottlenecks and ideas with industry workers, who in turn share the industrial perspective during a plant visit.

The exchanges help both teams to understand how decisions taken at each stage can impact the operations and performance of the other.

In 2019, the experience involved 57 employees from our Monte Belo farm and Matão juice plant.

SHE Opinion Survey

LDC held its first global SHE Opinion Survey in 2019, to identify improvement opportunities to make our workplace safer, healthier and more environmentally responsible.

The exercise involved 2,130 Juice Platform employees, including seasonal pickers, whose feedback will contribute to the definition of SHE plans and priorities for 2020 and beyond.

Coffee With Managers

Some 350 Juice Platform employees took part in this monthly initiative at our industrial sites and port terminal in 2019, aiming to facilitate the exchange of ideas and feedback between employees and managers.



Acting for Employee Welfare

LDC continually strives to go beyond current labor regulations to ensure our people enjoy a safe and healthy work environment, and offer fair and supportive employment benefits.

Health & Wellbeing

- Emergency drills take place year-round at our sites, covering first aid, ammonia leaks, fires and explosions, falls, animal bites, etc.
- All farm and industrial employees receive personal safety equipment, the use of which is enforced daily.
- All transportation is handled by fully qualified drivers, and vehicles are equipped with proper seating and seatbelts.
- Transportation, water, shade, sanitary facilities and eating areas are available at every site.
- Cabin tractors are now used for 85% of spray activities, during which employees are always required to wear protective clothing and gear.
- Free H1N1 vaccines for permanent employees benefitted over 2,700 people in 2019.
- We provide self-application anaphylaxis medicine for allergic employees at all farms, identifying people sensitive to insect bites or stings with red armlets to facilitate swift assistance and first aid when needed.

2019 Awareness Campaigns

Yellow September:

Focused on suicide prevention, with recommendations and communication on support channels.

Pink October:

Sharing information about breast cancer and offering free mammography to female employees and spouses.

Blue November:

Raising awareness of prostate cancer prevention measures.

Red December:

Focused on action to prevent AIDS and other sexually transmitted diseases.

Employee Benefits

While complying with Brazilian legal minimum wage, we strive to set pay above minimum levels, with bonuses linked to performance and safety targets.

Urban Permanent Employee	Urban Seasonal Employee
✓ Life Insurance	✓ Life Insurance
✓ Healthcare ¹	✓ Healthcare ¹
✓ Dental Assistance Plan ²	✓ Dental Assistance Plan ²
✓ Meal Ticket ³	✓ Meal Ticket ³
✓ Food Stamps	✓ Food Stamps
✓ Restaurant ⁴	✓ Restaurant ⁴
✓ Transport	✓ Transport
✓ Drugstore Assistance Plan ⁵	✓ Drugstore Assistance Plan ⁵
✓ Private Pension Plan ⁶	

Rural Permanent Employee	Rural Seasonal Employee
✓ Life Insurance	✓ Life Insurance
✓ Food Stamps	✓ Food Stamps
✓ Transport	✓ Transport
✓ Private Pension Plan ⁶	

¹For all urban permanent and urban seasonal workers, for some rural permanent administrative and for some rural operational leadership functions (co-participation plan), including dependents (spouse and children up to 21 years old, or 24 if at college).

²For all urban permanent and seasonal workers, and for some rural permanent administrative and some rural operational leadership functions, including families.

³Only for Santos Terminal employees, when requested in exchange for food stamps.

⁴Restaurants in industrial plants and port terminal open to employees, with LDC contributing to costs.

⁵Agreement with drugstores to facilitate purchase of medication.

⁶Optional for all permanent employees.



Diversity and Inclusion

Diversity being a core value at LDC, we work continuously toward an increasingly diverse and inclusive environment in everything we do, to ensure we attract, develop and retain the best available talent everywhere.

Multiple training sessions on diversity and inclusion were organized for leaders and managers across LDC, representing almost 800 hours in Brazil.

We also introduced new recruitment practices at all LDC sites in Brazil in 2019, in particular the use of blind CVs, whereby HR teams conduct all candidate selection processes and share only qualification and experience information with hiring managers, excluding gender, race, sexual orientation, age and any other personal information.

We also improved internal processes to encourage inclusion and provide greater support to:

- Pregnant employees, with guidance to managers regarding antenatal points of attention and information about women returning from maternity leave.
- New mothers, with reinforced governance regarding dismissals involving employees within a year of return from maternity leave.
- Employees with a disability, also through reinforced governance regarding dismissals.

As set out in LDC's global Code of Conduct, all employees and visitors are encouraged to report any discrimination suffered within LDC facilities through our compliance channels. Reports can be anonymous, and all contacts kept fully confidential.



Inclusion in Seasonal Work

Orange harvesting being a 100% manual activity, depending on the size of the crop we hire between 5,000 and 6,000 seasonal pickers in a given year, traditionally hiring this workforce from cities close to the farms.

Our socioeconomic study of seasonal workers in 2018 showed that approximately 47% came from states outside Brazil's Citrus Belt.

In addition to complying with all applicable legal requirements and LDC's Code of Conduct, as a major employer we continually strive go beyond this in order to drive positive change in communities around our operations.

Accordingly, in 2019 we decided that all seasonal workers who came from outside the Citrus Belt would be hired in their home states, supporting them with social and health issues, transport arrangements, lodgings and other benefits, with the involvement of a dedicated team of HR, health & safety and other technical experts.

A team of social workers arranged to receive and make these seasonal workers comfortable during their work on LDC-managed farms, for instance welcoming them with a stock of food supplies and distributing these monthly. They also organized logistics to help them return home after the harvest.

In addition to supporting the individual workers, the hiring campaign had a wider positive impact on socially vulnerable communities in their home states, through the added incomes that seasonal workers sent back to their families, by avoiding housing, transportation and other expenses.

2019 Impacts

A total 1,925 seasonal workers hired in their home state, through six hiring campaigns from April to August, across eight states and 30 cities.

Professional support:

42 experts (seven for each campaign) involved, including HR, medical, agriculture and safety specialists.

Accommodation:

- 180 houses available during the harvest, each home to eight people.
- Cleaning and maintenance managed by a crew of 60 people.
- 15,000 pieces of furniture and equipment provided (refrigerators, stoves, utensils, beds, mattresses, etc.).

Transport:

Around 50 buses chartered.

Food:

Some 2,000 baskets distributed each month.

Protecting the Environment







Environmentally Sustainable Facilities

A key part of our efforts toward more environmentally sustainable operations is the pursuit of LDC's global target to achieve 5% reductions between 2018 and 2022, across four environmental key performance indicators (KPIs):

- CO₂ emissions
- Electricity and energy consumption
- Water usage
- Solid waste sent to landfill

In 2019, we continued to enhance our processes to drive improvements across these KPIs, from data accuracy to innovation at specific sites to decrease our environmental footprint.

We achieved our goal to reduce waste and emissions by 1% year-on-year, but failed to achieve this for industrial energy and water consumption, mainly due to operational changes that impacted our 2019 numbers.

Impacts on our KPIs are explained in further detail in this chapter, with the key changes as follows:

- The shutdown of our Engenheiro Coelho plant.
- The first full year of operations of our dry peel plant in Bebedouro and our wastewater treatment plant at Paranavaí.
- The start of irrigation activities at our Monte Belo farm, which did not exist previously.

Electricity and Energy Consumption

This report includes revisions to the electricity and energy consumption figures shown in our 2018 Juice Sustainability Report, following internal and external audits conducted as part of our Green Finance initiative.

Fuel type	2018	2019
Wood chips (MT)	204,183	136,627
Sugarcane bagasse (MT)	195,849	197,733
Cottonseed bark (MT)*	-	423
Diesel (L)	4.098 million	4.039 million
Liquefied petroleum gas (MT)	530	526
Natural gas (Nm ³)	8.397 million	4.034 million
Electrical power consumption (kWh)	163 million	152 million

MT: metric tons / L: liters / kWh: kilowatt-hours / Nm³: Normal cubic meters

Reported in line with LDC's global standards and key performance indicators (KPIs), **electric power consumption levels were as follows:**

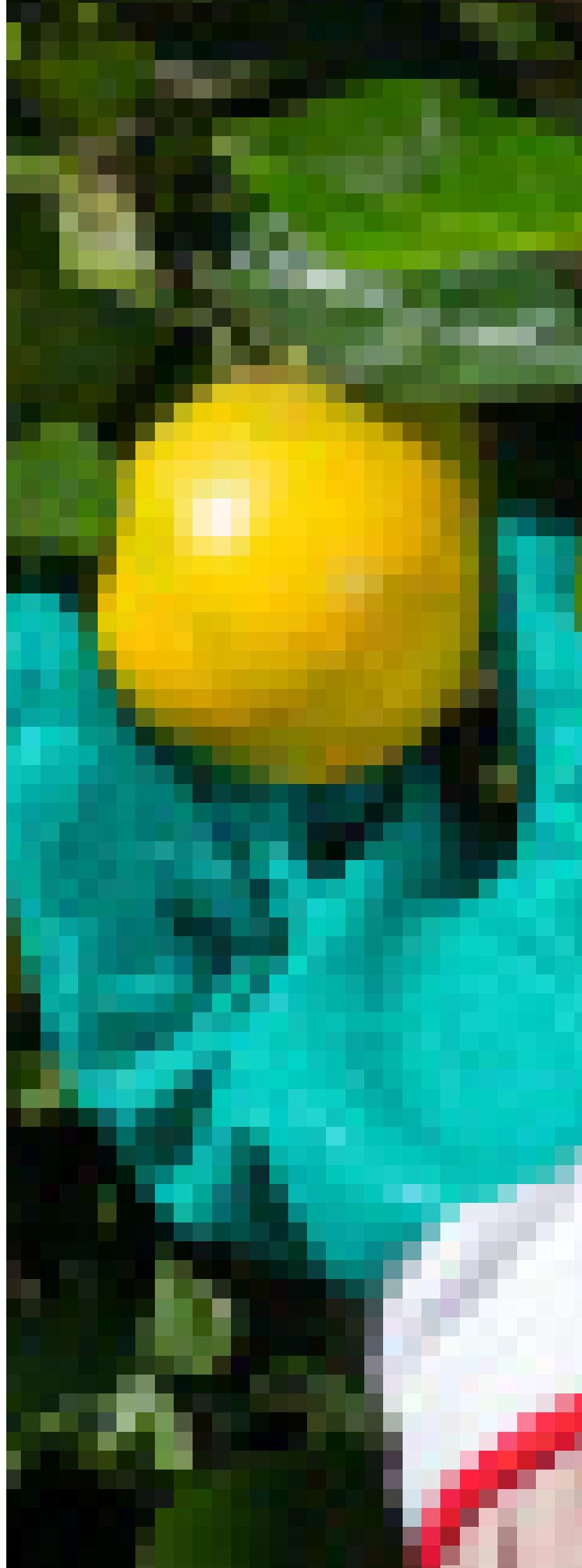
KPI (kWh/ton of processed fruit)	2018	2019
Industry	53,81	57,93
Agriculture	14,96	14,16
Total	45,98	46,71

The observed increase in electric power consumption indices was mainly due to three new installations:

- A dry peel unit at Bebedouro plant, which started operations in the second half of 2018, and for which 2019 was the first full year of reported activity.
- Our effluent treatment plant at Paranavaí, which also started operating at the end of 2018.
- An irrigation system at Monte Belo farm, which started operating in September 2019.

These impacts were offset by the shutdown of our Engenheiro Coelho plant, which reduced electrical power consumption in absolute terms, as well as by projects aiming to reduce overall industrial energy consumption.

Among many other examples, we installed a frequency modulator in ammonia compressors at Santos and Matão, upgraded electric motors to high-efficiency models in Bebedouro, and optimized processes to reduce low-capacity production lines.





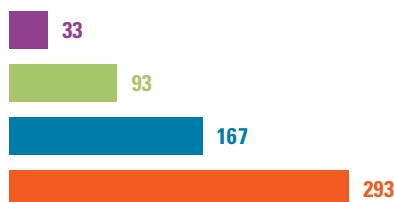
CO₂ Emissions

Not-From-Concentrate

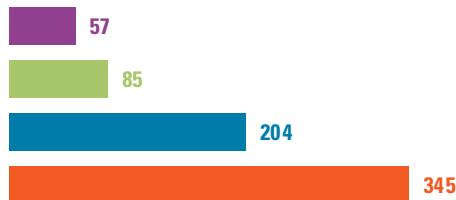
Total Footprint

g CO₂/L of juice (11,5° brix)

2018



2019



This report includes revisions to the CO₂ emission figures shown in our 2018 Juice Sustainability Report, following internal and external audits conducted as part of our Green Finance initiative.

Reported in line with LDC's global standards and KPIs, **CO₂ emission levels were as follows:**

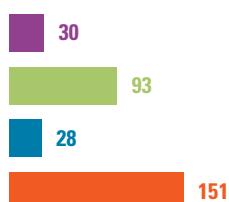
KPI (kg of CO ₂ / ton of processed fruit)	2018	2019
Industry	193,16	174,04
Agriculture	14,18	11,96
Total	157,05	133,30

Frozen Concentrate Orange Juice

Total Footprint

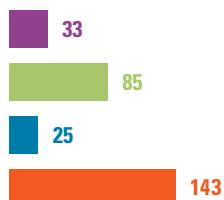
g CO₂/L of juice (11,5° brix)

2018



The use of cottonseed bark, which generates fewer emissions, the shutdown of our Engenheiro Coelho plant, and optimized tractor usage on farms, contributed to lower emissions overall.

2019



● Industrial ● Agro ● Logistics ● Total

Water Usage

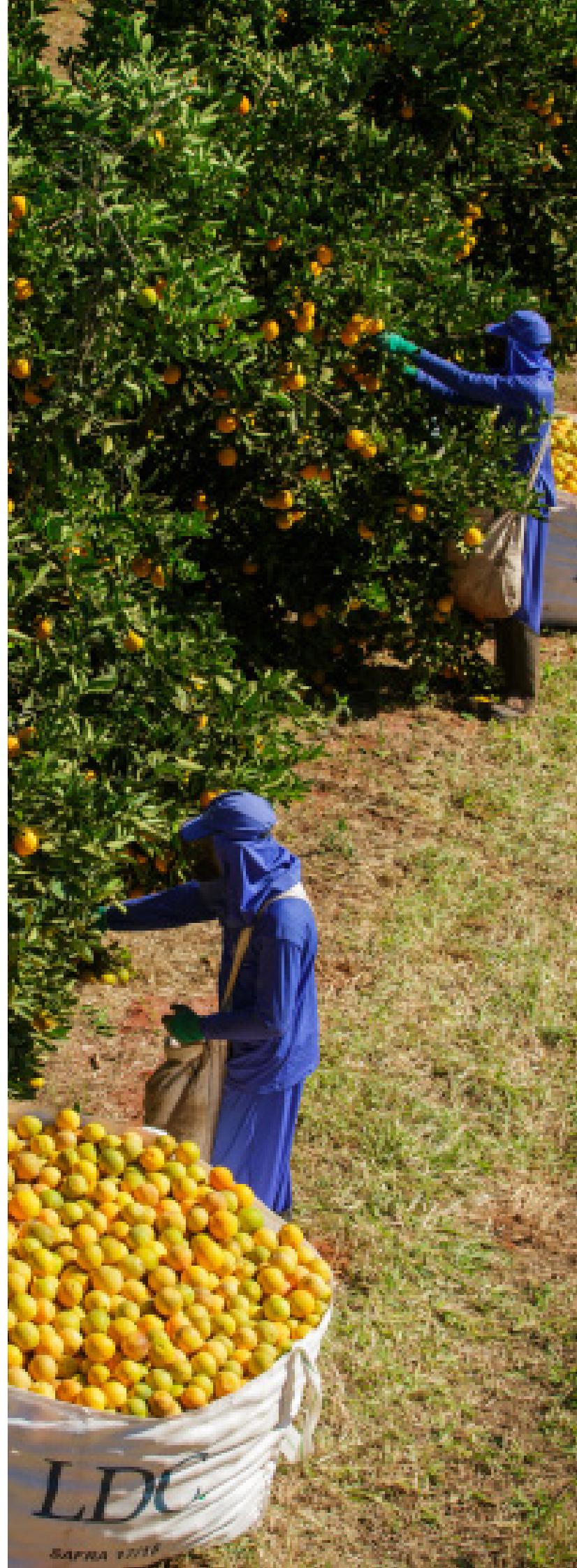
This report includes revisions to water consumption figures shown in our 2018 Juice Sustainability Report, following internal and external audits conducted as part of our Green Finance initiative.

Water usage (m ³)	2018	2019
Industry	4,640,191	3,468,270
Farms	14,505,000	14,279,162

Reported in line with LDC's global standards and key performance indicators (KPIs), **water consumption levels were as follows:**

KPI (m ³ /ton of production)	2018	2019
Industry	1.63	1.43
Agriculture	20.16	17.04
Total	5.37	5.43

Although the Juice Platform reduced water consumption across both industrial and agricultural activities in absolute terms, our overall water consumption index for Juice increased in 2019, due mostly to reductions in total processed fruits, which impacted the index calculation, which is an average weighted on production.





In Industry

We continued to recycle the water generated during frozen concentrate orange juice processing for cleaning and production purposes, and to eliminate leakages.

The shutdown of Engenheiro Coelho also helped to reduce absolute volumes.

These conditions drove a 12% index reduction.

In Agriculture

To reach 15% reduction in water consumption index at our farms, we improved our crop management, irrigating farms at the right time, and with the right amount of water.

Additionally, our northern citrus region demanded less irrigation than in the previous year, which helped us to reduce water consumption.

On the other hand, we started to use the irrigation system installed at Monte Belo farm in 2018, which added to our water consumption volume.

2019 Highlights

In **Matão**, our investments in effluent treatment contributed to water preservation while ensuring compliance with all legal requirements. We also adjusted our processes to reuse more water for activities requiring lower water quality, such as floor cleaning, reducing water extraction and wastewater generation.

Our **Bebedouro** site ran a campaign to identify and repair water leaks, to reduce water loss.

After completing our effluent treatment plant in **Paranavaí**, we continued to invest in treated wastewater outflow facilities in 2019.



Solid Waste Sent to Landfill

Industrial waste (MT)	2018	2019
General waste	345	187
Hazardous waste	28	41
Medical waste	0	0.06
Reused organic waste	42,603	50,041
Recycled waste	116	130
Metal recycled waste	548	492
Agricultural waste (MT)	2018	2019
General waste	201	150
Waste in general	201	144



Reported in line with LDC's global standards and key performance indicators (KPIs), **volumes of solid waste sent to landfill were as follows:**

KPI (kg/ton of processed fruit)	2018	2019
Industry	0.100	0.076
Agriculture	0.280	0.180
Total	0.137	0.103

In 2019, we continued to reduce waste generation and disposal to landfills, mostly through good practices and process improvements in industry, for example stepping up efforts to embed a culture of recycling across our sites, supported by improved selective waste collection systems.

The main driver for reduction in our agricultural waste index was the implementation in July 2019 of a system to weigh waste before disposal, thereby increasing measurement and reporting accuracy compared to past years, when waste was overestimated.

Despite these efforts, however, the volume of waste increased in absolute terms due to a larger orange harvest than the previous year.



1,600
native trees planted

to compensate emissions from our
main Brazil offices.

This made our offices in

Santos & São Paulo
carbon neutral

Green Office

The initiative launched in 2017 evolved into an LDC Green Office certification program in Brazil, which recognizes sites that implement environmental best practices in relation to plastic removal, water management, recycling, printing reduction, use of biodegradable cleaning products, LED lighting and others.

Run by trained SHE experts and managers, the program was implemented at all Juice industry sites and our main farm offices, with three offices certified as LDC Green Office.

In addition, in 2019 we progressed in our efforts to eliminate the use of plastic cups at our offices in Brazil, with 60% of our offices no longer using these, including our São Paulo and Santos offices.

World Environment Day

Celebrated at all LDC sites, World Environment Day encourages employee engagement in activities to support LDC's environmental goals and reduce their collective and individual footprint through simple changes to habits.

In Brazil, a month-long campaign underlined LDC's goals to reduce our four environmental key performance indicators in simple ways.

For example, our **Bebedouro** plant distributed native tree saplings for employees to plant at home or in their neighborhood.

Integrated Pest Management

Although our citrus farms are managed according to best practices in Brazilian citrus cultivation, and comply with all applicable regulations and legislation, the predominantly tropical climate presents a number of challenges, especially with regard to phytosanitary conditions.

Our trained agronomists and environmental engineers work together to overcome these challenges and toward increasingly sustainable agricultural practices, for instance relying on our integrated pest management standards to select responsible, more environmentally friendly phytosanitary products.

Since 2017, we have also adopted the ProMIP application, developed by our team to provide real-time information that facilitates controls and avoids unnecessary use of crop protection products.

ProMIP Benefits

- Daily pest inspection results online.
- Incidence and population dashboards for each pest, indicating areas requiring immediate action.
- Pest inspector route tracking, to ensure sampling follows our methodology.

As part of our commitment to respond to consumer requirements and expectations, all our farms and third party suppliers follow *ProteCitrus* guidelines on maximum residue limits for pesticides set by each market.

Wildlife Conservation

Our 'Biodiversity Protection and Conservation Plans' are designed to balance economic and social development with environmental protection, and are essential in our efforts to conserve native vegetation (permanent preservation areas and legal reserves) and evaluate our use of natural resources, including soil, water and air.

Conservation Through Reforestation

We **planted over 35,000 native trees** at our farms in 2019.

Almost half were planted at **São José** farm, as part of efforts to reforest an area affected by an environmental accident in 2016, due to flooding caused by extremely high rainfall levels.

The rest were planted at our **Monte Belo** and **Grauna** farms.

Biodiversity Protection and Conservation Plans also include actions to:

- Create ecological corridors between forest areas in and outside farms, for species preservation.
- Reduce traffic near conservation areas, to avoid frightening wildlife.
- Conserve soils.
- Prevent fires.
- Control invasive species.
- Monitor greenhouse gas emissions.
- Train employees in environmental best practice.

In 2019, we maintained the area mapped by these plans:

- 32 farms have conservation areas mapped.
- We have about 9,100 hectares of conservation areas in total - roughly equivalent to 430 football fields.
- 84% of these areas are mapped for medium or advanced conservation, benefitting local wildlife through feeding and breeding sites for birds and mammals, for example.

In 2019, we also added to our plans by identifying farms located in 'Environmental Protection Areas' (EPAs), established by the State and Federal Government to help ensure sustainable development in sensitive regions by setting objectives and standards for water, soil and biodiversity conservation.

We have built EPA rules into the Biodiversity Protection and Conservation Plans for our farms in these areas, to ensure that our activities meet all relevant environmental requirements.

LDC Farms in EPAs

Our **Bonin, São José, São Pedro do Paraíso** and **Rincão dos Coxos** farms are located in the following EPAs:

- Rio Batalha
- Corumbataí, Botucatu & Tejupá



Growing With Partners





In 2019, we pursued our work and engagement with a wide range of stakeholders and partners, toward increasingly sustainable practices in our juice business.

Although *Rainforest Alliance* certification remained the same as in 2018, the number of farms verified as Gold Grade by the *Sustainable Agriculture Initiative (SAI) Platform* advanced to 32 in 2019.

We also continued to encourage third-party suppliers to apply similar sustainability standards in their activities.





Rainforest Alliance

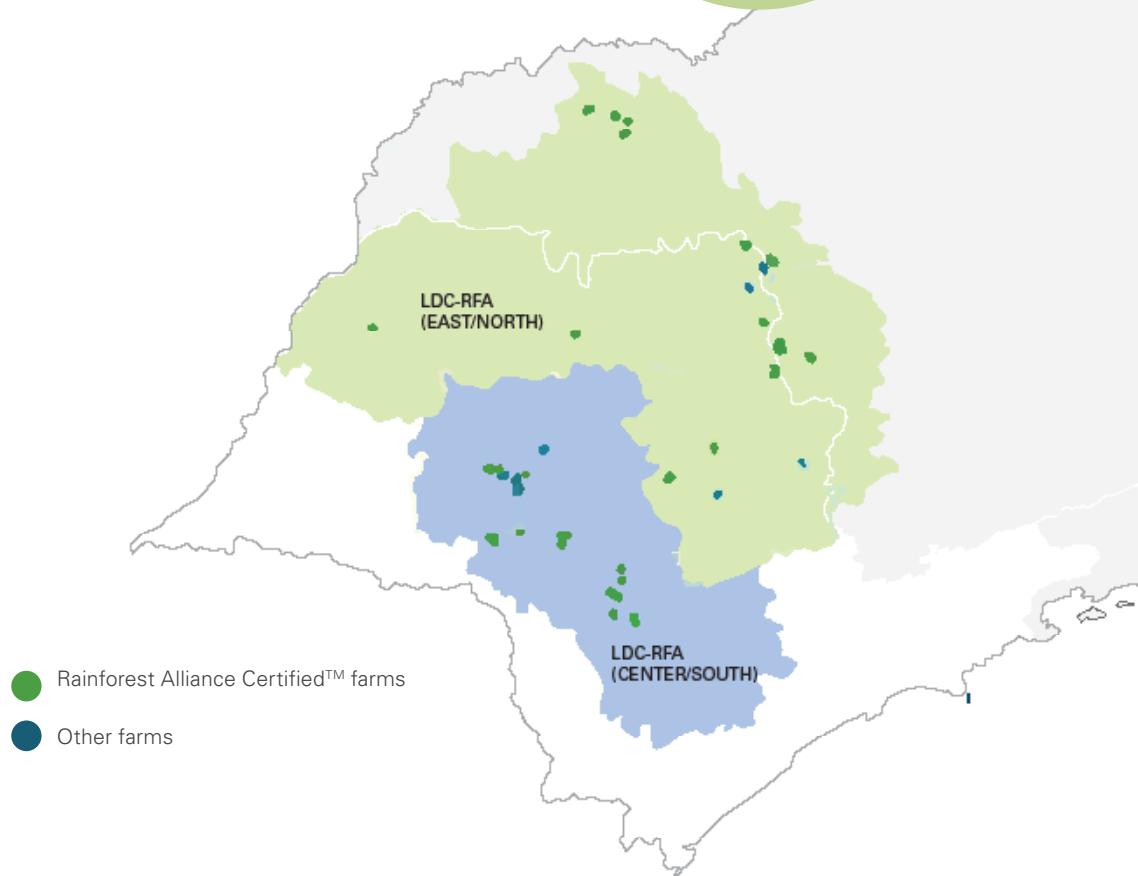
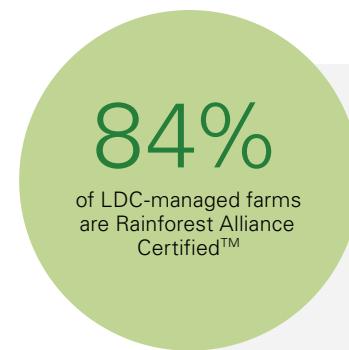
LDC continues to pursue *Rainforest Alliance* certification for all its operations, both for our farms and for our full chain of custody.

Farm-Level Certification

The number of farms certified by the *Rainforest Alliance* remained stable at 32 in 2019.

Farms are assessed against strict criteria using the *Rainforest Alliance's* Sustainable Agriculture Standards for:

- Effective planning and management.
- Biodiversity conservation.
- Natural resource conservation.
- Improved livelihoods and human wellbeing.



¹ Last year we incorrectly reported 29 farms certified by the *Rainforest Alliance* in our 2018 Juice Sustainability Report, while the correct number is 32, since several farms were grouped and reported as a single unit and reported, as follows: Angola Farm cluster, which contains Angola, Passagem and Ribeirão Fundo, was treated as one unit. Água Vermelha cluster, which contains Água Vermelha, Campo Alegre and Pilões, was treated as one unit.

Chain of Custody Certification

Since 2015, this certification ensures product traceability from Rainforest Alliance Certified™ farms through to our Matão plant and Santos port terminal, and on to our destination terminal in Ghent, Belgium. Our plant in Bebedouro has been allowed to process Rainforest Alliance Certified™ juice since 2016.

Certification by the *Rainforest Alliance* has various environmental, social and other benefits:

- A dedicated administrator ensures that our sites constantly meet certification standards.
- Formalized processes for work with neighboring communities.
- Expansion of our education program to promote environmental responsibility through farm tours, reforestation efforts and training for young people and local communities.
- Support with developing a resource management plan to reduce water and electricity consumption, manage solid waste and use crop protection products responsibly, based on a strict list of products considered safe for the environment.

Toward Supplier Certification

In addition to regular exchanges on responsible production practices, in 2019 we worked to encourage our third-party fruit suppliers to pursue certification by discussing the benefits, sponsoring a baseline audit of *Rainforest Alliance* standards, and helping producers to adapt their farms.

Supplier Testimonial

"Santa Sofia Agropecuária began producing oranges to supply the industry. As we gained expertise, we decided to expand our business and started cultivating lemons for export. That is when we realized that market demand was great and certifying our properties would make us competitive and bring great benefits, such as the protection of biodiversity, worker wellbeing and advantages for local communities.

LDC played a fundamental role when we started the certification process, putting at our disposal a trained team to support us, and thanks to this we earned *Rainforest Alliance* certification.

It was an intense process of adapting our production systems, and the benefits came as a reward for all the work and investment we put in. Today, our employees have made the transition and are now much more productive and engaged in the work they do, and we are also satisfied that *Santa Sofia* is able to contribute to sustainable agriculture as a company."

Luiz Eduardo Dumont Adams De Salvo S Raffaelli
Citrus Producer in São Paulo State, Brazil





Sharing Best Practice

As an industry leader, we believe that LDC has a key role to play in sharing best practice to encourage the adoption of sustainable production practices by third-party fruit suppliers, in line with our own policies as well as industry and legal requirements.

LDC strives to do this through its 'Programa Compartilhar'. In place since 2015, the program consists in bringing together fruit suppliers from various locations in São Paulo State to discuss a wide variety of subjects, including new technologies, traceability, biological control, sustainable farm management and responsible use of crop protection products and fertilizers, among others.

Over 180 people representing 101 fruit suppliers took part in program meetings in 2019 – a 51% increase in participation compared to 2018 (120 participants representing 78 suppliers).

To enrich the discussion and encourage questions and exchanges among participants, external experts are invited to speak at these meetings. In 2019, external experts from *Fundecitrus*, *Empresa Brasileira de Pesquisa Agropecuária* (Embrapa) and *Instituto Agronômico de Campinas* were invited to speak at these meetings.

Code of Conduct for Raw Material Suppliers

Providing guidelines relating to human rights, health and safety, business integrity and environmental protection, our Code of Conduct for suppliers remains in force.

In 2019, we continued to enforce compliance among our existing suppliers through Programa Compartilhar meetings and the systematic requirement to sign the Code of Conduct when contracting new suppliers.

Supplier Testimonials:

"Programa Compartilhar is extremely important for us as citrus growers. Topics covered are of great relevance, and we can discover different techniques to increase the productivity of our farms. I remember a meeting about rootstock that was essential for decision-making in the expansion of our farm. I hope the program continues to bring us knowledge about innovation and good practices in citrus farming."

Luis Carlos Finoto
Citrus Producer in São Paulo State, Brazil

"LDC's Programa Compartilhar is a good way for producers to obtain economic and technical information to manage their business more profitably and sustainably, reinforcing awareness of production norms and methods to protect the environment. The program also shares insights into future market trends, giving a medium- to long-term vision. Another important aspect of this program is the networking opportunity for both producers and LDC's origination teams, encouraging exchanges and interaction."

Marcio Siviero
Origination Supervisor at LDC
in Bebedouro, São Paulo State, Brazil



Sustainable Agriculture Initiative Platform

As part of the certification process, our farms are assessed according to the *Sustainable Agriculture Initiative (SAI) Platform's Farm Sustainability Assessment tool*, which combines existing codes, schemes and legislation as part of one global standard, to help farmers and food and beverage companies to produce, source and sell sustainable agricultural products.

In 2019, seven new farms were verified by an external certification agency as *SAI Platform Gold Grade*, bringing the total number of verified farms to 32 out of 38, which represents 84% of farms managed by LDC.



Fairtrade

LDC also works successfully with the *Fairtrade* certification program, with a focus on assessing smallholder producers against key labor and environmental standards and criteria.

In 2019, we partnered with a *Fairtrade*-certified cooperative of smallholder producers in Paraná State. Cooperative members split the premium they received among themselves to reinvest in social, economic and environmental enhancement projects.

Certified producers deliver their fruits to LDC's Paranavaí juice plant.



Sedex

As part of our commitment to ethical and socially responsible business practices, LDC has been a voluntary member of *Supplier Ethical Data Exchange* (Sedex) since 2010.

In 2019, we remained committed to the Sedex Members Ethical Trade Audit 4-Pillar Audit Report in its 6.1 version, which complies with best practice in recruitment and labor standards, human rights, health and safety, environment and business ethics.

LDC's juice terminals in Santos and Ghent, and our three processing plants in Bebedouro, Matão and Paranavaí, are audited under this scheme.



Other Certifications

As part of our commitment to meet customers' food safety, quality, sustainability and other requirements, and to align with best-in-class industry standards, LDC works with a wide range of other certifications.

SQF Food Safety Code for Manufacturing, Storage and Distribution, Edition 8.1

Food Safety Management System (recognized by GFSI):
Matão, Bebedouro, Paranavaí and Santos

SGF (Sure Global Fair)

Food Safety, Authenticity, Hygiene, Sustainability, Traceability and Labeling:
Matão, Bebedouro, Paranavaí, Santos and Ghent

FSSC 22000 4.1

Food safety management system certification scheme (recognized by GFSI):
Ghent

International Organization for Standardization (ISO)

ISO certification takes into account organizational context, the needs and expectations of workers and other interested parties, risks and opportunities, and leadership commitment to, and accountability for, improving management system effectiveness.

- ISO 9001:2015
Quality Management System:
Santos, Ghent and Rotterdam
- ISO 14001:2015
Environmental Management System:
Santos
- OSHAS 18001:2007
Occupational Health and Safety Assessment Services:
Santos

LDC is working to upgrade from OSHAS 18001:2007 to ISO 45001:2018 by 2021

Kosher Certificate

Required by the Jewish community, including Passover product lines.

Halal Certificate

LDC follows certification updates required by the Islamic community worldwide, including Gulf countries, as well as normative standards as follows:

- Malaysian Standard (Malaysia): MS 1900, MS 1500, MS 2300
- LPPOM MUI (Indonesia): HAS 23000, HAS 23201
- Singapore Standard (Singapura): MUIS-HC-S001, MUIS-HC-S002
- GCC Standardization Organization: GSO 2055-2, GSO 2055-1
- United Arab Emirates - ESMA: UAE.S 2055-2, UAE.S 2055-1, UAE.S 2055-44

Strengthening Customer Relationships

Building on more than 30 years of expertise, in 2019 we pursued our efforts to address the evolving needs of our extensive customer network around the world, guided by our purpose to create fair and sustainable value, for the benefit of current and future generations.

- A unique global quality structure was implemented with high-quality technical support for customers, including information and product specification.
- Initiated in 2015, our quality culture initiative continued in 2019, with a focus on food safety and customer satisfaction.
- We stepped up our logistics, research, development and product customization offer.
- We launched new products, like not-from-concentrate lemon and lime juices, and continued to offer market trend insights.
- Our key account management program helped us to address the needs of strategic clients, offering relevant products and suitable logistics, financing and sustainability solutions.



Supporting Local Communities





At LDC, we believe that our purpose to create fair and sustainable value includes driving lasting positive change in the lives of the communities near our operations.

Beyond generating economic activity, we work with a variety of stakeholders in the communities we touch around the world, supporting their long-term growth and welfare through a wide range of social initiatives – ourselves and in collaboration with partners and other organizations.



For Future Generations

Partnering with Alfredo Naime School

Fundação Abrinq, an organization working to defend the rights of children and adolescents in Brazil, recognizes LDC as a child-friendly company for our work with *Alfredo Naime School* over the last 20 years, helping the school to move from part-time to full-time education and expand its curriculum.

The partnership continued in 2019, with LDC sponsoring and participating in events organized by the school, as well as funding school equipment and activities – for instance, the purchase of new uniforms, the distribution of Easter eggs and Christmas gifts for students and their families.

Educandário Santo Antônio de Bebedouro

In addition to funding the purchase of school uniforms, LDC sponsors this school's extracurricular activities for around 275 children each year, including sports, IT, dance and theatre.

Student Visits to LDC Plants

In 2019, we once again welcomed students from local technical institutes to our plants, to learn about LDC's industrial practices.

- Paraná hosted 20 agronomy students from *Universidade Estadual de Maringá*.
- Matão welcomed ten students in chemical engineering, administration, logistics and accounting from *Universidade Estadual Paulista* (Araraquara campus), and another ten from *Universidade Anhanguera*, presenting our industrial activities to engage bright young minds.
- Bebedouro hosted 16 nursing technician students from *Senac* technical school in Bebedouro, who discovered our SHE processes and the role of a nursing technician in an industrial setting, as well as 26 nutrition students from *UNIFAFIBE* university center, who learned about catering in industry.



For the Environment

Together for the Environment

In place since 2014, this program encourages children from elementary schools to adopt good environmental practices, through activities that they can easily replicate at home.

Students visit our Rainforest Alliance Certified™ farms in the states of São Paulo and Minas Gerais, touring the site, taking part in lessons on recycling and sustainable agriculture, and helping to plant native seedlings.

At the end of the program, each child receives an illustrated booklet with tips on responsible consumption and recycling, and information on orange juice production. They also take home a certificate, a gift t-shirt and a magic seed that spells the word 'nature' when it sprouts.

+1,400

participants
across 24 sites

Beach Cleaning in Santos

Around 50 employees and their families came together on a Saturday morning to collect trash found in the sand over 2.5km of a local beach. The resulting 50kg of waste were sent for disposal in accordance with responsible recycling practices.



Other Initiatives

Ammonia Leak Emergency Drill

In July 2019, we supported the municipality of Santos and other public agencies and companies in the area, to run an emergency drill covering an ammonia leakage scenario, with the participation of over 400 people in the community near LDC's port terminal.

Plastic Caps for Charity

LDC employees at our 38 farms collected 145,000 plastic bottle caps over two months, which were converted into 145 wheelchairs for donation to *Barretos Cancer Hospital*, in São Paulo.

Family Day

At Matão plant, Family Day was an opportunity for local employees to invite their relatives to our site and discover their workplace, through presentations, organized tours and over lunch – all after a mandatory explanation on safety measures to observe while on site.

Good Gymkhana

This charitable initiative takes the form of an internal competition aiming to collect a maximum amount of non-perishable food for local charities, with great results in 2019.

- Matão: 880 liters of milk donated to *AIDS Support Solidarity Group*.
- Bebedouro: 340kg of food and 150 liters of milk donated to local retirement home *Lar do Idoso*.
- Paranavaí: 115kg of cleaning and personal hygiene products donated to *Lins de Vasconcelos* retirement home.
- Santos: 220 liters of milk donated to local orphanage *Casa da Vó Benedita*.

Other donations in 2019 benefited various local daycare and retirement centers in the communities near our operations, with donated items including clothes, blankets, toys, personal hygiene and cleaning products, Christmas hampers and more.



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