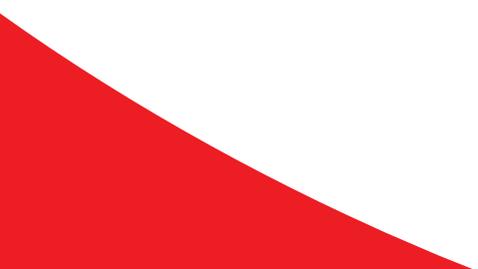


# Annual and Sustainability Report **2018**







**Annual and**  
Sustainability Report  
**2018**

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# SUMMARY



# TO READ THIS REPORT

GRI 102-45, GRI 102-46 GRI 102-48 GRI 102-50, GRI 102-51, GRI 102-52, GRI 102-53, GRI 102-54

**J**BS, because of its businesses, geographies and the people who help build the business every single day, is a highly diversified food Company. The Company's identity is built around its Culture, which represents the mission, beliefs and values which are shared by its Team Members in all 15 countries where the Company does business.

As part of its mission to provide the best products and services to its clients, building solid relationships with its suppliers, creating value for its shareholders and offering each of its Team Members an opportunity for a better future, the Company believes nurturing respect for the entire production chain is essential for its continued success. As part of this commitment, every year JBS publishes its Annual and Sustainability Report. This, the 10th edition of the Report, describes the Company's economic, social and environmental performance throughout 2018, its management and governance practices and the way the

business is structured. This report has been prepared in accordance with Global Reporting Initiative (GRI) Standards: Core option. Our financial statements comply with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and are produced by Grant Thornton Auditores Independentes.

The report has also been structured to focus primarily on sustainability and the Company's stakeholders. There are four chapters: **Our Business**, **Our People**, **Our Sustainability** and **Our Performance**, as well as a Company profile in the "This is JBS" chapter.

In **Our Business**, JBS presents its governance and management model, its commitment to ethics and compliance as well as its risk management and value creation strategies.

**Our People** presents JBS's relationship with its two main stakeholders: Team Members and the communities closest to its operations.

The JBS materiality matrix is the basis of the **Our Sustainability** chapter. This details how the Company manages its business's five priority sustainability issues and the results it has achieved throughout 2018.

Finally, **Our Performance** presents JBS's financial results and the recognition JBS has received, both of which help understand the scope of the Company's activities and the level of excellence it has achieved, particularly in terms of value creation, reducing impacts and maximizing the positive outcomes from the business.

The results and information in this report cover operations from all JBS S.A. business platforms, divided into JBS South America (Seara, Friboil, JBS Couros and JBS Novos Negócios) and JBS USA (JBS USA Beef - which includes the operations in the US, Canada, Australia and New Zealand, - JBS USA Pork and Pilgrim's Pride Corporation - with Pilgrim's operations in the US, Puerto Rico, Mexico and Europe).

**IF YOU HAVE ANY COMMENTS, SUGGESTIONS, QUESTIONS OR CRITICISM ABOUT THIS DOCUMENT, PLEASE EMAIL THEM TO RELATORIO.ANUAL@JBS.COM.BR, SEND THEM TO THE INVESTOR RELATIONS AREA AT +55 (11) 3144-4224 OR RI@JBS.COM.BR OR EMAIL THE SUSTAINABILITY AREA AT SUSTAINABILITY@JBS.COM.BR.**

<sup>1</sup> Prior to December 2018, this business unit was called JBS Carnes.



# MESSAGE FROM MANAGEMENT

GRI 102-14

## A MESSAGE TO OUR STAKEHOLDERS

I am excited to be able to share JBS's 2018 results with you and discuss the progress we have made. Executing our mission – which is to be the best at whatever we put our minds to and fully focus on our businesses - we have produced outstanding results which will allow the Company to continue creating opportunities for our Team Members and generating value for all our stakeholders.

For the past 65 years, JBS has been a synonym for hard work, innovation, growth and operational excellence. The passion and commitment of more than 230 thousand Team Members worldwide have transformed a Brazilian beef Company into one of the global food industry leaders with interests in practically every consumer market in the world.

JBS has an extensive footprint – with businesses in North, Central and South America, Europe and Oceania – allowing it to maximize global opportunities. This global strategy, alongside a unique and diversified portfolio of proteins, solutions, value-added products and recognized brands, is one that increases the Company's competitive advantages worldwide and helps reduce possible impacts from market volatility.

As such, our strategy is based around operational excellence. In 2018, we strengthened our global team and invested in in-house talent as we continued to leverage opportunities and realize the Company's potential in many of our markets. We have refined our processes and taken great strides in our Compliance and Ethics program while also accelerating our

global sustainability strategy, for which we have received a number of awards from various organizations worldwide.

We have also set a number of new records with net revenues of R\$ 181.7 billion, EBITDA of R\$ 14.8 billion and free cash flow of R\$ 5.7 billion, equivalent to around US\$ 1.5 billion. The free cash we generated was used to reduce the Company's net debt and reduce our financial leverage to a factor of 3.01 times in the dollar-denominated net debt/EBITDA ratio.

Alongside these very positive results, we have created new opportunities for our livestock breeders and integrated suppliers, customers, consumers and our team and their families.

Based on the quality of our products and our determination



A STORY  
*written  
together.*



to innovate while continuing to focus on customers' and consumers' requirements, we have a track record of building valuable and highly recognizable brands. This is all supported by our global innovation framework that focuses on understanding and anticipating consumers demands in many different markets, which in turn helps the Company develop and improve sales channels and solutions that build consumer preference, generating value for all our related parties.

I am proud to be leading JBS through this new growth cycle and helping improve the quality of life for millions of people around the world every single day. It is our responsibility to produce safe, high quality and sustainable food and it is a mission that we have passionately embraced.

In essence, we are a food Company that is passionate about its role in families' meals, supplying sustainable food solutions that our customers and consumers are proud to share and serve.

Through teamwork, commitment and humility, we believe the best is yet to come for JBS and all our stakeholders. Backed by our teams' extraordinary efforts, the Company is poised to make further progress, take on any challenges the future brings and help build a better world for us all.

On behalf of our global team, I would like to thank you all for your continued support and I believe there is much we can still achieve together.

**GILBERTO TOMAZONI**  
Global CEO



“JBS IS A SYNONYM FOR **HARD WORK, INNOVATION, GROWTH AND OPERATIONAL EXCELLENCE.** THE PASSION AND COMMITMENT OF MORE THAN 230,000 TEAM MEMBERS HAVE TRANSFORMED A BRAZILIAN COMPANY INTO ONE OF THE **GLOBAL FOOD INDUSTRY LEADERS.**”

# MESSAGE FROM MANAGEMENT

2018 was one of JBS's most important years ever. The Company celebrated its 65th anniversary and consolidated its position as one of the world's largest food industry companies with operations in 15 countries and more than 275,000 customers in 190 countries.

Gilberto Tomazoni was elected our global, clearly signalling how the Company's governance framework has evolved. One of his first steps was to announce Guilherme Cavalcanti as the Company's global CFO.

The Board also continues to focus on the best interests of the Company and its shareholders, setting out guidelines and policies to support the Company's growth.

The Board is supported by a number of advisory committees addressing strategic business issues such as Sustainability, Audits, Finance and Risk Management, Governance and Related Parties.

JBS has achieved planned and consistent growth in every business area and has been expanding its markets and winning over customers with its wide-ranging product portfolio, all of which is part of the Company's coherent strategy to create value and increase margins.

The Company has fulfilled its commitments to the market through consistent strategic planning and disciplined financial and operational management.

In its approach to sustainability, JBS has progressed in several areas that have helped improve the economic, environmental and social aspects of food production. As a result, our product quality and safety are generating additional value for customers and consumers. The Company is also being recognized for its ongoing efforts to reduce environmental impacts and increase resource usage efficiency.

We would like to be profitable, but also, and more importantly, we would like to create value for society. In the Compliance area, the JBS Compliance department reports directly to the Board and the Company has been recognized for its efforts in building a Compliance culture. The Company has a range of



consistent programs that are applied globally and it is now one of the most transparent organizations in Brazil and, based on the Transparency International ranking, a food industry compliance leader.

JBS has made incredible progress in 2018 and we will focus on ensuring that it continues to present solid and consistent growth over the years ahead. One of the Company's great strengths and differentials is the quality of its management team. We have a team of highly professional and experienced executives who are committed to our strategy and are executing it confidently while continuing to improve the Company's relationships with its stakeholders.

Underpinned by a solid culture that unites all of our worldwide operations in pursuing a single strategy and backed by a team of trained and motivated people, it is our firm belief JBS will maintain its leadership and make significant progress towards its goal of being an industry benchmark as it continues to deliver solid results and make strides in fundamental areas such as sustainability, governance and compliance.

**JERRY O'CALLAGHAN**

Chairman of the Board of Directors



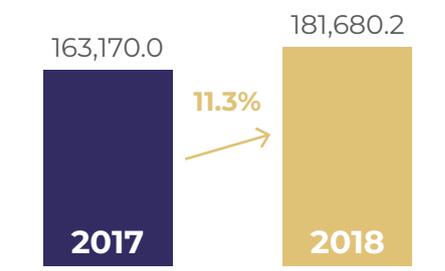
**“JBS HAS PROGRESSED IN SEVERAL PRACTICES THAT HAVE HELPED IMPROVE ITS ECONOMIC, ENVIRONMENTAL AND SOCIAL OUTCOMES. AS A RESULT, OUR PRODUCT QUALITY AND SAFETY IS GENERATING ADDITIONAL VALUE FOR CUSTOMERS AND CONSUMERS. THE COMPANY IS ALSO BEING RECOGNIZED FOR ITS ONGOING EFFORTS TO REDUCE ENVIRONMENTAL IMPACTS AND INCREASE RESOURCE USAGE EFFICIENCY.”**

# THIS YEAR'S HIGHLIGHTS

## NET INCOME

**R\$ 181.7BN**

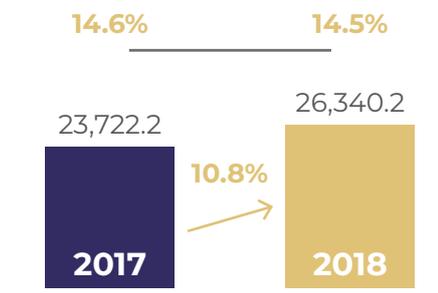
Up 11.3% compared with 2017



## GROSS PROFIT

**R\$ 26.3BN**

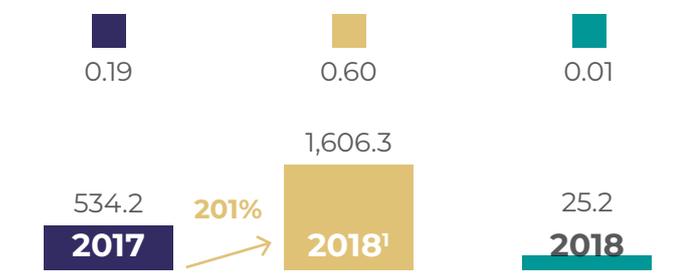
In 2018, the gross margin was 14.5%



## ADJUSTED NET INCOME

**R\$ 1.6BN**

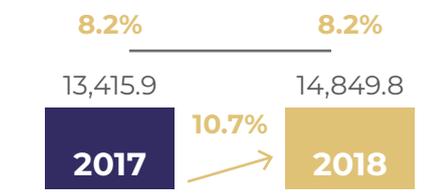
■ Earnings per share (R\$)



## ADJUSTED EBITDA

**R\$ 14.8BN**

EBITDA margin was 8.2%



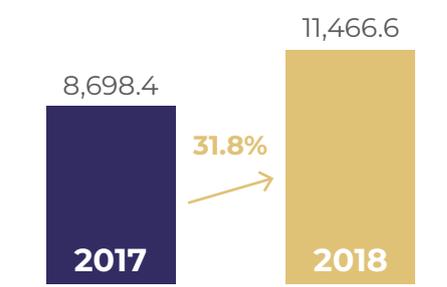
<sup>1</sup> Excluding the impact of the adherence to Rural Tax Regularization Program (PRR-Funrural)

Note: graphs are in R\$ million

## OPERATIONAL CASH FLOW

# R\$ 11.5BN

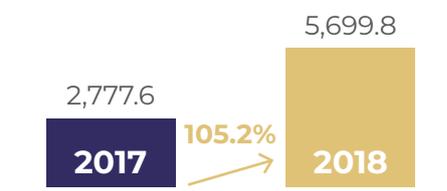
Up 31.8% compared with 2017



## FREE CASH FLOW

# R\$ 5.7BN

Up 105.2% compared with 2017



## MAIN INDICATORS

INDICATOR	2018	2017	2016	2015	2014
<b>ECONOMIC/FINANCIAL INDICATORS – R\$ MILLIONS</b>					
<b>NET OPERATING REVENUE</b>	181,680.24	163,170.00	170,380.53	162,914.53	120,469.70
<b>COST OF GOODS SOLD</b>	-155,340.05	-139,397.70	-149,066.70	-140,324.20	-101,796.30
<b>GROSS PROFIT</b>	26,340.19	23,772.20	21,313.83	22,590.30	18,673.40
<b>GROSS MARGIN</b>	14.5%	14.6%	12.5%	13%	15.5%
<b>ADJUSTED EBITDA</b>	14,849.76	13,415.90	11,286.90	13,300.40	11,090.00
<b>EBITDA MARGIN</b>	8.2%	8.2%	6.6%	8.2%	9.2%
<b>NET INCOME</b>	25.2	534.20	233,60	4,640.1	2,035.9
<b>NET MARGIN</b>	0%	0.3%	0.1%	2.8%	1.7%
<b>CASH FLOW USED IN INVESTING ACTIVITIES</b>	1,742.74	2,426.42	3,539.40	21,603.87	4,276.85
<b>NET DEBT</b>	47,217.75	45,283.34	46,904.79	47,038.74	25,168.71
<b>OPERATIONAL CASH FLOW</b>	11,466.60	8,698.43	3,667.40	21,206.40	8,987.00
<b>FREE CASH FLOW</b>	5,699.75	2,777.55	128.00	-397.47	4,710.16
<b>SOCIAL AND ENVIRONMENTAL INDICATORS</b>					
<b>NUMBER OF TEAM MEMBERS</b>	230,086	233,797	237,061	227,168	208,503
<b>TOTAL GHG EMISSIONS, BY WEIGHT (tCO<sub>2</sub>e) - SCOPE 1</b>	4,363,800.82	6,051,350.26	6,553,358.36 <sup>3</sup>	4,445,098.00	4,411,977.13
<b>TOTAL GHG EMISSIONS, BY WEIGHT (tCO<sub>2</sub>e) - SCOPE 2</b>	1,536,269.49	1,780,144.14	1,814,793.76 <sup>3</sup>	1,779,980.77	1,457,679.79
<b>VOLUME OF WATER CONSUMED (THOUSAND M<sup>3</sup>)</b>	180,728.61	180,438.23	190,961.16 <sup>3</sup>	165,606.00 <sup>3</sup>	66,709.00 <sup>2</sup>
<b>INVESTMENTS IN ENVIRONMENTAL MANAGEMENT AND IMPROVEMENTS (R\$ MILLIONS)</b>	721,10	806,50	855,20	716,60	N/D <sup>1</sup>

<sup>1</sup> Not available.

<sup>2</sup> Information regarding JBS operations in Brazil.

<sup>3</sup> Numbers reviewed.

**99%**

of Brazilian Team Members received ethics and compliance training.

The Company invested around

**R\$ 300 MILLION**

in the safety of its Team Members worldwide.

Globally, over

**R\$ 62.5 MILLION**

was invested in waste water treatment.

## 1ST PLACE

JBS tops the transparency ranking for food sector companies with international operations in the 2018 Transparency International Brazil report. The Company came 9th on the overall ranking.

**81%**

of the water captured and used in the Company's industrial processes is treated and safely returned to the environment.

Over

**R\$ 230 MILLION**

has been invested in food quality and safety across all operations.

More than

**135,000 TEAM MEMBERS**

received Occupational Health & Safety training worldwide.

Globally, more than

**R\$ 160 MILLION**

has been invested in energy efficiency projects.

## GLOBAL INNOVATION TEAM

(GIT) was created in October 2018 to increase information sharing, accelerate innovation through cross-border exchanges and create global platforms to support innovative practices.

There was a

**29%**

reduction in the number of accidents resulting in lost time and

**55%**

reduction in the number of lost days JBS worldwide.

**18%**

of the energy used by the Company's production processes was renewable energy.

Over

**13.3 THOUSAND**

Team Members and producers worldwide received animal welfare training.

The Company reused

**1.2 MILLION**

tons of waste in 2018 for composting, recycling, energy reuse and energy cogeneration, equivalent to 53.58% of all waste generated.

JBS continued to invest in training, particularly for people in leadership positions – more than

**80,000**

staff across all the Company's operations received career development training.

JBS invested

**R\$ 88.2 MILLION**

to improve animal welfare practices across all its global operations.

The Company recycled the equivalent of

**3.36%**

of all the water captured globally.

JBS invested more than

**R\$ 27 MILLION**

on management and measurement and initiatives to reduce water usage and reuse water worldwide.



# THIS IS JBS



# PROFILE

GRI 102-1, GRI 102-3

JBS S.A. is a Brazilian multinational and a recognized leader in the global food industry. Based in the city of São Paulo, JBS has a global production and distribution platform that stretches across **15 countries and manages more than 400 offices and plants on five continents – the Americas, Africa, Asia, Europe and Oceania. We serve around 275 thousand customers in more than 190 countries,** including major regional chains to small-scale retailers, as well as wholesale clubs and food service companies.

Everywhere the Company operates, its more than 230,000 Team Members follow the same Company guidelines on issues including economic, social and environmental sustainability, innovation and food quality and safety and implement best practices throughout the value chain, all of which is backed by the same Culture and Values. In all of its business and every region, the Company is focused on operational excellence.

However, JBS ensures its local operations retain sufficient flexibility to adapt to local markets and consumer requirements.

JBS operates in three major business areas on both the B2B and B2C markets, offering a diverse portfolio of brands and products including everything from fresh and frozen meats to prepared foods sold under market-leading brands such as Friboi, Seara, Swift, Pilgrim's Pride, Plumrose and Primo, among others.

The Company also operates a number of related businesses through its JBS Couros and JBS Novos Negócios units. These operations focus on innovation and use material from the food production process that would otherwise be classified as waste for the production of leather and other products, including biodiesel, collagen, pharmaceutical inputs, personal hygiene and cleaning items, animal nutrition ingredients, natural casings and many others.

JBS Novos Negócios also provides products and services that supplement the Company's own value chain, including metal packaging, environmental management solutions and shipping services.

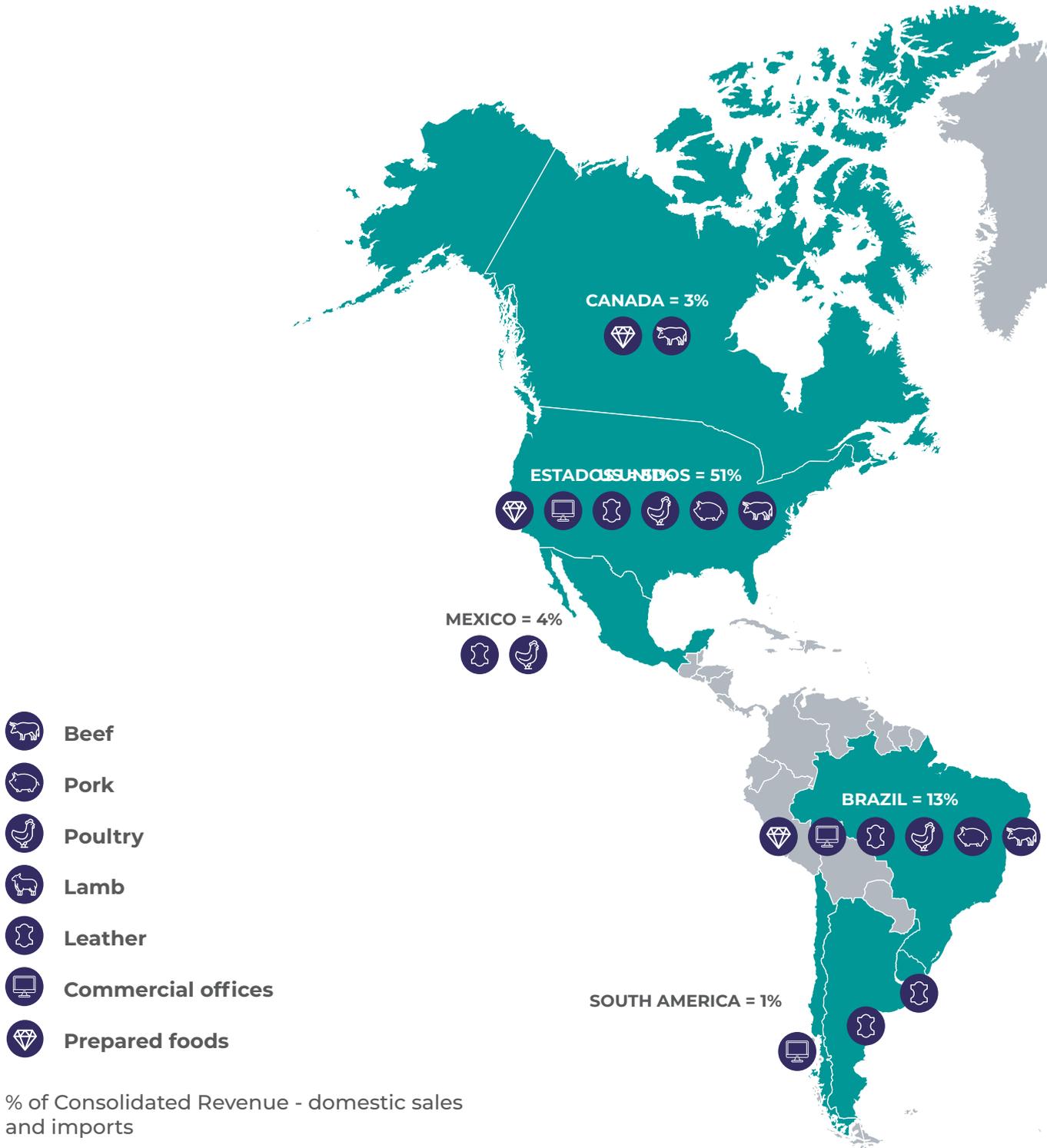


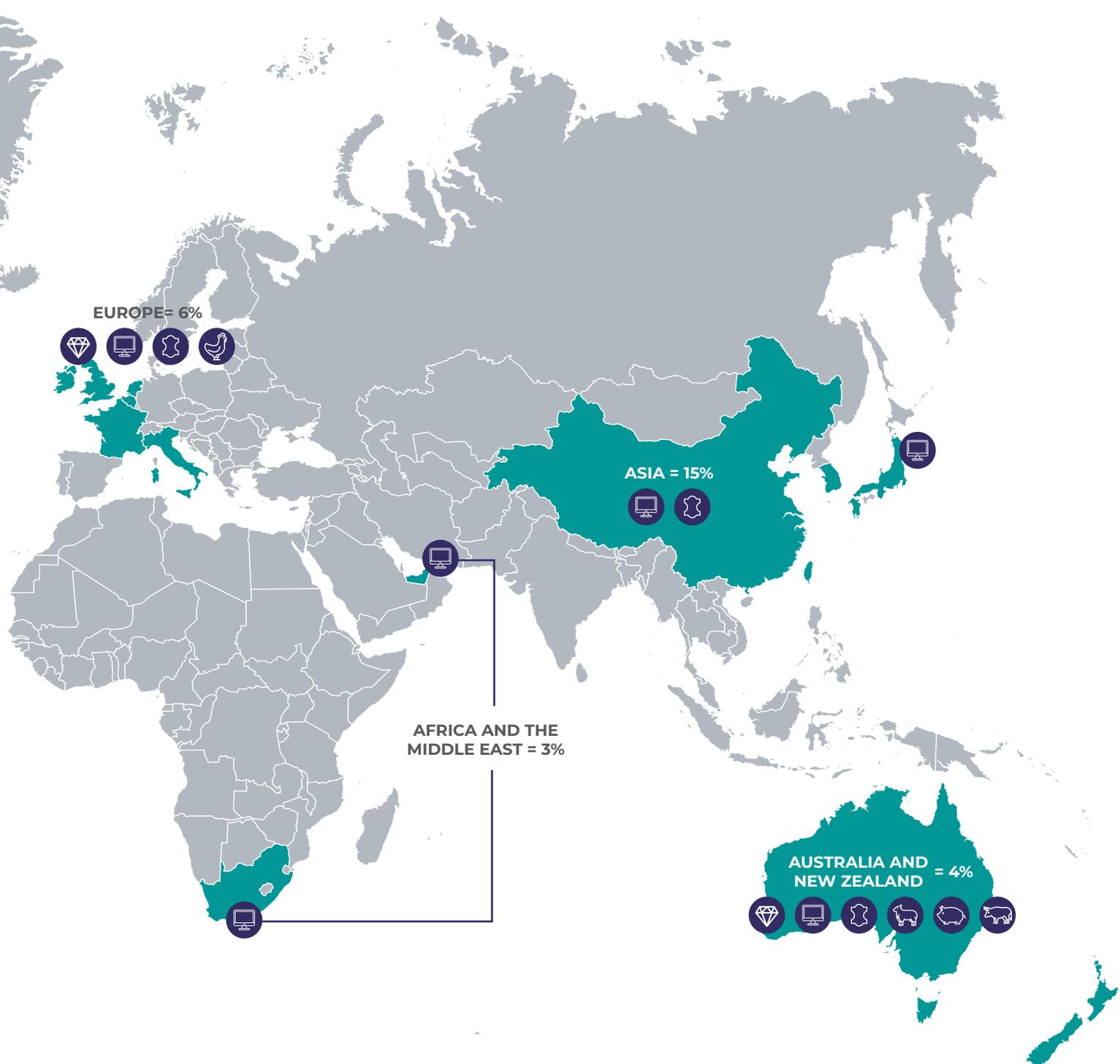


## GLOBAL ACTIVITIES

GRI 102-4, GRI 102-6, GRI 102-7

The Company has over 400 production units in 15 countries and commercial offices in 20 countries.





# OUR CULTURE

GRI 102-16

## OUR MISSION

*To be the best in all that we do completely focused on our business ensuring the best products and services to our customers, a relationship of trust with our suppliers, profit for our shareholders and the opportunity of a better future for all of your Team Members.*

## OUR BELIEFS

- Focus on details
- Take a hands-on approach
- Our achievements are based on hard work
- The right person in the right place
- Passion for what we do
- Attitude is more important than knowledge
- Leaders must win their subordinates' trust
- Lead by example
- Focus on results
- Work with people better than us
- Belief makes the difference
- Product quality



# OUR VALUES

OWNERSHIP

DETERMINATION

DISCIPLINE

AVAILABILITY

SIMPLICITY

SINCERITY

HUMILITY

# GOVERNANCE

GRI 102-10, GRI 102-18

**J**BS is constantly improving its corporate governance practices in order to create value, build trust with shareholders, investors and other stakeholders and generate sustainable results across the value chain.

JBS's corporate governance structure has been developed and improved with a view to guaranteeing transparency in all its relationships. The governance structure includes the Board of Directors, the Global Compliance Department, a permanent Fiscal Council and advisory committees focusing on strategic areas, including: Sustainability; Auditing; Financial and Risk Management; Governance; and Related Parties (further information on JBS committees is available on the JBS Investor Relations website: <<http://jbs.invest.com.br/>>). There are also three strategic areas, reporting directly to the President of Global Operations: Food Safety and Quality, Center of Excellence and Innovation and Global Sourcing (*for Food*

*Safety and Quality further information see page 40 and more information about Innovation, see page 44).*

The Board of Directors - the Company's highest-ranking governance body - ended 2018 with eight members, including three independent directors, as per the Company Bylaws. Members of the Board are elected at an annual general shareholders meeting for a unified, two-year term; their many responsibilities include defining business policies and guidelines as well as economic, social and environmental targets.

The chairman of the Board of Directors and the Company CEO are separate positions held by different professionals. The Board of Directors elected Gilberto Tomazoni to take up the position of JBS Global CEO in December 2018. This position was previously held by José Batista Sobrinho. Sobrinho, the Company's founder and its first CEO, remains with the Company as the Vice Chairman of the Board of Directors.

Prior to becoming CEO, Tomazoni was COO at JBS and was directly involved in the global business strategy.

All members of the Board and the Company's committees, including the Fiscal Committee, receive fixed, monthly, performance-based compensation. This means they do not receive any direct or indirect benefits nor do they receive a share in the Company profits. Compensation for other JBS management personnel is performance-based, encouraging sustainable medium and long-term growth at JBS while incentivizing efforts to reach short-term targets. Surveys are used to periodically compare compensation packages with the general market practices and all compensation is aligned with JBS and shareholders interests.

## BOARD OF DIRECTORS

### Jeremiah O'Callaghan\*

- Aguinaldo Gomes Ramos Filho
- Cledorvino Belini\*\*
- Gilberto Meirelles Xandó Baptista
- José Batista Sobrinho
- Roberto Penteado de Camargo Ticoulat\*\*
- Sérgio Roberto Waldrich\*\*
- Wesley Batista Filho

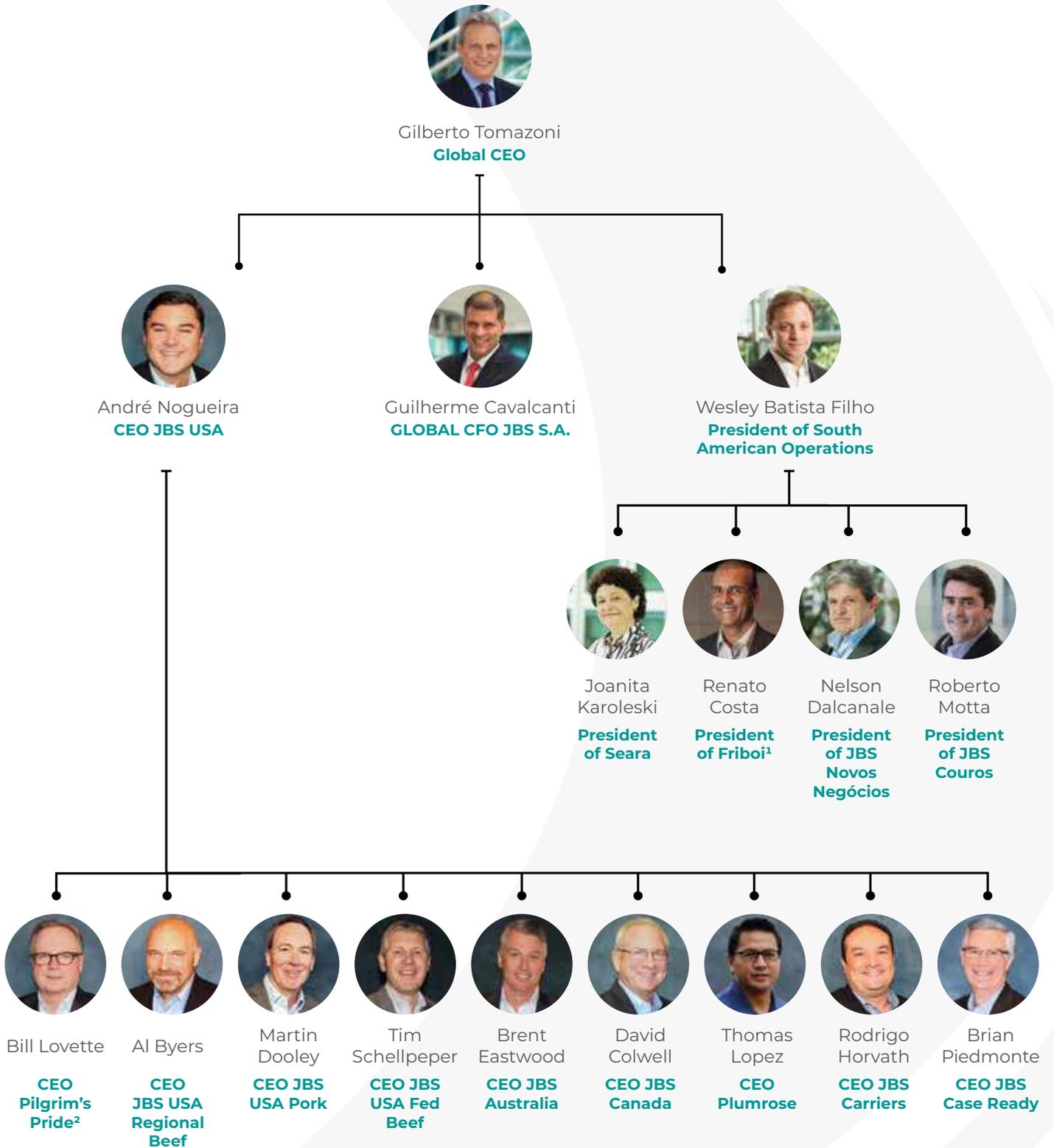
\* Board Chairman | \*\* Board independent members



Further information on the committees is available on the JBS Investor Relations website: <<https://ir.jbs.com.br>>

# GLOBAL MANAGEMENT STRUCTURE

(As of 12/31/2018)



<sup>1</sup> Prior to January 2019, this unit was called JBS Carnes  
<sup>2</sup> Bill Lovette was replaced by Jayson Penn in March 2019

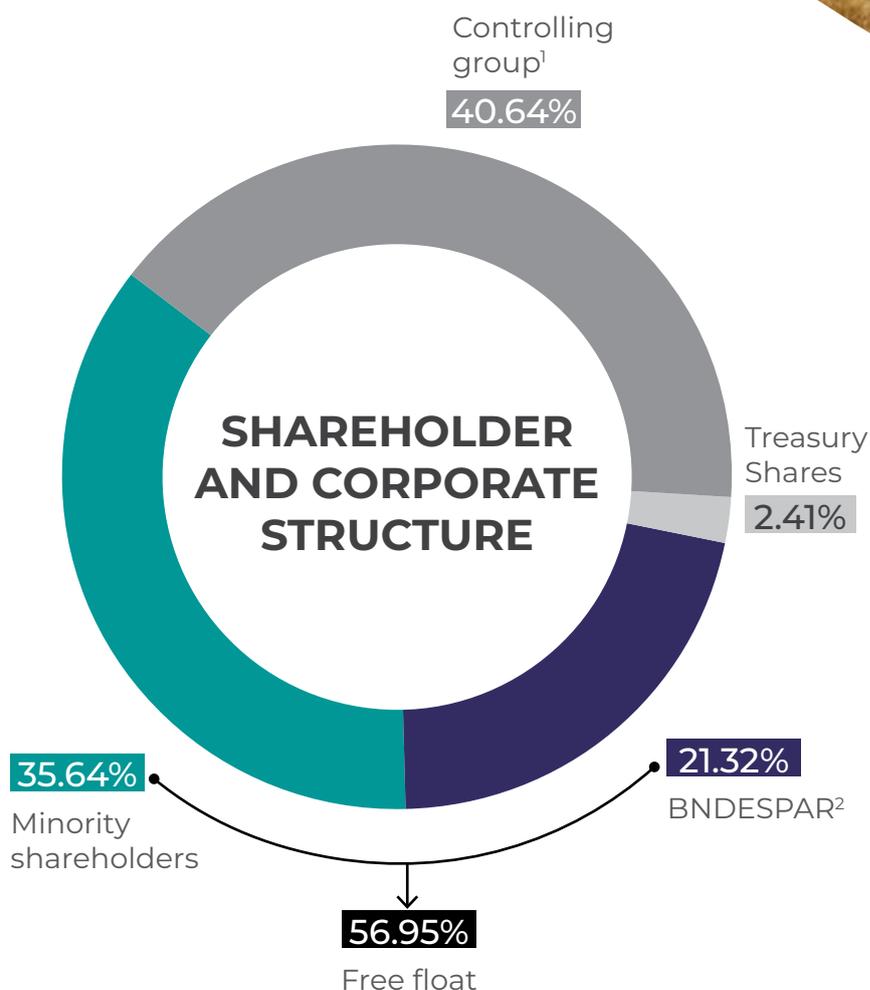
# SHAREHOLDER STRUCTURE

GRI 102-5

JBS stock is traded on the B3's Novo Mercado in Brazil. The Novo Mercado is a listing segment made up of companies that are committed to voluntarily complying with corporate governance practices over and above those required by law. JBS has gone even further on a number of issues. Out of the total number of issued shares, 35.64% were held by minority shareholders, exceeding the 25% requirement under Novo Mercado regulations.

Within the Company's board of directors, 37.5% of the members are independent, compared with the 20% required under Novo Mercado rules. Additionally, the Company only issues common stock, granting equal rights to all shareholders, while all shareholders enjoy tagalong rights in the event of changes in JBS's control.

At the end of 2018, JBS S.A. had the following equity position:



<sup>1</sup> J&F Investimentos S&A e Formosa

<sup>2</sup> BNDES Participações S.A



**JBS STOCK IS ALSO INCLUDED IN THEORETICAL PORTFOLIOS BY THE FOLLOWING B3 INDEXES:**

- Differentiated Corporate Governance Stock Index (IGC)
- Differentiated Tag Along Stock Index (ITAG)
- Brazil Index 100 (IBrX 100)
- Brazil Index 50 (IBrX -50)
- Expanded Brazil Index (IBrA)
- Carbon Efficiency Index (ICO2)
- BM&FBovespa Consumer Index (ICON)
- BM&FBovespa Value Index (IVBX-2)
- Mid-Large Cap Index (MLCX)
- Trade Corporate Governance Index (IGCT)
- Governance Index Corporate – New Market (IGC-NM)
- Industrial Sector Index (INDX)
- Ibovespa Index

In the US, JBS stock is also traded as Level 1 ADRs (American Depositary Receipts) on the OTCQX over-the-counter market.

The Investor Relations area is responsible for communicating with shareholders and investors; this department has a website (<https://ir.jbs.com.br>) and it frequently releases the Company's results through conference calls and events attended by capital market agents and specialist media outlets.

# ETHICS AND COMPLIANCE



JBS has been reinforcing its Compliance structures since 2017 and is taking steps to become a Compliance benchmark, given the critical role compliance plays in business sustainability. JBS is constantly improving its existing control mechanisms and activities and is developing new policies and procedures in line with best global practices. These initiatives, alongside the JBS Code of Ethics and Conduct and the JBS Ethics Hotline, are part of the organization's global compliance program, called "Always Do the Right Thing".

In 2017, the Company created a global department headed up by José Marcelo Proença, who is responsible for developing the program. The department reports directly to the Board of Directors in order to guarantee its independence. JBS also has Ethics Committees for each of

its business units in Brazil as well as an exclusive committee, called the Institutional Ethics Committee, staffed by Company executives. These committees discuss how to investigate reports submitted via the JBS Ethics Hotline and monitor progress of the Always Do the Right Thing program.

The JBS Ethics Hotline can be accessed from any country where the Company does business and is available in 11 languages, 24 hours a day, seven days a week.

In the first half of 2018, the Board of Directors approved a new Code of Ethics and Conduct as well as a Business Partner Code of Conduct - these are both global documents, which means there is just one version of these documents which are used by every Company unit globally.

Special attention has also been paid to communicating the issues addressed in the Code of Ethics and Conduct, how the Ethics Hotline works and the new policies and procedures that were implemented in 2017 and apply to everyone who works at JBS. In addition to over 20 in-house communication campaigns, JBS organized 25,000 hours of on-site and remote training courses throughout the year, reaching practically every single Company Team Member. Approximately 98.8% of Brazilian Team Members received training.

Leadership courses were also organized for staff managing the Company's international operations in 2018. In 2019, JBS will continue its strategy of training every single team member and will extend its training courses to include its international and third parties. Additionally, around 1.5 thousand Team Members received on-site training on specific issues not addressed in the Code of Ethics and Conduct - for example, the commercial team received training on cartel-related issues.

At JBS's international operations, the Company hired Lance Kotschwar in 2018 as Compliance area director and he is responsible for organizing initiatives that are aligned with the Company's global strategy and guarantee integrity at all JBS international operations.

## ETHICS AND COMPLIANCE PROGRAM DISCLOSURE

- More than **20 in-house communication campaigns**
- **25,000 hours of on-site and distance training courses** were organized in Brazil, reaching 99% of local Team Members. All Brazil staff will undergo training in 2019.
- Around **1,500 staff** from specific groups received **on-site training** for issues not addressed by the Code of Ethics and Conduct - for example, the commercial team was trained on cartel-related issues and plant managers received training on moral and sexual harassment.



A number of internal controls were implemented in 2018, including guidelines on product donations, sponsorship, offering and/or receiving gifts and entertainment and progress was made on the project to create a specific, automated third-party reputational analysis (due diligence) tool as part of efforts to improve the process the Company began the previous year. Today, the tool is available for higher risk third parties and the list of third parties who will undergo due diligence will be expanded throughout 2019. The Company will continue to work with international partners who will assist in the due diligence process in regions that face higher risks and lower levels of information transparency.

JBS has also created a number of policies to address specific issues and reviewed existing

guidelines, such as its gifts and entertainment policy. Although JBS has a single Code of Ethics and Conduct for all its operations, policies may vary on a country by country basis.

JBS is a member of several major organizations, including the Ethos Institute; the Company signed the Business Integrity and Anticorruption Pact which the Institute has developed to disseminate best business practices and help build a more ethical and responsible market. JBS is also involved in Ethos Institute working groups looking at a number of ethics and integrity issues.

As a result, Transparency International ranked JBS as one of Brazil's most transparent companies in its most recent report (*for more information, see page 166*).

## 2019 COMPLIANCE TARGETS

- Increase the number of due diligence investigations into third parties that pose a risk
- Train third parties on the JBS Business Partner Code of Conduct
- Development of global policies
- Improve team member training worldwide
- Create controls and evaluate the effectiveness of existing controls
- Launch the global compliance website, making program initiatives available to the public
- Improve and expand the effectiveness of compliance communications and include materials in other languages, such as English, Italian and Spanish

## JBS COMPLIANCE PROGRAM INSTRUMENTS

### CODE OF CONDUCT AND ETHICS

This document provides Team Members with guidelines on how they are expected to act in any given situation, describing conduct and behavior that is acceptable to and required by JBS. The Code's current version, published in the beginning of 2018 and now available in Portuguese, English, Italian and Spanish, was produced in order



The Code of Conduct and Ethics is available on the Company's website.

to consolidate and unify existing guidelines at JBS's various global operations. The organization also has a mandatory Business Associate Code of Conduct for third parties doing business with JBS, including customers and suppliers. Both documents can be accessed through the Company's website.



The Business Associate Code of Conduct is available on the Company's website.

### POLICIES AND PROCEDURES

Documents addressing specific issues to support Team Members during their day-to-day activities, in line with the organization's compliance rules. They are:

- Sponsorship Policies
- Product Donation Policy
- Gifts and Entertainment Policy
- Related Party Transactions Policy
- Consequences Policy
- Reporting Investigation Policy
- Ethics Committees' Charters

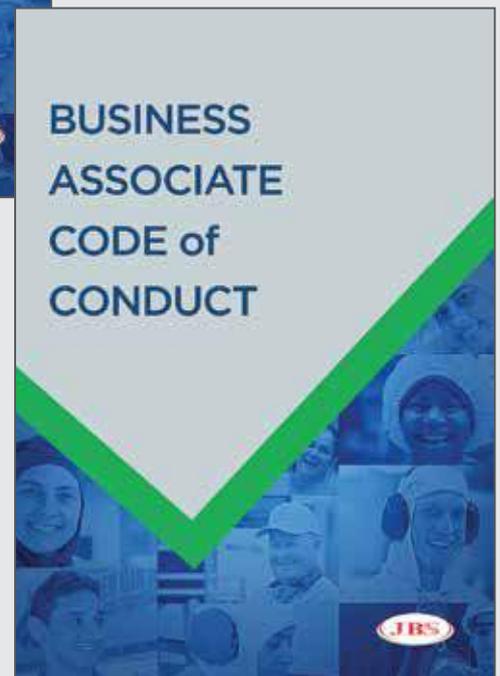
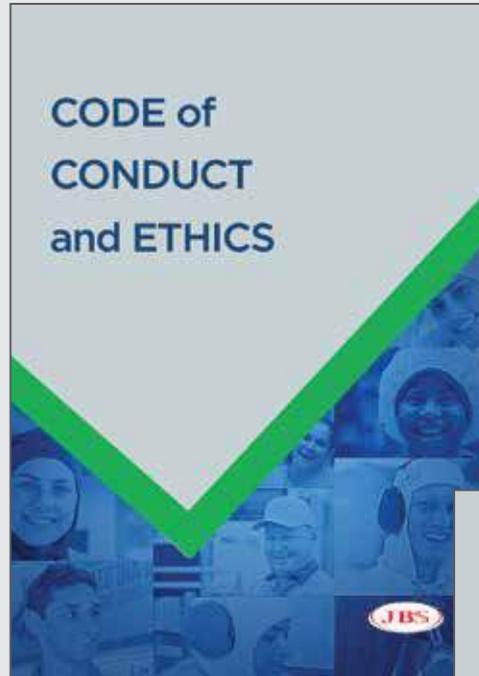
All documents, not including access restricted documents, are available on the Company's website.



## JBS ETHICS HOTLINE

The Hotline is available to all Company stakeholders (Team Members, suppliers, customers, investors and others). Anyone can use it to report wrongdoing or behavior that violates the JBS Code of Conduct and Ethics or the Business Associate Code of Conduct.

The hotline is currently available in three languages – Portuguese, English and Spanish – serving the many different nationalities doing business with the Company worldwide. The Ethics Hotline is managed by a specialist provider from outside the Company to guarantee whistleblower safety and confidentiality. Anyone wishing to file a report may do so anonymously. The Company responsible for the JBS Ethics Hotline registers the report, classifies it based on the issues involved and incident severity, and submits the information to the JBS Compliance area for appropriate action.



# RISK MANAGEMENT

GRI 102-11

**T**he Risk Control Department is responsible for identifying, assessing, mitigating and monitoring financial risks inherent to JBS's operations. Risk controls are based on the Financial Risks and Commodities Management Policy, approved by the Board of Directors. The department also helps operational units identify and monitor financial risk specific to their own activities, supported by specialist staff and specific systems.

The table below lists the risks JBS has identified by category and severity level, as well as the efforts made to mitigate them.

## THE MAIN FINANCIAL, SOCIAL AND ENVIRONMENTAL RISKS\* IDENTIFIED AND MONITORED

CATEGORY	TYPES
FINANCIAL RISKS	Market
	Credit
	Liquidity
SOCIAL AND ENVIRONMENTAL RISKS	Raw Material Procurement
	Climate change

DEFINITION	MITIGATION METHOD
Currency, interest rate and commodity price risks when price fluctuations could affect JBS businesses.	Exposure is mapped in real time.  Hedging instruments, including derivatives, are used, subject to approval from the Board of Directors.
The risk of default on accounts receivable, financial investments and hedge contracts.	Accounts receivable: portfolio is diluted and secure credit parameters are set (based on proportional limits, financial and operational ratios and credit agency queries) to reduce risks.  Financial transactions with financial institution counterparties: exposure thresholds are defined by the Risk Management Committee and approved by the Board of Directors, based on rating agency classifications.
The possibility of imbalances appearing between negotiable assets and enforceable liabilities that could affect the Company's ability to fulfill future financial obligations.	Capital structure management focuses on immediate, modified liquidity metrics - i.e. cash on hand and financial investments, divided by short-term debt - and working capital, to maintain natural leverage for the Company and its subsidiaries.
The risk of purchasing raw materials from suppliers involved in deforestation of native forests, invasion of protected areas such - as indigenous land or environmental conservation units -, use of child or forced labor or products that could pose a risk to consumer health.	Cattle purchases: Notify the market of the social and environmental criteria adopted for cattle purchases and support for the use of best farming practices. In Brazil, JBS monitors supplier farms located in the Legal Amazon States using a geospatial system capable of identifying non-conformities and barring raw material purchases from non-compliant suppliers ( <a href="http://jbs.com.br/sustentabilidade/dialogo-transparencia-e-comunicacao/">http://jbs.com.br/sustentabilidade/dialogo-transparencia-e-comunicacao/</a> ).  Poultry: the Company's relationship with animal breeders assures raw material quality. Suppliers are visited periodically and are audited to ensure production practices are in line with the JBS's criteria ( <a href="http://jbs.com.br/sustentabilidade/dialogo-transparencia-ecomunicacao/">http://jbs.com.br/sustentabilidade/dialogo-transparencia-ecomunicacao/</a> ).  Product quality: a global area that focuses on all production processes, which are audited internally by various regulators and customers to maintain high food quality and safety standards and remain eligible to serve all markets.
Climate change could have a negative impact on the Company's businesses. Resources like water, electricity and animal feed (which is dependent on farming) are critical for production of raw materials (cattle, poultry, pork and lamb).  Businesses could also be affected by new legislation and regulation in this area.	We monitor the environmental impacts from direct (industrial, logistics and shipping) operations and taking steps to minimize the impact of the Company's own and its suppliers' operations. Monitoring involves taking a global inventory of direct and indirect GHG emissions using the international GHG Protocol methodology. The results of the inventory are published annually on the CDP platform. JBS also monitors indicators representing the volume of water and electricity used by its operations in order to optimize production processes and gradually reduce consumption. To reduce the impact from JBS operations and create opportunities, the Company has an annual plan to invest in environmental improvements to optimize use of natural resources, water and waste energy recycling and address other issues.

\*All potential risk factors the Company is aware of are detailed in sections 4 and 5 of the JBS S/A Reference Form, available at <http://jbs.infoinvest.com.br/ptb/4896/80775.pdf>

# ASSOCIATIONS AND PARTNERSHIPS

GRI 102-12, GRI 102-13

**J**BS is a member of various food industry groups and associations and a member of some of the largest industry and sustainability organizations in each of the countries where it operates.



## GLOBAL

- Global Roundtable for Sustainable Beef (GRSB)
- International Meat Trade Association
- Leather Naturally
- Leather Working Group (LWG)
- Sustainable Agriculture Initiative



## UNITED STATES

- American Fats and Oils Association
- American Feed Industry Association
- American Meat Science Association
- Arizona Cattle Feeders' Association
- Beef Industry Food Safety Council
- Colorado Livestock Association
- Environmental Protection Agency Animal Ag Discussion Group
- Idaho Cattlemen's Association
- Kansas Livestock Association
- National Cattlemen's Beef Association
- National Chicken Council
- National Pork Board
- National Pork Producers Council
- National Renderers Association
- North American Meat Institute
- Oklahoma Cattlemen's Association
- Texas Cattle Feeders Association
- U.S. Poultry and Egg Association



## BRAZIL

- Brazilian Food Industry Association (ABIA)
- Brazilian Association of Meat Exporters (ABIEC)
- Brazilian Animal Protein Association (ABPA)
- Brazilian Tanning Industry Center (CICB)
- Sustainable Livestock Working Group (GTPS)
- Ethos Institute
- National Pact Institute to Eradicate Slave Labor



**AUSTRALIA**

- Australian Beef Sustainability Framework
- Australian Environmental Business Network (AEBN)
- Australian Food and Grocery Council (AFGC)
- Australian Government National Traceability Project
- Australian Lot Feeders Association (ALFA)
- Australian Meat Industry Council
- Australian Meat Processor Corporation (AMPC)
- Cattle Council of Australia
- Meat and Livestock Australia



**EUROPEAN UNION**

- British Frozen Food Federation
- British Poultry Council
- Campden BRI Food and Drink Initiative
- Chilled Food Association
- European Federation for Beef and Pork Meat
- French Meat Federation
- French Meat Interprofessional Federation
- French Poultry Federation
- Institute of Livestock or INRA (French National Institute of Agricultural Research)
- Northern Ireland Food and Drink Association
- Northern Ireland Poultry Federation



**CANADA**

- Canadian Cattlemen's Association
- Canadian Roundtable for Sustainable Beef (CRSB)



# Our Business



JBS plant in Itumbiara - GO

# GLOBAL BUSINESS STRATEGY

GRI 102-2

For JBS, providing families around the world with quality food is not just a challenge: it is a commitment. People who previously had little or no access to higher protein diets can now enjoy more appropriate nutrition. The world has a population of 7.6 billion and this figure is expected to reach 9 billion in 2050. **Providing the world's population with high quality food means we need to improve and will have to increase food production by 60%. This will only be possible through innovation to increase productivity and efficiency across the production chain.**

In addition to the challenge of increasing food quality, dietary habits are also affected by ethical and cultural standards. Issues such as product sourcing and integrity, value chain transparency and environmental and social footprints are increasingly important to people all around the world.

In this context, JBS, a global Company capable of addressing emerging consumer needs and requirements, is constantly focused on improving food quality, transparency and sustainability. As a result, JBS's business model is unique in the food industry. It manages a platform made up of various different yet independent operational units that have the autonomy to implement regional strategies aligned with the Company's overall global strategy. This model speeds up the decision-making process, improves our resilience in the event of economical commercial challenges and ensures JBS has a foothold in all of the world's most competitive markets through companies recognized for their management and operational excellence, best practices and commercial brands.

**One of JBS's most important business guidelines is diversification, which it pursues**

**through its business activities or its brands, products and markets.** The Company operates on four continents, managing processing units, distribution centers and commercial offices serving approximately 275 thousand customers in 190 countries. This breadth gives JBS a global competitive edge and minimizes exposure to health, business, economic or policy risks in any given region.

The Company's operational structure is based on five main businesses: beef, poultry, pork, leather and new business.

**In 2018, the Company continued to prioritize food safety and quality, enforce compliance with high standards and support innovation, putting it in a position to adopt best industry practices and develop new projects across the globe.**





#### CASE: 1953 FRIBOI

Friboi launched the 1953 Friboi brand in 2018 to celebrate JBS's 65th anniversary. The range includes over 50 premium beef cuts from animals bred by crossing various European breeds. The raw material is controlled and selected at source in line with stringent quality standards.

In order to develop the brand, the Company has invested in advanced technology and carried out on-site and the laboratory testing, with support from the State University of Campinas (Unicamp). 1953 Friboi is the first Brazilian meat brand to employ a multibreed protocol, which was implemented after tests revealed that high-quality meat is not produced only by one specific breed of cattle or production system.

Producers who farm different European breeds of beef cattle can produce high-quality meat, increasing the supply of premium beef and making it more accessible to consumers. In its first year, the brand joined forces with 500 livestock breeders and processed 100,000 animals.

Demanding consumers are increasingly looking for cuts of meat that are tender, tasty and succulent. As a result, the new brand has gained a foothold on a growing market based around its signature attribute: "The evolution of taste". Previously, the premium meat sector was only open to the food service industry, but after the 1953 Friboi retail launch, it is now open to end consumers. The brand is now available through 5400 points of sale in 15 Brazilian states and delivered 5000 tons of meat in 2018.

# FOOD QUALITY AND SAFETY

GRI 416-2

JBS's business strategy is based around its commitment to producing safe, nutritional, tasty and high-quality food. **The Company therefore focuses much of its efforts on continuously improving operational, manufacturing and supply standards across all its businesses.** This includes efforts to fully comply with regulatory and certification requirements in over 190 markets. The Company also implements policies and procedures to manage the value chain (which includes responsible raw material procurement), partnerships with suppliers, Team Member health and safety, training courses and any number of other activities that are part of the Company's day-to-day activities (*for more about Product Integrity, see page 124*).

## QUALITY GOVERNANCE

JBS has a responsibility to continue setting the bar across the food industry and its Global Food Safety and Quality Assurance Department, which reports directly to the Global CEO, is responsible for implementing quality programs and procedures at a global level and improving operational, manufacturing and supply

procedures at all its business units. Created in 2017 and based out of the USA, its goal is to transform JBS into a global food quality and safety benchmark and continue opening up new global markets.

**Each business unit has a specialist Food Quality and Safety team responsible for implementing guidelines and policies at local level.** In the US, Food Quality and Safety leaders supervise food safety and quality assurance programs at each unit, working hand-in-hand with the Global Department.

In 2018, the Global Food Safety and Quality Assurance Department worked with teams at each of the business units to better understand their individual reporting processes, technologies and resources, after which it began a process of streamlining and improving policies and practices worldwide. The goal is to draw up a strategic plan and set all JBS units around the world on a single path towards a single global standard that exceeds all mapped requirements, while complying with all region-specific regulations and meeting customers' requirements.

## MANAGEMENT AND CONTROL

At JBS, food safety and quality assurance means monitoring the value chain, financial results and customer satisfaction and relationship indicators. The process covers several phases, from raw material procurement controls to auditing point-of-sale product presentation standards and includes tightly controlling production and distribution activities (*for more information about raw material procurement, see page 124*). Factory teams and customers receive annual training and annual refresher courses, as well as opportunities to exchange experiences on best practices to support each stage of the process.

To ensure that products sold under JBS's various brands comply with the highest safety and quality standards when they reach consumers, the Company has adopted food-related risk management and assessment systems and set up committees and forums to discuss quality issues with area specialists. The Company has also adopted certification procedures and accurate labeling systems and health missions and customers regularly carry out internal and external audits and inspections of Company facilities.

EACH BUSINESS UNIT  
HAS A SPECIALIST FOOD

# QUALITY AND SAFETY

TEAM

JBS holds a number of certificates, including BRC (British Retail Consortium) certification, which is a global benchmark for protein quality, and complies with ISO 9001 quality management and other standards (for more information about the Company's certificates, see pages 166 and 167). These certificates help the Company access additional markets and serve international clients.

JBS also has a Supply Chain Protocol to certify product sourcing. The certification system has further improved quality controls across the production chain. The seal addresses issues that go beyond current regulations and includes some of the most stringent global certificates and protocols.



## CASE: SUPPLY CHAIN PROTOCOL

At the beginning of 2018, Friboi launched its Supply Chain Protocol to certify compliance with stringent customer and consumer requirements. The certificate includes a number of strict protocols addressing issues such as animal welfare, traceability, sustainability, operations, production, quality, processing and marketing.

The Seal's parameters are based on globally recognized standards from the BRC (British Retail Consortium), European Union Regulation 1099 on Animal Welfare, the AMI Animal Welfare Protocol (USA) and the European Union Traceability Regulations.

Units undergo a five-phase process, including a gap analysis carried out by outside consultants and specific training courses, to achieve certification. Today, all units in Brazil comply with the Seal's protocols and undergo three annual external audits carried out by the Brazilian Certification Service (SBC), one of which is unannounced. The initiative was a major step for the Company and will support its commitment to quality, innovation and improving processes throughout the production chain.



A JBS INITIATIVE CERTIFIED BY SBC

## DIFFERENT CONTROLS IN EACH MARKET



All units are inspected by the U.S. Department of Agriculture's Food Safety and Inspection Service (FSIS).



The Canadian Food Inspection Agency (CFIA) inspects facilities to guarantee compliance with federal food safety standards.



Production facilities are inspected and audited by third parties under European Food Hygiene regulations, in addition to other customer quality requirements, to verify compliance. Pilgrim's Moy Park supports the Food Standards Agency's campaign to reduce the spread of Campylobacter and has invested more than 1 million pounds in research and cutting edge practices to help the poultry industry battle the bacteria.



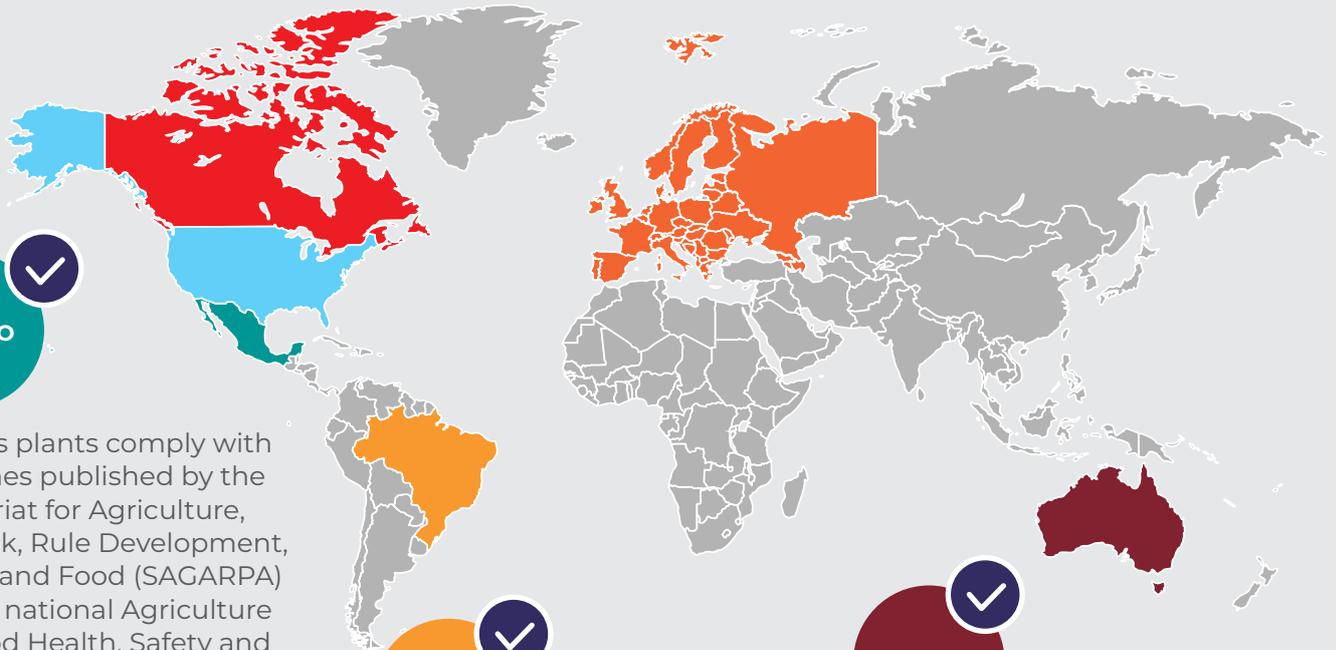
Pilgrim's plants comply with guidelines published by the Secretariat for Agriculture, Livestock, Rule Development, Fishing and Food (SAGARPA) and the national Agriculture and Food Health, Safety and Quality Service (SENASICA). Additionally, each Mexican plant holds a TIF (Federal Inspection Certificate) which is issued by the government to certify that foodstuffs comply with World Animal Health Organization standards and the Codex Alimentarius of the United Nations' Food and Agriculture Organization.



All JBS units are inspected by the Federal Inspection Service (FIS), which represents the Brazilian government's Ministry of Agriculture, Livestock and Supply (MAPA) certifying the Company to sell its products at home and abroad.



Representatives from the Department of Agriculture and Water Resources (DAWR) inspect export facilities on a daily basis to ensure the unit complies with all federal and international food safety requirements.





### **INNOVATION AND TRAINING INVESTMENTS**

JBS also invests to modernize and continuously improve its food quality and safety area. Much of these efforts are focused on improving and expanding its infrastructure.

The Company has several laboratories specialized in microbiological and biotechnology analysis at several of its units worldwide. These laboratories provide food safety indicators for the Company's various brands, to guarantee product quality. By modernizing its infrastructure and equipment, JBS has been able to achieve increasingly accurate analyses in shorter time frames. At Seara, for example, analysis results are put on the Laboratory Information Management System (LIMS), which generates a periodically updated database of performance and standards compliance information for the entire Company.

As part of these efforts, JBS partnered with the Colorado State University (CSU) in 2018 to build the Global Food Innovation Center, a teaching and research unit that will help the Company further improve food safety,

meat sciences and animal welfare practices. The Center will also provide training and help develop testing equipment. It was unveiled on April 9, 2019.

In Europe, Pilgrim's Moy Park has a number of accredited laboratories capable of providing fast, high-quality microbiological tests required to monitor production. This process is fully documented to guarantee its results are accurate and verified. All Moy Park operations are assessed on criteria including product and service health and safety.

JBS is also committed to ongoing team training to ensure all Team Members follow best food quality and safety practices across the Company.

### **CONSUMER SATISFACTION**

Customer and consumer satisfaction indicators are used to verify whether food quality and safety management is generating effective results. These indicators are produced by customer service channels and other custom equivocation tools used by the Company's business units (*for more information on customer and consumer relations, see page 78*).

### **LABELING** (GRI 417-1)

Globally, JBS products need to comply with a wide variety of labeling regulations, based on local legislation and best market practices. Labeling information such as food composition, nutritional tables, net weight, best by dates and other information helps consumers evaluate product quality.

In Brazil, food products must carry the Ministry of Agriculture's Federal Inspection Service (SIF) seal and comply with Health Regulator (Anvisa) regulations, such as listing any allergenic content.

In the US, certification is provided by the United States Department of Agriculture's Food Safety and Inspection Service (USDA, FSIS) seal. Labeling information varies by product and geography, but includes everything from how to prepare the food up to ingredients, dietary supplements like vitamins, minerals and fiber and allergen warnings.

# INNOVATION

JBS works tirelessly to set itself apart from the rest of the market, making innovative products that meet customer and consumer expectations. This is reflected by the significant number of new products it unveils – **in 2018, it created nearly 85% of new fresh meat products** that boosted sales and margins in line with the Company's other value-added products.

The Company also works hard to understand nascent market and consumer requirements. Research and development areas at each of the food business units focus on two different sectors, fresh and prepared foods, because they each serve different channels that have their own requirements and serve customers with widely differing needs.

Management tools will be implemented in 2019 to optimize development efforts for the products in highest demand. The Company also assesses major global food trends, such as the tendency to reduce fat and sodium content, reduce portion sizes, and so on.

The Company has also created a methodology to monitor regional innovation processes and ensure that the lessons learned are made globally available, particularly for the prepared food ranges and to improve brand value creation. This project is being developed by the **Global Innovation Team (GIT)** since October 2018 in order to increase information sharing, accelerate information through cross-border exchanges and create global platforms to support innovative practices. We expect to conclude the communication and program acceleration phases in 2019.

**Seara invested more than R\$ 16 million in R&D.** This resulted in the Company winning a number of awards at Food Ingredients South America 2018, where the Company came first and third in the Most Innovative Product category, and Major Packaging Cases, highlighting two of its products: Lasagna Seara and Seara Rotisserie. In 2018 alone, Seara was running 990 product innovation projects for the domestic and export markets.

The special chicken ranges are also well-known on export

markets, including the **Seara 100% Natural chicken range, developed especially for the United Arab Emirates, which was also highlighted at the SIAL Innovation Selection Paris 2018.**

**Pilgrim's Pride has developed the first industrial scale organics plant, which was unveiled in 2017, to meet growing demand for organic products. In 2018, the plant reached full production capacity, processing more than 900,000 birds a week.** Last year, Pilgrim's invested US\$ 4 million in R&D.

Pilgrim's Mexican operation launched 30 products as part of the portfolio diversification strategy, subject to the usual strict quality controls. In 2018, it launched a number of innovative products in Europe including a gluten-free breaded chicken and vegetarian snacks range.

At the start of 2018, Friboi also launched its 1953 Friboi brand celebrating JBS's 65th anniversary. The range offers over 50 premium beef cuts from animals bred by crossing various European and Zebu breeds. The raw material is controlled and selected at

source in accordance with the highest possible quality standards. Distribution of this type of product used to be restricted to food service channels, but the Company is now distributing to major retail chains as well, expanding its premium beef offerings to consumers. The Company has invested in advanced technology and carried out on-site and the laboratory testing, with support from the State University of Campinas (Unicamp), to further develop the brand. 1953 Friboi is already available through 5,400 points of sale across 15 Brazilian states.

**R\$ 38.5  
MILLION**

**INVESTED IN INNOVATION  
THROUGHOUT 2018**



## FOOD INNOVATION PLATFORMS

Globally, JBS innovates across four main food product platforms:

### HEALTHY AND NATURAL CHOICES

Functional products with high standards of traceability and low social and environmental impact;

### FAMILY AND CONNECTIONS PLEASERS

Easy to cook food for eating with family and friends;



### COOK, PREPARE AND EATING

Products that are quick and easy to make and offer high nutritional performance;

### INDULGENCE AND SENSORY

High-quality foods that enchant the senses and provide unique experiences.

Other areas of the business are also involved in ongoing efforts to innovate. For example, JBS Novos Negócios has a number of ongoing investments. JBS Biodiesel has invested R\$ 5.5 million to adapt one of its plants so it is able to use alternative oils. In the beef collagen and ingredients area, NovaProm invested R\$ 1 million to set up its R&D area, train its team and provide additional infrastructure in order to better serve its domestic and international customers. This also resulted in the Company obtaining USDA certification, allowing it to export to the USA.

Investments at JBS Couros have helped create new articles for the furniture, footwear and leather goods sectors; develop projects to use low toxicity chemical products with a reduced environmental impact in the automotive and furniture sectors; optimize chemical usage; reduce water consumption by about 30%; and reduce processing time for automotive articles by around 40%.



#### CASE:

#### **PARTNERING WITH COLORADO STATE UNIVERSITY**

As part of a strategic partnership that began in 2017, JBS USA contributed US\$ 12.5 million (R\$ 45.6 million) to the Colorado State University (CSU) to support education and research. US\$ 7.5 million was used to build the JBS Global Food Innovation Center, which was unveiled on the University campus on April 9, 2019.

The new facility will offer a number of benefits, such as advanced study opportunities and research into food safety, meat sciences and animal welfare. For students, this will be an opportunity to put their academic knowledge to practical use. One of the venues at the center was designed by Prof. Temple Grandin, one of the world's leading experts in animal welfare, to provide opportunities to study the issue interactively.

JBS USA's partnership with the University will also benefit the Company's Team Members. A US\$ 5 million investment in education means that more than 100 Team Members will be able to enroll on MBA courses, take part in distance-learning agribusiness courses and obtain professional certification.

# BUSINESS LINES

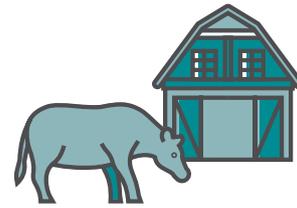
GRI 102-9

**J**BS is the world's largest beef and poultry processing Company and second largest pork and lamb processor. It is also a leading leather producer and a major force in many related businesses. The Company is always aware of market trends and is continuously investing in its already varied portfolio, which includes many types of product from fresh and frozen meats to prepared foods. **In recent years, the Company has focused on developing high quality and higher value-added products** to meet customers' ever more complex requirements and consumers' changing demands.

## BEEF

JBS has two business units that produce and sell beef protein: Friboi, in Brazil, and JBS USA Beef, in the US, Canada and Australia.

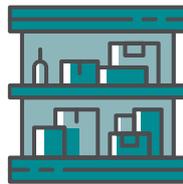
Although there are some differences based on the specific regions where their respective plants are located – in Brazil, most livestock breeding is extensive while in other countries it is usually based on feedlot systems – the JBS beef value chain at both business units is much the same (see the description).



### BREEDING AND FEEDING

Animals are bred intensively or extensively by partner farmers.

1



### POINTS OF SALE

JBS products are available in 190 countries at everything from small markets to major retail chains.

7

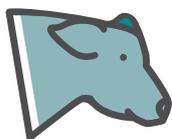


### DOMESTIC AND EXPORT MARKETS

JBS's global structure produces food to serve 275,000 customers in internal and external markets.

6

# VALUE CHAIN



#### RAW MATERIAL PROCUREMENT

JBS buys animals from livestock breeders and encourages its suppliers to implement best practices (*for more about Product Integrity, see page 124*).

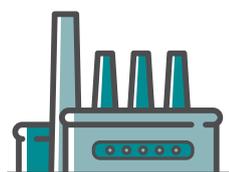
2



#### TRANSPORT

JBS uses specially adapted vehicles to transport animals from farms to factories, based on animal welfare guidelines.

3



#### PROCESSING AND INDUSTRIALIZATION

Production is in accordance with the strict quality (*page 40*) and animal welfare (*pages 110 to 123*) standards.

4



#### WAREHOUSING AND DISTRIBUTION

JBS uses a special system to properly warehouse and distribute its products to ensure their quality remains unaffected.

5

# BEEF

## Friboi

The Friboi business unit owns some of Brazil's best known beef brands, such as the Friboi brand itself – Brazil's market leader – Reserva Friboi, Maturatta Friboi, Do Chef Friboi, Swift Black and the recently launched 1953 Friboi, offering premium products directly to retailers (*for more information, see page 39*).

Throughout 2018 the business continued to execute its strategy of producing high value-added products and it increased its share of the food service market, significantly improving sales to major restaurant chains across Brazil.

Friboi improved revenues from international sales compared with 2017, particularly in Asia (China), South America (Chile) and Europe. The Asian market is expected to grow further into 2019 based on a number of deals JBS has signed and rising demand for animal protein.

For example, in November 2018, the Company signed a US\$ 1.5 billion, three-year agreement

with the Alibaba group, a global e-commerce giant, to sell animal protein in China.

JBS's growth strategy in China is focused on serving specific requirements of local customers, focusing especially on channel segmentation, such as B2B, food service, retail and e-commerce, as well as packaging and portioning. In addition to its wide-ranging portfolio of value-added products based on different animal proteins, Friboi also understands the complexities of the Chinese market and it has large-scale production facilities capable of meeting local demand.

The Company continues to improve the level of services offered to its customers. This includes offering retailers prepared foods for sale in PAT (Protected Atmosphere) packaging, such as minced meat, hamburgers, steaks, meat strips and medallions, and it has expanded the Top Grade Butcher program to improve beef quality, which

includes everything from animal welfare through to end product delivery. The Top Grade Butcher program ended 2018 with over 800 participating stores and is intended to develop a special sales channel that builds loyalty among retailers and offers solutions for supermarket butchers. Participating chains gain access to an exclusive range of products – Reserva Friboi - produced using selected cattle and special trimming methods. When a client chooses to sell exclusively Friboi products, in exchange, they receive butcher management support, which guarantees the correct inventory volumes at competitive prices, helping them avoid losses while improving business results.

Another area the Company focused on was its relationship with livestock breeders. JBS made significant progress signing term and predefined agreements with the Company's main suppliers, which meant production planning improved, increasing efficiency.

# EXPORT GROWTH

RESULTS BOOSTED BY  
THREE-YEAR, US\$ 1.5  
BILLION DEAL WITH  
THE ALIBABA GROUP



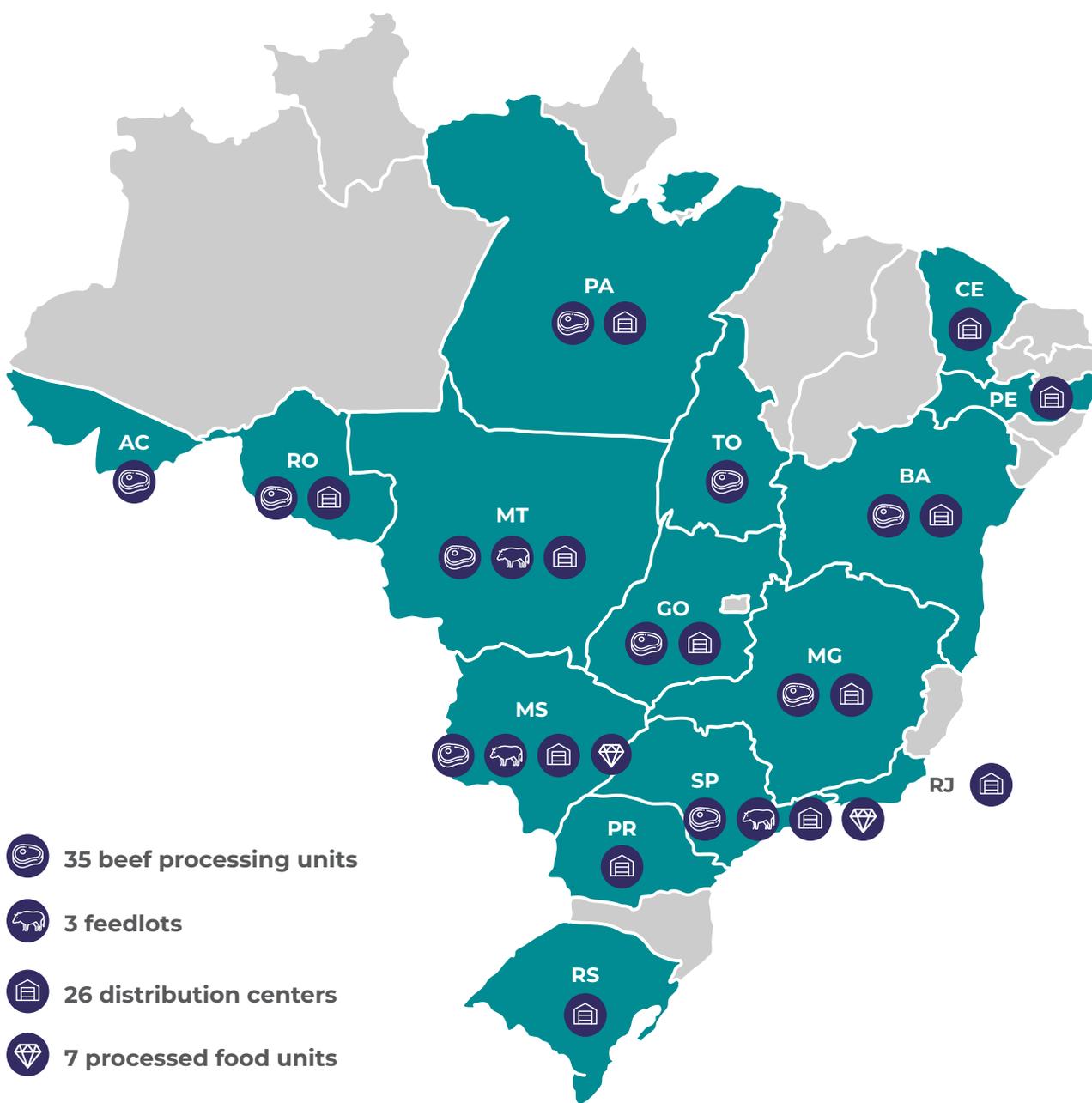


Throughout the year, Friboi also invested in improvements for its production processes, particularly increasing automation and using technology in several of its processes to further increase product quality.

One example of the benefits of automation comes from Brazil's 2018 national truck drivers' strike. During the strike, the logistics tracking system meant the business unit was able to map the location of around 1000 trucks that were on the road at the time and offer assistance to ensure refrigerated cargoes were not affected and could still be delivered with a level of quality for which the brand is now known.

Because of the level of segmentation across Friboi sales channels, the fleet has trucks capable of shipping 800 kg up to tractor-trailers that can carry up to 30 tons of refrigerated cargo, which illustrates just how important the logistics tracking system is.

## FRIBOI OPERATIONS MAP



### MAIN BRANDS

*Friboi*

1953

**Maturatta**  
Friboi

Do Chef  
Friboi

RESERVA  
Friboi

Swift  
**BLACK**  
CASA DO PORCO DA FRIBOI



### JBS USA Beef

The JBS USA Beef business unit is responsible for beef and lamb operations in the US, Canada and Australia. The Company offers a wide and varied portfolio of fresh products under well-known, leading brands for both local and export markets.

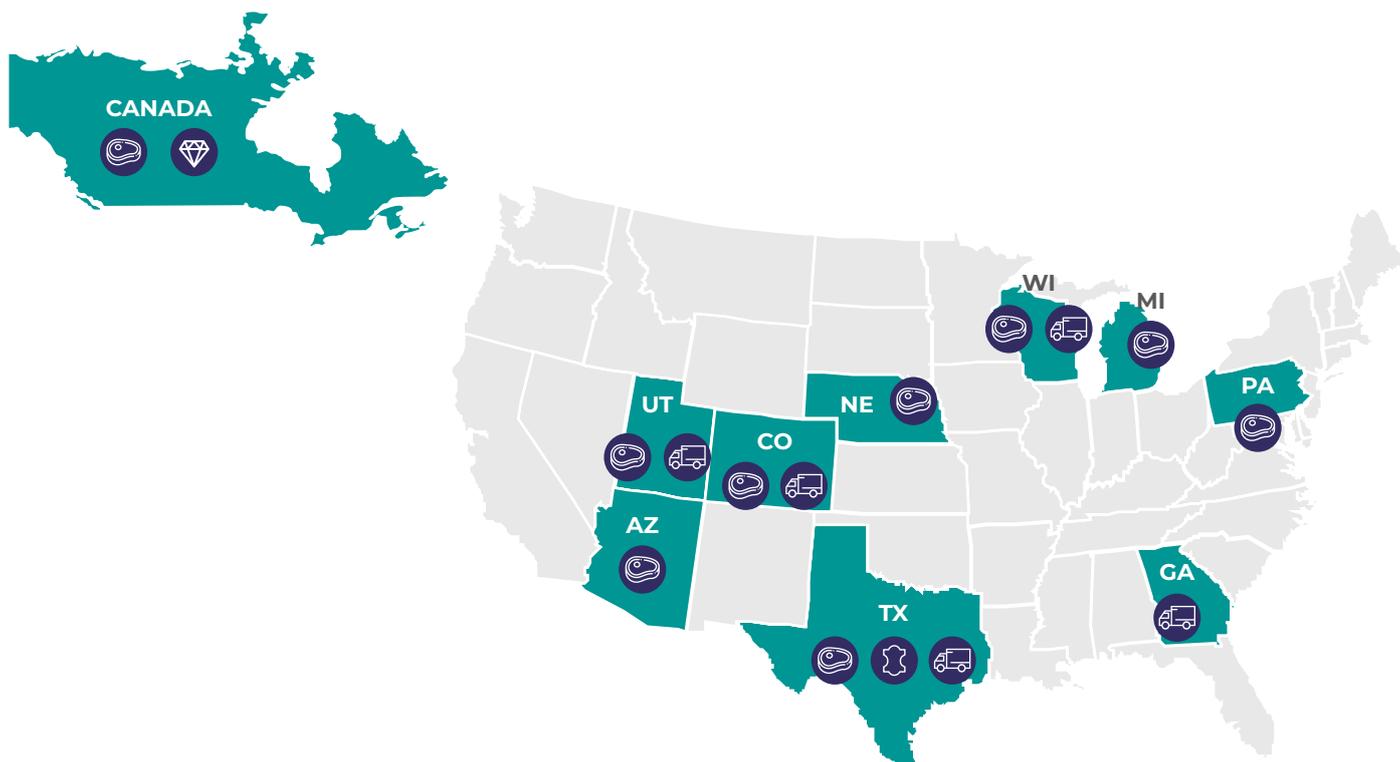
In Australia, JBS is the biggest animal protein processor and exports beef and lamb to more than 80 countries. It also has a significant share of the domestic market.

In line with the organization's global strategy, JBS USA Beef focuses on product and service quality and it is always looking to add value for its business partners. In 2018, the unit repeated its standout 2017 results and increased market share.

Decisive growth factors remain the increase in US and Canadian cattle supply and high demand for protein in both countries, as well as the Company's increasing operational efficiency.

Other critical factors include the quality of the Company's teams and its strategic focus on quality, service, customer partnerships and investment in higher value-added and higher-margin products. Its results also benefited from a jump in exports to a number of global markets to serve rising global demand for animal protein, particularly in Asia.

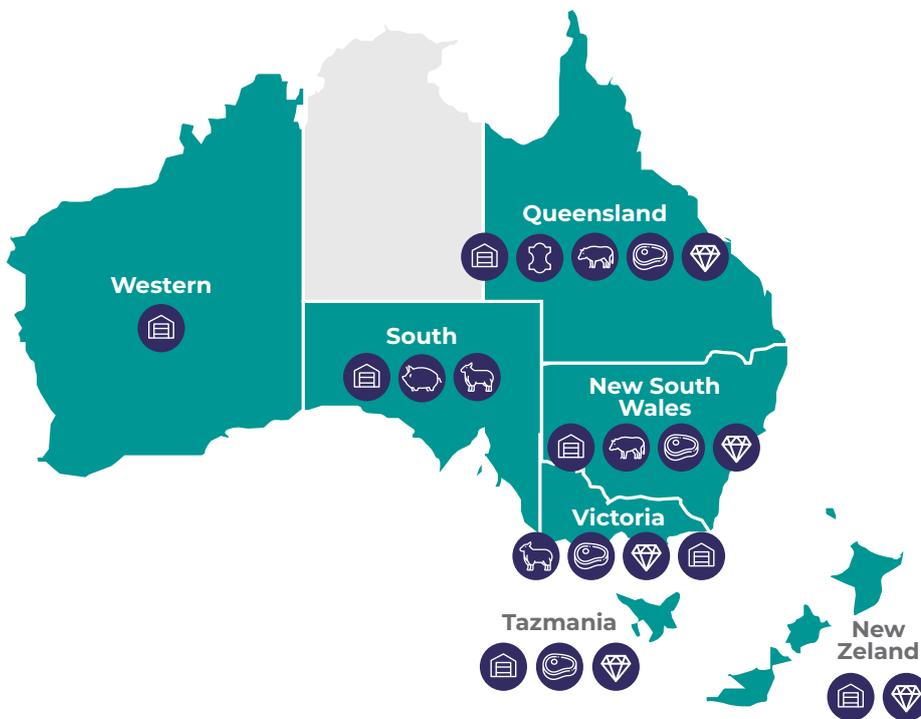
## JBS USA BEEF OPERATIONS MAP UNITED STATES AND CANADA



MAIN US BRANDS



AUSTRALIA AND NEW ZEALAND



- 18 beef processing units
- 6 feedlots
- 2 leather units
- 9 logistics units
- 8 processed food units
- 8 distribution centers
- 2 lamb units
- 1 pork unit

MAIN AUSTRALIAN BRANDS

Beef



Lamb



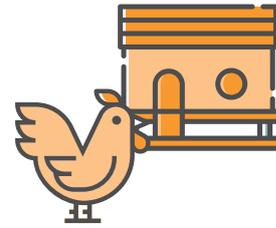
Processed foods



**POULTRY**

Two JBS units focus on poultry production and sales: they are Seara Alimentos, in Brazil, and the Pilgrim's Pride Corporation, which markets its products to the US, Central America (Puerto Rico and Mexico) and Europe.

The poultry used by JBS units are produced at its own farms or by integrated producers. Integrated farmers receive all the consumables, technical support and training required to help them implement best safety, quality and sustainability practices, in accordance with Company principles. The same principles apply to other links in the value chain (see infographic).



**FARMS AND HATCHERY**

Poultry grow up on the Company's own farms or on integrated farms where they go through several genetic selection, incubation and reproduction processes.



**POINTS OF SALE**

JBS products are available in almost every consumer market in the world at everything from small markets to major retail chains.



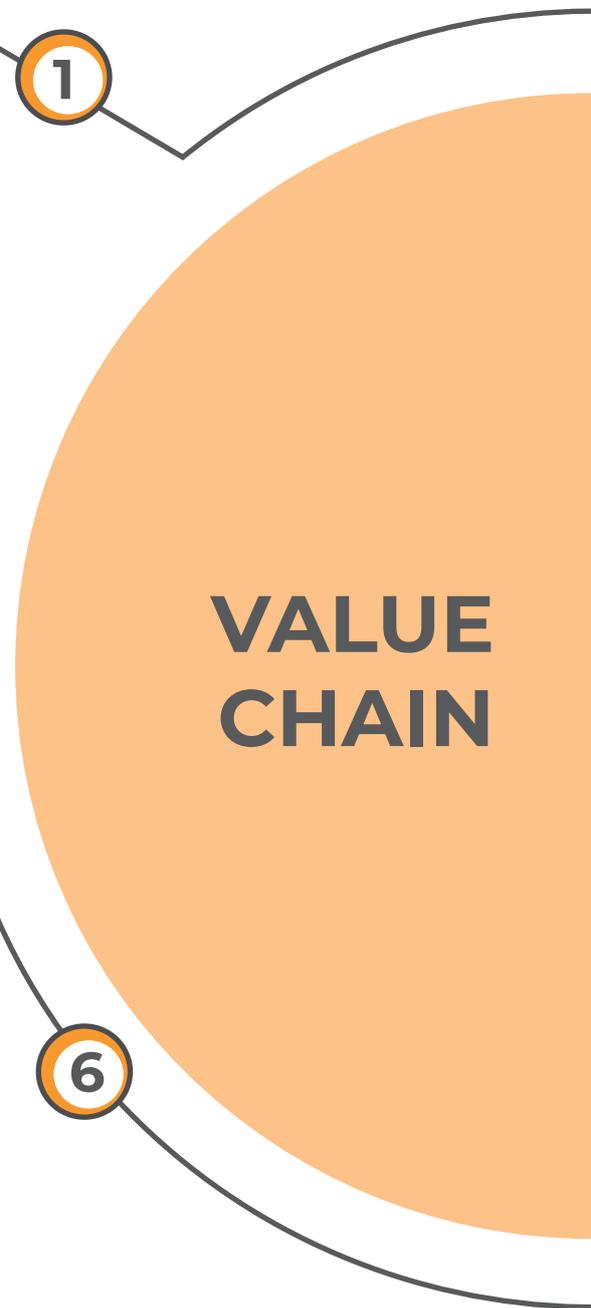
**PILGRIM'S IS THE WORLD'S LEADING CHICKEN PRODUCER AND PROCESSOR AND THE LARGEST PRODUCER OF ORGANIC CHICKEN IN THE WORLD**

**SEARA SERVES MORE THAN 100 MILLION CONSUMERS IN OVER 130 COUNTRIES**



**DOMESTIC AND EXPORT MARKETS**

JBS's global structure produces food sold in Brazil and another 190 countries.





#### FOOD AND NUTRITION

Animal feed is produced at the Company's own factories and tailored to meet animal health and growth requirements at each stage of their lives.

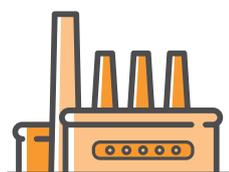
2



#### TRANSPORT

JBS uses specially adapted vehicles to transport animals from farms to factories, based on animal welfare guidelines.

3



#### PROCESSING AND INDUSTRIALIZATION

Production is in accordance with the strict quality (*page 40*) and animal welfare (*pages 110 to 123*) standards.

4



#### WAREHOUSING AND DISTRIBUTION

JBS uses a special system to properly warehouse and distribute its products to ensure their quality remains unaffected.

5

# POULTRY



### Seara Alimentos

Seara has an extensive portfolio of fresh poultry, prepared food, processed and frozen products and leading brands. It supplies the Brazilian and international markets, particularly Europe, the Middle East and Asia, where it serves the retail, food service, B2B, cash and carry and e-commerce channels. Poultry represents 87% of all unit exports. **Chicken is one of the most popular proteins in Brazil: it is present in 97% of homes and appears in 2-3 meals per week.**

The Company has offices in China, Japan, South Korea, Singapore, Holland, London, United Arab Emirates, North Africa and South Africa in order to better serve its 100 million consumers in over 130 countries. Alongside JBS's other business units, Seara also has a strategy to diversified product portfolio, prioritizing higher value-added products. **Seara has made significant investments in innovation, research and development not just to create products, but also to improve its current portfolio and customer service.**

Examples include the lasagna that uses the "Heats evenly" technology, the Gourmet chicken range and the Breaded Chicken Hamburger. The unit has also invested in efforts to strengthen Seara brand quality and develop exclusive regional products as well as regional brands, in order to serve demand in Brazil's many different regions and markets across the world.

**Altogether, the Company has developed 90 options for the Brazilian market, including tender, succulent cuts of chicken bred without using hormones, as required by Brazilian law.**

The Company's main chicken ranges are Seara DaGranja, Nhô Bento, Assa Fácil, Congelados & Soltinhos and fresh chicken cuts ready for seasoning.

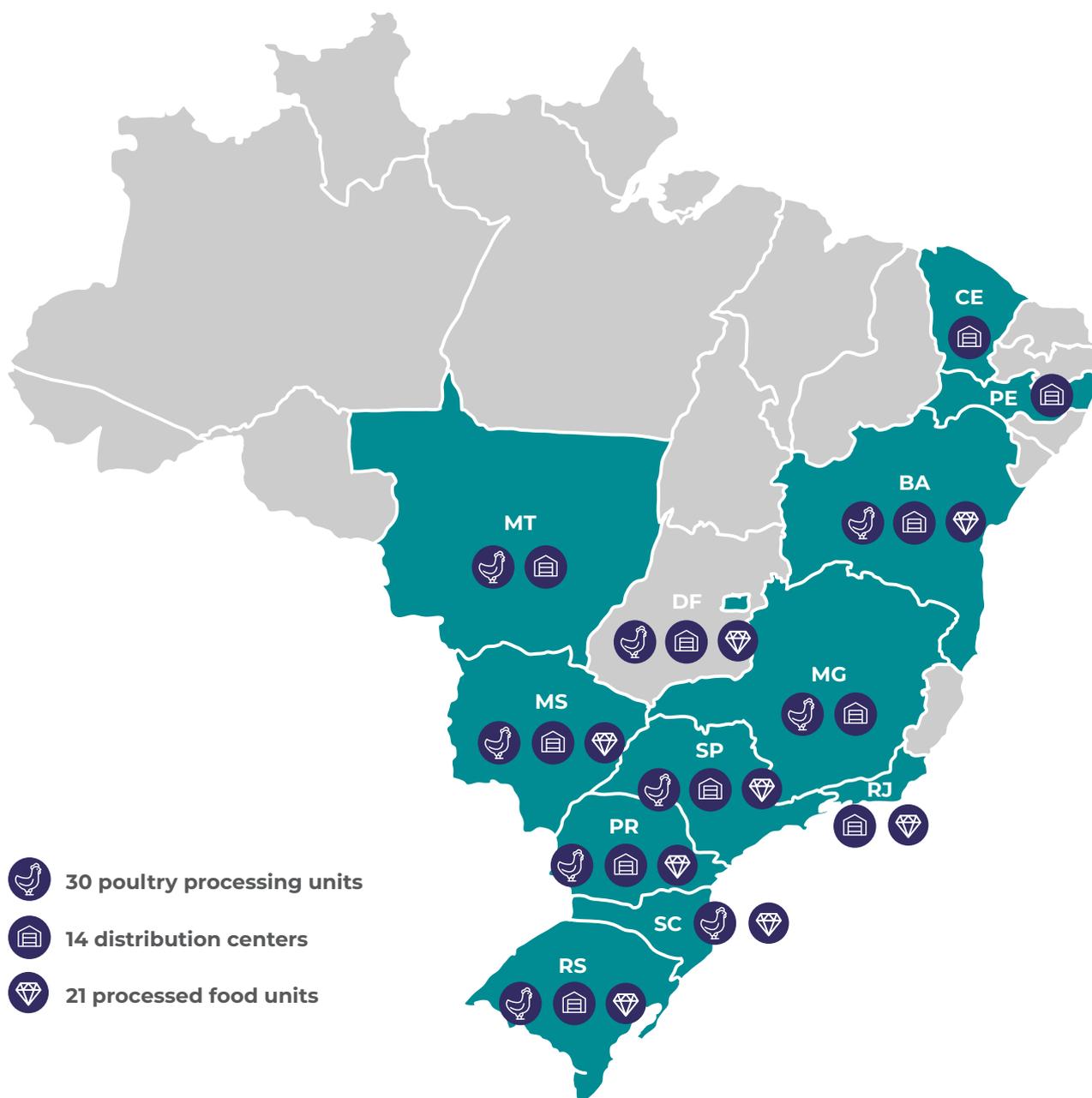
In 2018, Seara also expanded its 100% Natural Seara DaGranja range as consumer demand for healthier and more natural products increased. Seara DaGranja dishes were selected as one of the three most innovative products in 2018 at

the FI Innovation Awards, organized by FiSA (Foodingredients South America).

The Seara Rotisserie range offers day-to-day convenience alongside preservative free meals, following the trend for clean label products. The range is made using fresh food, employs the PowerVac technology and includes options that use Seara DaGranja chickens, which are bred without using antibiotics and have a 100% vegetable diet.

This helped Seara achieve positive results throughout the year, despite challenges on a number of markets. One of its achievements was taking top spot in the Brazilian frozen foods category in June and July.

## SEARA POULTRY OPERATIONS MAP



### MAIN SEARA POULTRY BRANDS



### OTHER SEARA BRANDS



### Pilgrim's Pride Corporation

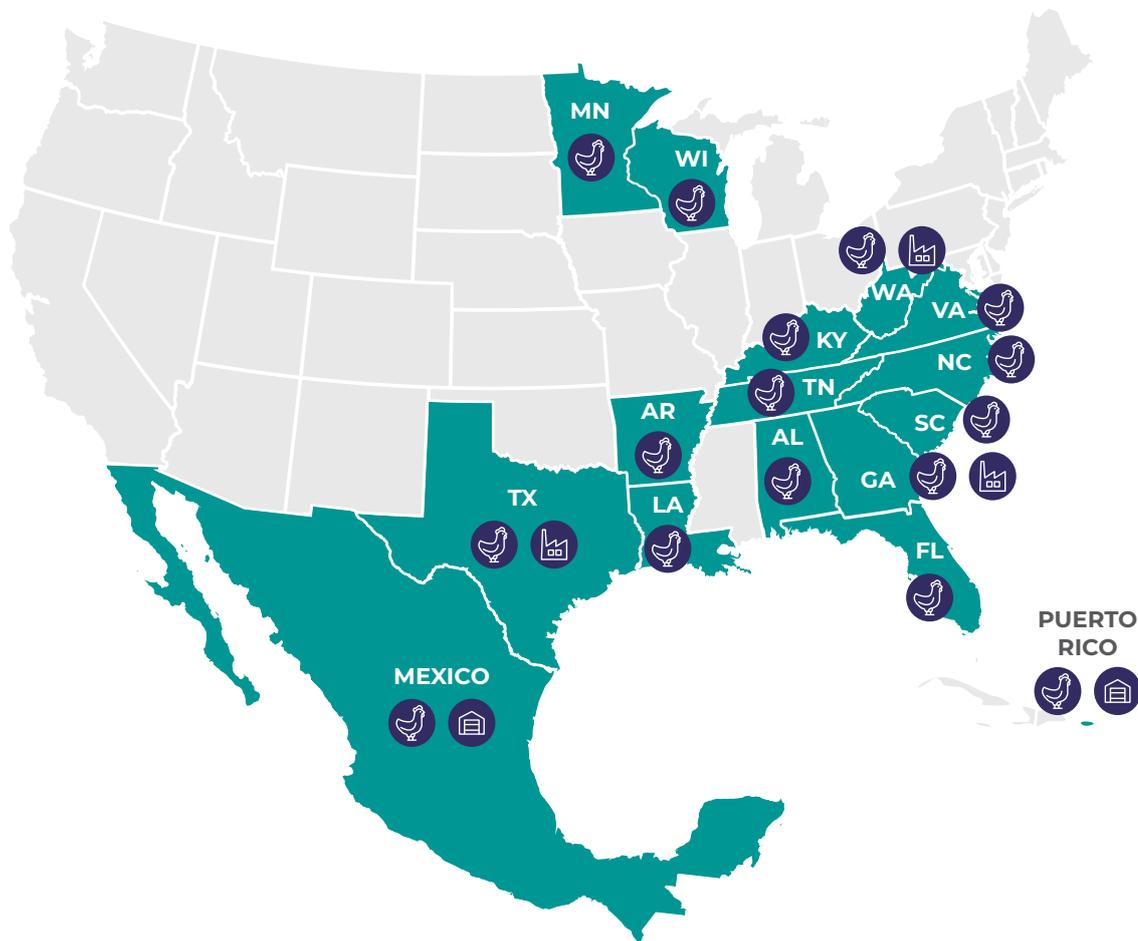
Pilgrim's, which has plants in the US, Puerto Rico, Mexico, the UK and continental Europe, is a global leader in chicken production and processing and the world's largest producer of organic chicken.

The Company produces and markets high value-added fresh

meat, prepared and ready-to-cook foods and, through its Moy Park subsidiary, vegetarian, beef and pork products and desserts. Its strategy is based on continuously improving its performance, customer partnerships, geographic and portfolio diversification and innovation. Pilgrim's is listed on the NASDAQ.

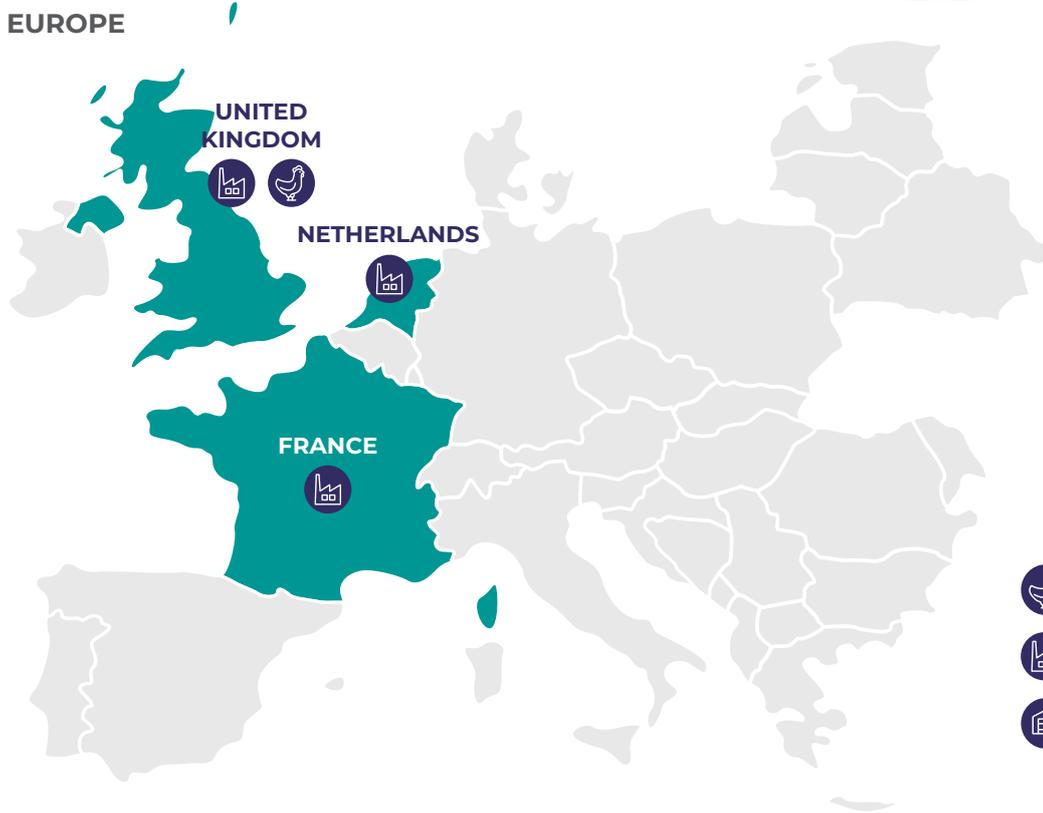
2018 was a very challenging year for Pilgrim's in the United States as demand for chicken decreased, however, the Company managed to sustain its good results by moving ahead with internal improvements and focusing on customer service quality.

## PILGRIM'S OPERATIONS MAP UNITED STATES, MEXICO AND PUERTO RICO





EUROPE



-  36 poultry processing units
-  16 case ready product units
-  23 distribution centers

MAIN GLOBAL BRANDS

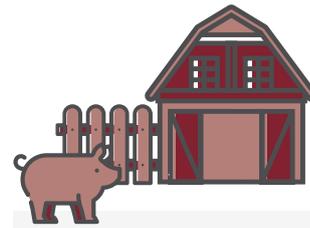


**PORK**

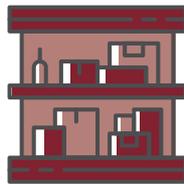
As in the beef and poultry sectors, JBS has three business units that focus on pork and its derivatives: Seara Alimentos, in Brazil, JBS USA Pork, which includes Plumrose operations in the US, and JBS USA Beef. JBS USA Beef owns the Primo Smallgoods brand - a leading manufacturer of processed products including ham, sausage and bacon, with an operational structure split between Australia and New Zealand.

The animals used by JBS units come from the Company's own or integrated farms - which receive all consumables, technical support and training required to help them implement best safety, quality and sustainability practices, in accordance with Company principles.

**IN 2018, THE COMPANY INVESTED TO EXPAND ITS INTERNATIONAL MARKET SHARE, ADDING MORE REFINED AND HIGHER VALUE-ADDED PRODUCTS TO ITS PORTFOLIO**

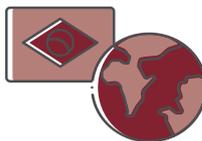


Pigs are bred on the Company's own farms or on integrated and third-party farms where they undergo genetic selection and reproduction processes.



**POINTS OF SALE**

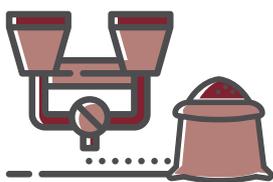
JBS products feed families worldwide and are available everywhere, from small markets to major retail chains.



**DOMESTIC AND EXPORT MARKETS**

JBS's global structure produces food sold in Brazil and another 190 countries.





#### FOOD AND NUTRITION

Pig feed is produced at the Company's own plants and provides everything the animals need to grow and remain healthy.

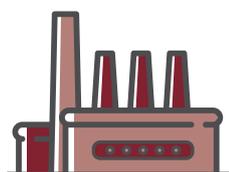
2



#### TRANSPORT

JBS uses specially adapted vehicles to transport animals from farms to factories, based on animal welfare guidelines.

3



#### PROCESSING AND INDUSTRIALIZATION

Production is in accordance with the strict quality (*page 40*) and animal welfare (*pages 110 to 123*) standards.

4



#### WAREHOUSING AND DISTRIBUTION

JBS uses a special system to properly warehouse and distribute its products to ensure their quality remains unaffected.

5

# PORK



### Seara Alimentos

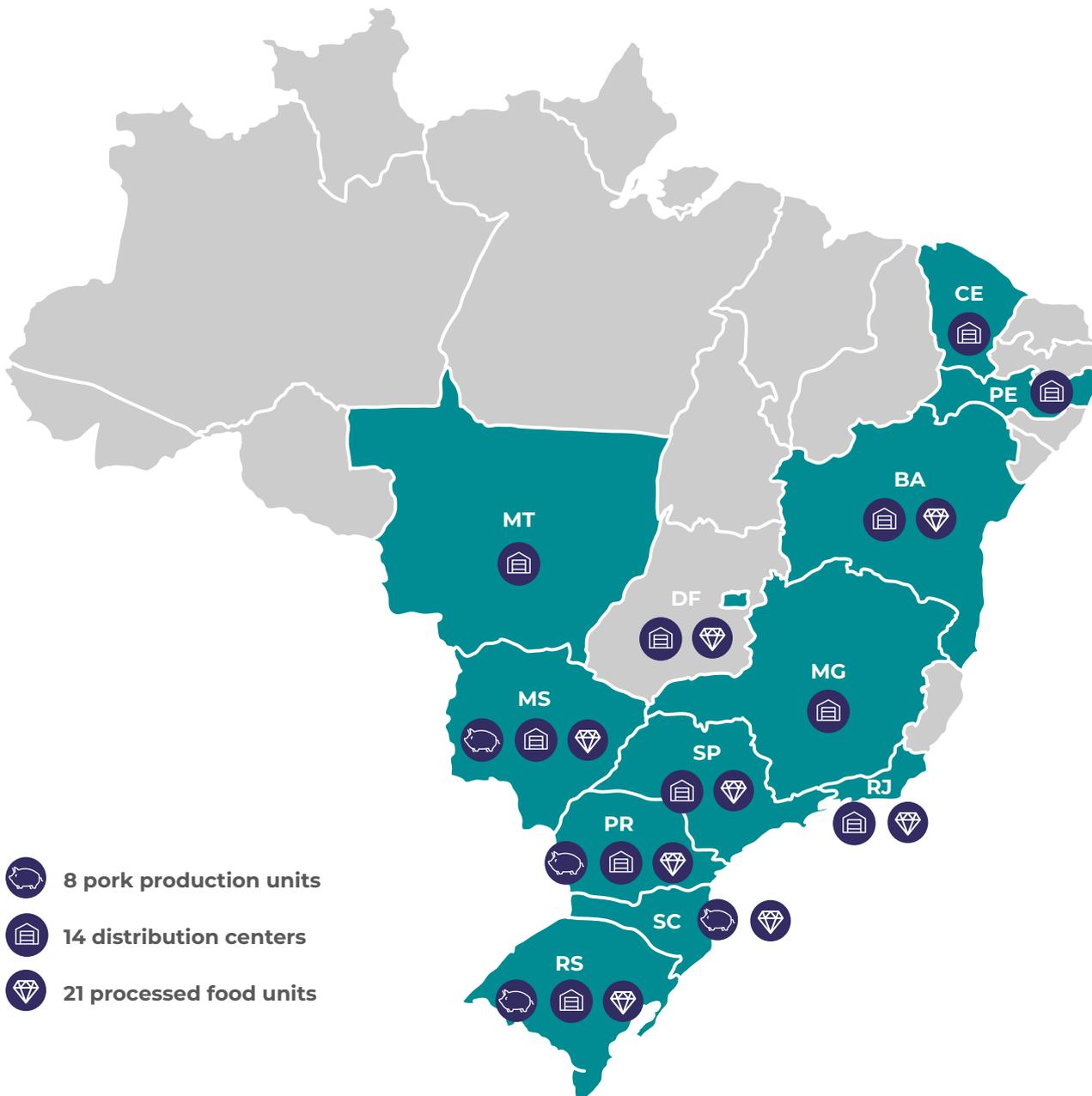
The Seara pork portfolio includes fresh and processed foods for the domestic and export markets to meet growing demand for this protein. Although per capita pork consumption is not as high in Brazil as it is in other countries, Seara has invested in new, higher value-added products. They include the Seara Gourmet range, such as Pork Ribs with Barbecue Sauce, Sliced Capocollo, special German Sausages and Bolognese Mortadella.

In 2018, the Company invested to expand its international market share, adding more refined and higher value-added products to its portfolio across various sales channels. For example, in Japan, in addition to offering pork cuts, Seara has started marketing products tailored for local preferences. Mirroring its poultry business, China is one of the main export destinations for the Company's pork-based products through both retail and food service channels.

In Brazil, Seara's portfolio now includes the Seara Pork Frozen & Loose range including IQF pork cuts (individually frozen and kept loose inside Resealable packaging) expanding the mix of more functional and easy to prepare products, and the Seara Rotisserie range. Initial results show better-than-expected acceptance among consumers (*for more information about Seara's strategy and results, see page 164*).

Underlining its commitment to quality, Seara ran a campaign last year explaining what goes into one of Brazil's most popular cold cuts, Seara ham, which is made using 100% pork leg. In parallel, **the Seara Rotisserie line took 1st place in the Most Innovative Food Product category 2018, part of the FI InnovationAwards** by FiSA (Foodingredients South America), South America's biggest awards in the food ingredients, products and supplements industry.

## SEARA PORK OPERATIONS MAP



### MAIN SEARA PORK BRANDS



**JBS USA Pork**

JBS USA Pork is the world's second-largest pork producer, making high value-added fresh and ready-to-cook products available under its market-leading brands such as Swift® and Swift Premium®, as well as innovative products like Plumrose - the range offers bacon, ham, sliced meats and pork cuts. The unit's strategy focuses on product and service quality, building partnership with customers and increasing operational efficiency.

In 2018, JBS USA Pork repeated the positive results it reported the previous year on the back of growing demand for pork-

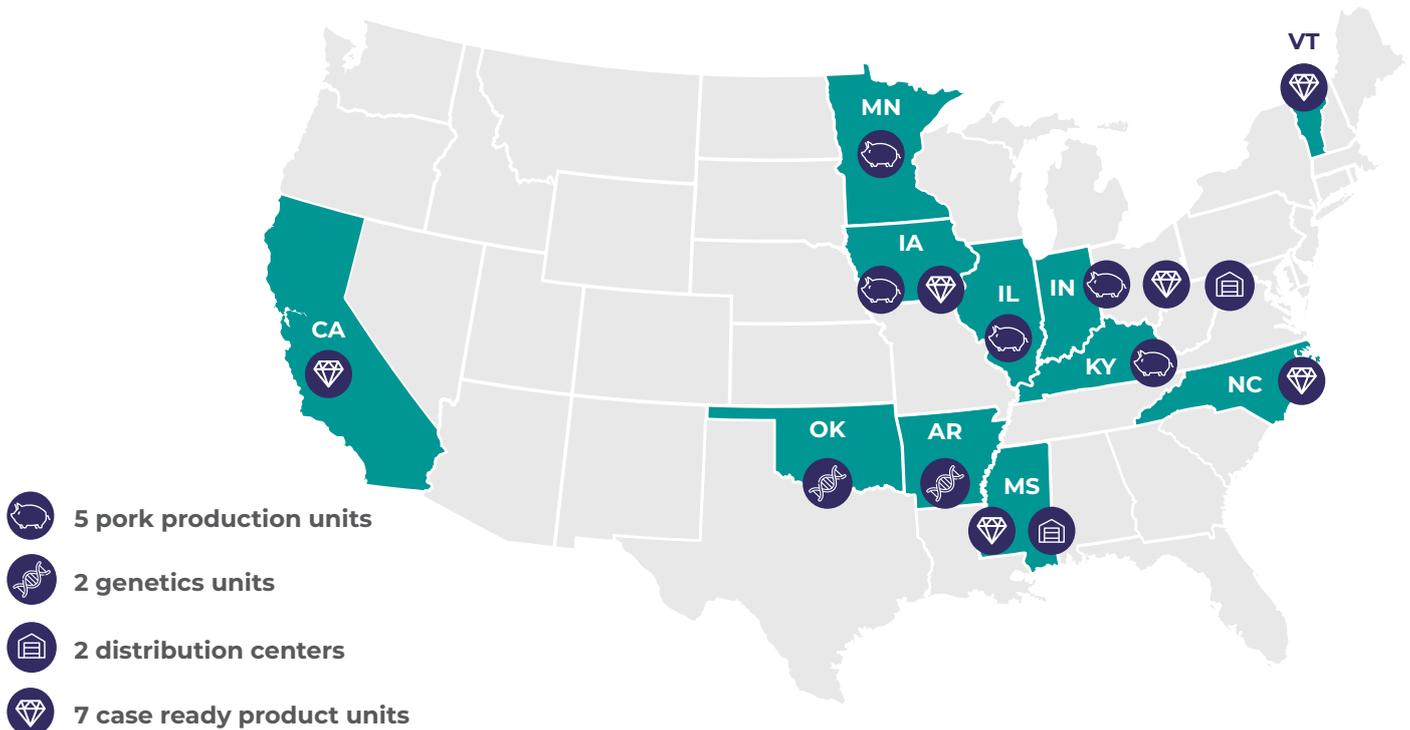
based products and consistent improvements in operational performance, outperforming its US competitors by significant margins. The highlight of the year was bacon, which posted a 15.3% margin, compared with just 9% in 2017.

The unit also concluded integration of a number of recent acquisitions, reporting a substantial improvement in performance through cost reductions and production optimization. For example, Plumrose reported much improved results – EBITDA rose 58.5% compared with 2017. Pork exports, particularly to China, also rose significantly.

The unit has invested in team training focusing on research, development and innovation, particularly for fresh pork, and has focused on quality and safety.

The goal is to identify and adopt new processing technologies at its production units and to develop higher value-added products. One example is packaging: products can now be shipped straight from the factory to retailers, avoiding the need to handle food before it is sold to the end customer.

**JBS PORK OPERATIONS MAP**  
UNITED STATES



MAIN US BRANDS



## JBS COUROS

Through JBS Couros, JBS is the world's largest producer of wet blue, semi-finished and finished leather. The Company operates a number of production units, distribution centers and commercial offices in North America, South America, Europe and Asia, serving several markets around the world with products for the automotive, furniture, footwear and leather goods sectors.

To address the challenges of the global leather market, the Company has invested in innovation and technology to develop higher value-added products such as semi-finished and finished products, which offer greater versatility and improve efficiency. The unit focuses on developing items that meet or exceed rising customer expectations; creating pioneering sustainable production concepts; and expanding its portfolio in every segment (footwear and leather goods, furniture and automotive).

**BASED ON TREND RESEARCH, THE UNIT HAS LAUNCHED ITS OWN BRANDS, ONE OF WHICH IS CALLED AUTHENTIC, PRODUCING LEATHER FOR THE FURNITURE INDUSTRY; CAMBRÉ, FOR FOOTWEAR AND LEATHER GOODS; AND VIRGUS, FOR THE AUTOMOTIVE SECTOR**



Sustainable raw material procurement, respecting social, environmental and animal welfare practices

1



Footwear, automotive, furniture and other good sales to domestic and export customers

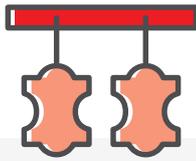
6



Wetblue manufacturing process for semi-finished products

5

VALUE CHAIN



Leather is separated at the JBS beef processing plant for use as a raw material.

2



**TRANSPORT**

The raw material is transported with special care

3



A processing plant then transforms it into “wetblue” leather

Wetblue: leather which has undergone an initial chrome tanning process; wet white: leather which has been pre-tanned using aldehyde or synthetic phenolic tannin, which is why it acquires a lighter color; semi-finished: the leather is retanned, dyed, waxed and the dried; finished: leather that is ready to use after undergoing a number of processes to standardize its softness, color and shine.

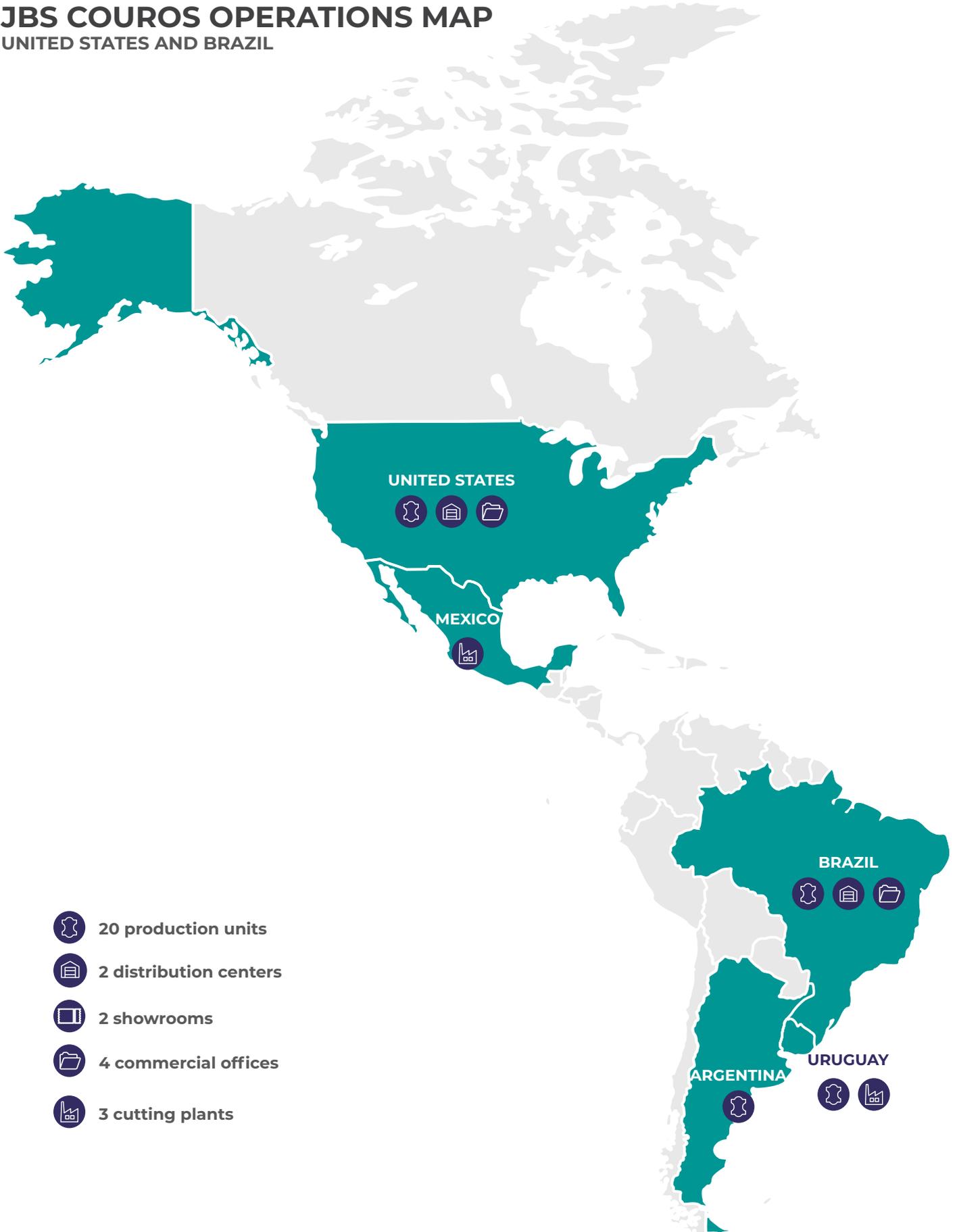
4



Wetblue sales to domestic and export customers

# LEATHER

## JBS COUROS OPERATIONS MAP UNITED STATES AND BRAZIL



Based on trend research, the unit has launched its own brands, one of which is called Authentic, producing leather for the furniture industry; Cambré, for footwear and leather goods; and Virgus, for the automotive sector, to maintain its prominent position on the global market. JBS Couros has also focused on the luxury and premium markets through Conceria Priante, its Italy-based production unit and research and development center. In 2018, Priante launched the Absolute Freshness range for the leather goods sector.

In 2018, JBS Couros invested in machinery, parts, equipment, accessories and improvements at its production plants in order to maintain product quality, team member welfare and prospect for new business. **JBS Couros currently operates 17 units that have been certified by the Leather Working Group (LWG), all receiving top marks for traceability.** The LWG is an international initiative involving companies, retail chains, tanneries and suppliers to debate and promote efficient and sustainable farming practices across the global leather industry – and has been directly involved with the Group in developing protocols and organizing discussion forums to debate best practices.



### MAIN LEATHER BRANDS

AUTHENTIC  
— DEEP INTO NATURE —

Cambré  
ENJOY THE VERSATILITY.

VIRGUS  
GREAT PERFORMANCE



Conceria PRIANTE



### JBS NOVOS NEGÓCIOS

JBS Novos Negócios operates 11 business units that are active in various industries in Brazil.

It includes operations that transform beef, pork and poultry byproducts and waste material into high value-added products such as biodiesel, collection, natural casings, animal feed, pharmaceutical consumables, hygiene and cleaning products and many others sold in

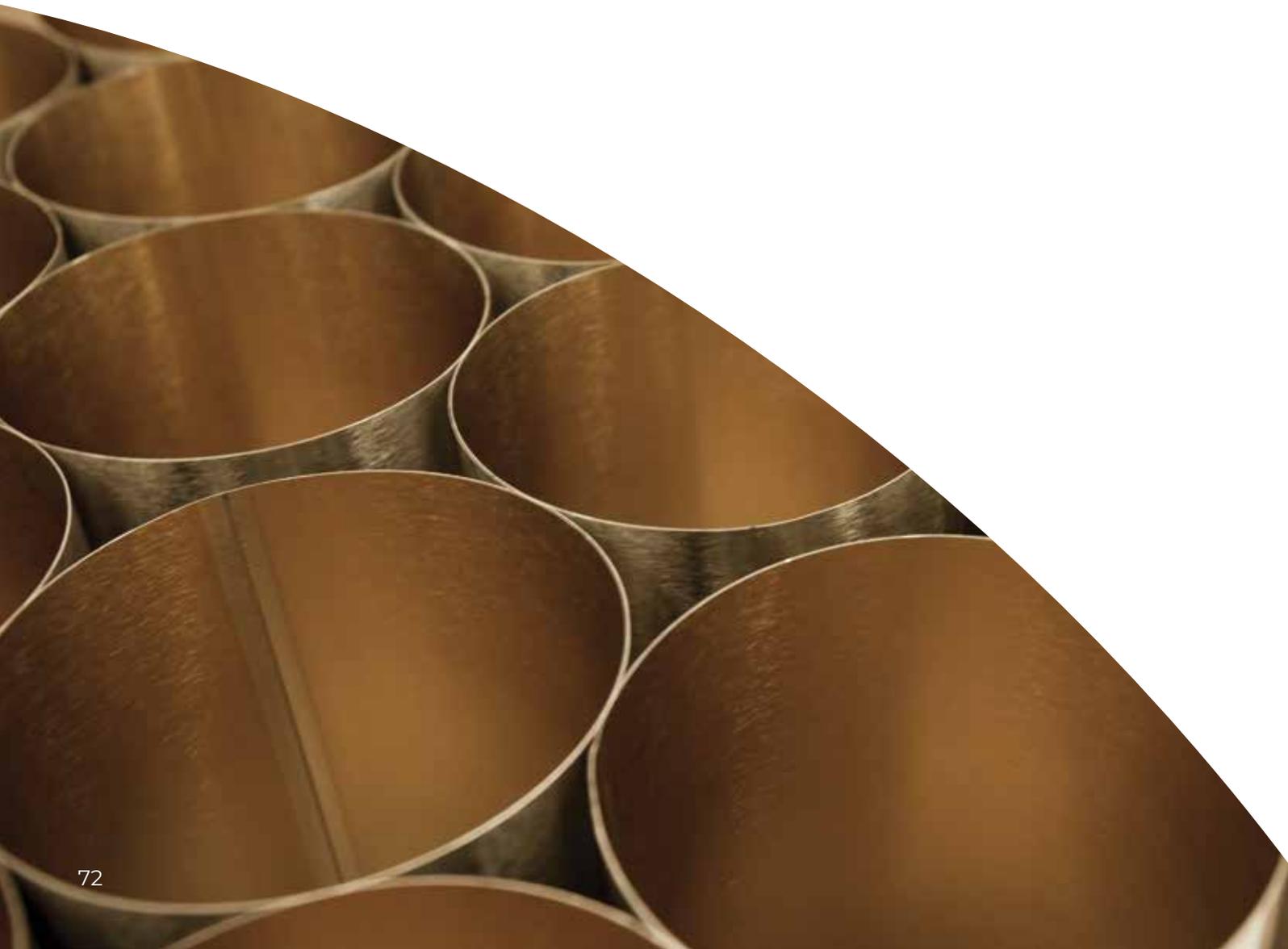
Brazil and exported to over 20 countries. It also runs a number of companies that provide JBS with strategic services such as metal packaging, trading, shipping, recycling and waste management.

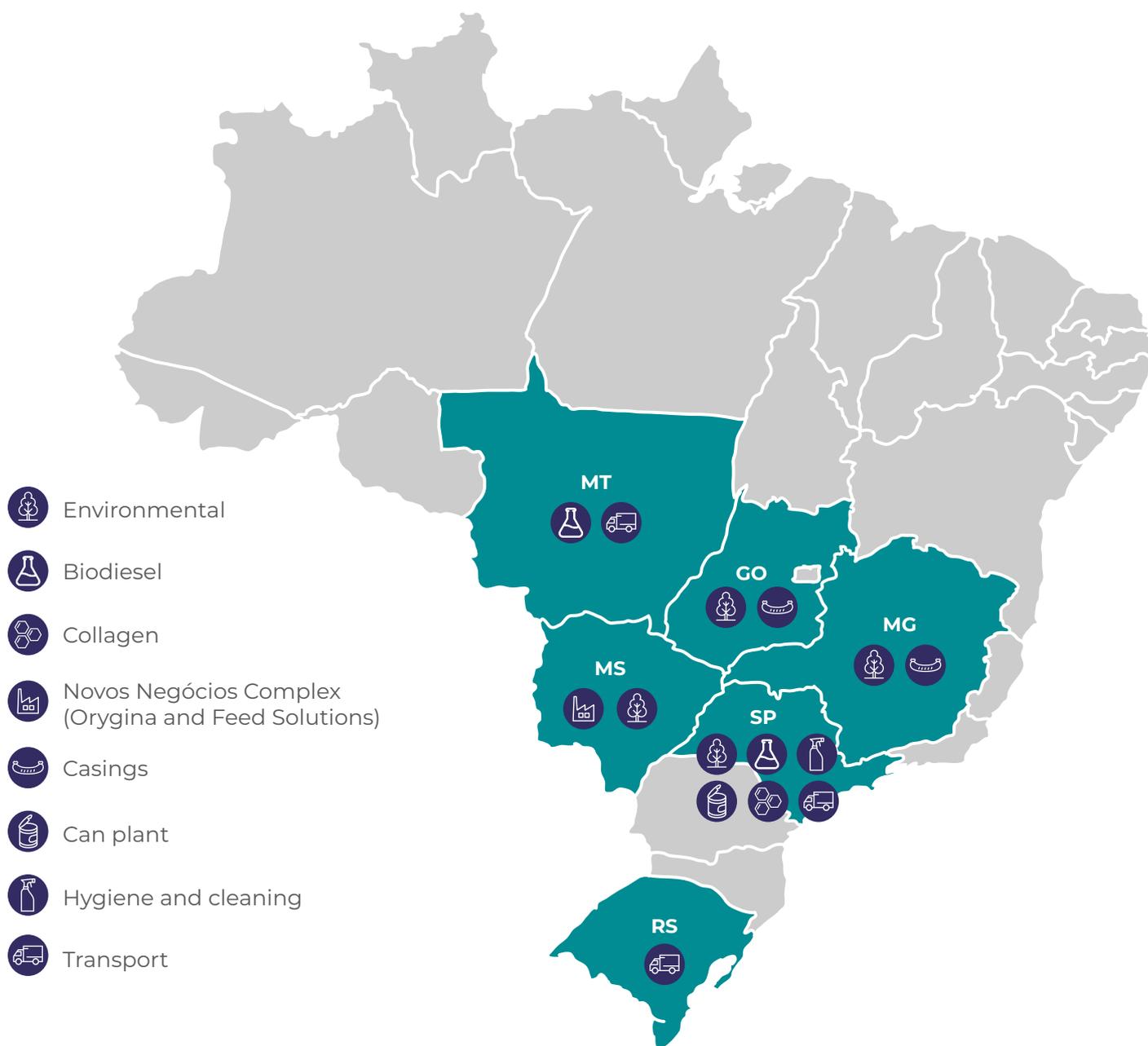
By recycling these products into the market using a closed cycle – one of the pillars of the circular economy – it generates value for JBS and supports the organization’s sustainability strategy, which means all of the raw materials used by its operations can be recycled. This provides the organization with significant financial gains and encourages adoption of sustainable practices across the production chain, in addition to boosting innovation within the Company.

In 2018, JBS Novos Negócios continued its fertilizer factory construction project. The

factory will produce fertilizers using organic waste generated by other JBS operations. The project has been approved by the relevant government agencies and is now in the environmental licensing phase. The unit has also obtained approval to build two factories making consumables for the pharmaceutical industry and it has started operating a business that produces high value-added animal feed ingredients.

In Brazil, JBS Transportadora has its own fleet of 1.1 thousand trucks, all of which are tracked and controlled using real-time telemetry.





**BUSINESS UNITS**

 <b>JBS Higiene &amp; Limpeza</b>	 <b>JBS Biodiesel</b>	 <b>JBS Feed Solutions</b> <small>ANIMAL NUTRITION</small>
 <b>JBS Embalagens Metálicas</b>	 <b>JBS Trading</b>	 <b>NOVAPROM</b> <small>Bringing proteins and ingredients to life</small>
 <b>JBS Natural Casings</b>	 <b>JBS Ambiental</b>	<b>ORYGINA</b> <small>The Home of SINGLECHAIN™ APIs</small>
 <b>JBS Transportadora</b>		 <b>TRP</b> <small>caminhões seminovos</small>

## JBS NOVOS NEGÓCIOS UNITS



### JBS AMBIENTAL

This Company supplies products and solutions for industrial waste such as plastic, wood and metal. Some of these inputs are recycled and return to JBS industrial plants as trash bags, tarpaulins, bags or plastic coverings. It also manages and processes post-industrial solid waste that cannot be recycled, ensuring it is correctly disposed of. This involves using a system to track these materials from their source up to final disposal. JBS Ambiental has eight waste collection centers in Andradina (SP), Barretos (SP), Ituiutaba (MG), Campo Grande (MS), Naviraí (MS), Goiânia (GO) and Lins (SP). The Lins unit alone processes 260 tons of various types of plastics every month and transforms it into recycled plastic resins, a raw material that can be used to manufacture new plastic products. In 2018, it produced around 3,000 tons of recyclable plastic resins and handled around 14 thousand tons of solid waste, including plastics, metals, paper and hazardous and non-recyclable materials. *(for more information on waste management, see page 149).*



### JBS BIODIESEL

With two factories in Campo Verde (MT) and Lins (SP), JBS Biodiesel is the world's largest vertically integrated manufacturer of biodiesel using beef tallow. As the business has evolved, other types of waste are starting to be used as raw materials, including used, recycled cooking oil.



### JBS NATURAL CASINGS

The world's largest producer of natural cattle-based casings in the world operates two processing units in Brazil, in Goiânia (GO) and Ituiutaba (MG), serving the world's largest food companies. Internationally recognized for its supply capabilities as well as product quality and traceability, its products are used to manufacture casing products like salami and sausages and all material is controlled from source. Part of its output is also used to make strings for musical instruments, tennis rackets and surgical sutures, among other items.



### JBS EMBALAGENS METÁLICAS

With two factories in the interior of São Paulo, in Lins and Barretos, this business unit produces steel cans for products - including food - that need protection from physical, chemical and biological interactions. It is one of Latin America's largest manufacturers of metal packaging and is capable of producing approximately 1 billion cans a year. In recent years, it has invested in expanding its portfolio which now includes items such as cans for luncheon meats, sardines and tuna (extruded) and increased its current capacity for the vegetable and tomato segment, among others. The Company also produces aerosol packaging, an area where much of its growth has come from.



## NOVAPROM

A pioneer and global leader in beef collagen production, NovaProm is capable of producing 5,000 tons of collagen and 4,000 tons of functional ingredients for industrialized products at its plant in Guaíçara (SP). The business unit supplies a number of industries, such as fresh processed meat products, baking, cosmetics and pharmaceutical sectors. Much of its revenues come from exports and in recent years the Company has managed to gain a foothold in new markets in the Americas, Asia, Africa, Oceania and Europe.



## JBS HIGIENE & LIMPEZA

This business unit is the biggest manufacturer of soaps and bar soaps in the B2B segment, serving the main beauty and hygiene markets in Brazil and customers in Nigeria, Cape Verde, Angola, Cuba, Argentina, Peru, Colombia, Paraguay, Venezuela and Uruguay. With a production unit in Lins (SP), it also produces base mass for vegetable or animal and glycerin based soaps.



## JBS TRADING

This unit is responsible for sales of raw materials to the food, hygiene, cleaning and biodiesel industries. It manages products such as vegetable oils, animal fats and chemicals.



## ORYGINA

This unit produces consumables for the pharmaceutical industry and develops raw materials for research centers, molecular development, gene therapies and vaccines. The state-of-the-art unit is located in Campo Grande (MS). It obtains its supplies from JBS and all products are traceable from source.



## JBS TRANSPORTADORA

This unit has its own fleet of 1.1 thousand trucks which are fully tracked and provide real-time telemetry controls. It serves JBS and outside customers through its 35 affiliates across the country.



## JBS FEED SOLUTIONS

This unit is based in Campo Grande (MS) where it produces plasma and blood products made from chilled adult bovine blood, serving 100% of demand from JBS's own units. These highly nutritional materials are used as ingredients to make pig and poultry feed.



## TRP CAMINHÕES SEMINOVOS

This unit is responsible for negotiating new vehicle purchases for JBS companies and selling an average of 2,000 used trucks and trailers a year.

# SUPPLIERS

GRI 102-9, GRI 308-2, GRI 414-2

JBS focuses on achieving a balance between competitive costs, high quality, respectful sustainable practices and supply consistency. As suppliers are an integral and important part of the value chain, the Company has developed a number of initiatives to build even closer ties with them based on trust, respect, ethics and transparency.

Given the nature of its business, JBS depends on a diverse range of suppliers including everything from small-scale family farmers and rural partners who supply animals up to major multinational companies who manufacture and supply a range of materials, such as packaging, ingredients and services, as well as food safety, information technology and recycling services. JBS operates an ongoing Supplier Qualification and Assessment program which includes annual audits based on Global Food Safety Initiative (GFSI) criteria. The Company believes its suppliers contribute to its overall sustainability and, as such, it focuses on building partnerships that share the Company's mission and values in order to achieve a more sustainable approach and guarantee supplies of higher-quality inputs.

The Company has a global supplies department which is responsible for guaranteeing that all supplier relationship and responsible raw material

procurement policies are applied across all Company units. JBS therefore looks to maximize the potential of its supplier partnerships at all of its business and guarantee standardization and consistency across its diverse supply chain.

In 2018, **Friboi made significant progress with its Brazilian supplier partnerships when it adopted long-term contracts with some of Brazil's biggest livestock breeders.** As raw materials represent a significant proportion of production costs, this type of partnership will not only improve price management, also it will also increase quality and profitability. Supply consistency means the Company is able to manage its factories in a way that achieves maximum efficiency.

The Company's Brazilian beef operations have been using the Supply Chain Seal since 2017 to assess and certify compliance with stringent international standards and common customer requirements. This certificate is wider in scope than other certificates currently on the market because it goes above and beyond existing protocols.

In order to guarantee the origin of pork and poultry raw materials, Seara has been implementing producer integration systems. This involves offering producers all the consumables they need to rear safe and healthy pork

and poultry and guidance on production processes and environmental practices.

JBS USA carries out a rigorous assessment of all input suppliers who come into direct contact with foodstuffs before they partner with the Company. They also undergo IS Network and Global Food Safety Initiative (GFSI) audits. When selecting new suppliers, JBS prefers local companies that offer competitive costs and are capable of meeting JBS standards and requirements. This also helps to boost economies in local communities.

In 2018, JBS Australia began a Supplier Relationship Management Program focusing on its biggest direct materials suppliers. The program addresses issues such as safety, collaborative business updates, demand forecasting, services and quality, sustainability, innovation and other issues.

Seara has a robust quality audit process for certifying new suppliers and monitoring current suppliers. This process verifies the food safety culture, maintenance and training and adoption of best manufacturing practices. **The Company registered a 31% increase in audits compared with 2017.** Seara also assesses its suppliers based on the quality of service provided to its business units, punctuality and a range of other criteria.



## CASE:

**FAMILY FARMING AT PILGRIM'S**

Jamey Burns and his wife started their family chicken farm in 2010. With the help of the spreadsheet and much attention to detail, they planned each phase of their future chicken farm, breeding poultry for Pilgrim's in the city of Carroll County, which is located in the state of Georgia, in the USA. Military veterans with more than 40 years service in the US Armed Forces and Air Force, the couple found themselves running their own day-to-day lives for the first time in two decades.

Today, after 52 breeding cycles, they are proud to be breeding poultry and raising their two children on the farm. Jamey's day always begins at 6 AM when he checks the birds and the digital devices that monitor the weather at the farm while he prepares breakfast for the family. At 8 AM, he is already in the battery house where he spends between three and eight hours, depending on the animals' phase of development.

Jamey is also heavily involved with the community where he teaches football, supports the local recreation department and recently helped manage a campaign for a local community representative. Julie is a school volunteer. The couple believes that the most significant part of their work is being able to focus most important to them – their children, aged nine and 11. "I now have the freedom to spend time on other things.

For years I was doing a job that went well beyond 9-to-5", said Jamey.

Throughout his life, Jamey has always believed in the importance of a strong code of ethics whether it was during his time at Mercer University, where he studied on an ROTC scholarship, during his time with the Armed Forces or today, on the poultry farm. He recently used this approach to improve the farm's energy efficiency. He applied for and received a loan from the National Resource Conservation Service (NRCS) in the USA to build a warehouse for the aviary bed. This means he is able to stock material for long enough to only use it when the weather is good, which means it is not washed away in the rain.

In 2018, he innovated again, in an attempt to reduce electricity costs and improve operations. In May, he installed solar panels capable of generating enough electricity to supply his farm (and a little bit more). Since then, the Burns farm has saved 196,687 pounds (85 tons) of CO<sub>2</sub>, equivalent to annual emissions from around 10 homes or planting 4,702 trees. Although he is very proud of this achievement, Jamey continues to look at ways of improving the farm. He hopes that this will serve as an example to his children and encourage them to adopt the same work ethic he and his wife defend.

# CUSTOMERS

JBS operates in both the B2B (business-to-business) and B2C (business to consumer) segments, which means it deals with three different types of customer: companies that purchase raw materials to produce or market food service products, retail chains, which are points of sale for the Company's brands, and end consumers.

JBS always works closely with its customers to understand their requirements.

The Company develops high-quality, customized products for its business customers and offer services to help them improve profitability. This is based on information collected by its sales representatives, from technical and industrial team visits to customers and customer satisfaction and other relationship surveys.

The Company takes the same approach and its relationship with end consumers. In this case, the Company uses market research and surveys applied through direct channels, such as the Customer Service Center and the Friboi and Seara social media outlets in Brazil. US consumers have at their disposal a range of tools including the Consumer Hotline (*for more information about stakeholder communication, see pages 102 and 103*)

For example, the Seara customer service center received over 57,000 comments on its products, processes and services from Brazil and abroad in 2018. Providing the Company's factories with online information on a daily basis helps to continuously improve services and maintain customer and consumer satisfaction.

Company plants also receive frequent visits from client and certification agency auditors to verify that its products, processes and customer service comply with specific customer and local market requirements.

## 2018 HIGHLIGHTS

According to surveys of domestic and international customers, 78% of customers are satisfied with Friboi, taking into account only those ranking the Company an 8 on a scale of 0 to 10.

In the Época-Reclame Aqui Awards, for the first time Seara and Friboi were Customer Service finalists

in the Food – Perishables, Frozen and Dairy Category.

JBS Couros reported a 43% drop in the number of customer complaints compared with 2017. It also reduced discounts and product returns caused by quality problems by 10% compared with the previous year.







# Our People



Team members of the Ituiutaba Plant - MG

# TEAM MEMBERS

GRI 102-41, GRI 103-2, GRI 103-3, GRI 404-1

People are key to JBS's success all around the world. This is why the Company is constantly focused on being a responsible employer and ensuring its Team Members are proud to be a part of the organization. This includes efforts to hire, retain and develop Team Members who are dedicated to operational excellence and identify with the JBS Mission and Values. The Company is also committed to supporting workplace health, safety and welfare for its entire team, offering equal opportunities to all and continuously investing to develop its talent and leadership.

The Human Resources areas at the Company's various units are responsible for all JBS team member hiring, retention and professional development worldwide.

This is a significant challenge for a Company that has over 230,000 Team Members around the world, with a wide range of cultures, languages and experience. **JBS's success in this area is thanks to the fact that everybody adheres to its corporate Culture.** JBS's Human Resources areas are the guardians of this Culture. All of their strategies focus on communicating the Company's corporate values, from the time new staff are

hired, through training and up to performance assessments. However, because laws, regulations and job markets are different in every region, each business implements specific initiatives at its units to reflect local circumstances and each business's requirements.

All Company management policies and programs are revised on an annual basis, alongside the main health and safety, turnover, absenteeism and overtime indicators. As a result, the Company can make any adjustments that are required and guarantee that team member health, safety and working conditions comply with the Company's high standards. **In 2018, JBS invested in a number of artificial intelligence tools in Brazil to support HR practices. One of the most successful cases helped identify opportunities to reduce absenteeism at JBS Courous.**

Managers have an open door policy for all Team Members who wish to discuss any issues, reinforcing the culture of respect the Company has for its staff. The Company values dialogue and focuses on building trust, which includes offering every team member the opportunity to put forward their ideas and suggestions. For example, JBS USA organizes a number of periodic meetings referred

to as Roundtable, Townhalls and Safety and Production Meetings. If critical issues are identified, the Company draws up an action plan and the Team Members who raised the issue are kept informed of developments.

JBS USA also has an Open Door Policy which encourages Team Members to present any problems affecting the overall work environment to their supervisors or the HR area. Through the discussions and debates this policy generates, the Company is able to identify how Team Members view work-related issues, such as compensation and benefits, working hours, safety and satisfaction with management. In Brazil, the Company's in-house Ombudsman is responsible for mapping these issues.

Another way of evaluating team member satisfaction is to use engagement surveys. Managers also speak regularly with Team Members to ensure everyone's expectations remain in alignment. In the second half of 2018, the Company carried out a Culture survey in Brazil to assess team member engagement with the organization's values. The results will guide training and communication activities over the next several years.



CASE:  
**JBS WITHOUT FRONTIERS**

This program was created in 2015 to support specialist Team Members, offering Friboi deboners and meat cutters the opportunity to work at the JBS Food Canada unit in Brooks. The project offered multiple advantages: it reinforced the Company's global position, created opportunities, offered Team Members international experience, helped retain talent and was an opportunity for Team Members to share their experiences. 180 people applied for the 15 places available in the first year of the program. 200 people applied in 2018.

After analyzing CVs and holding one-to-one interviews, Janaina Jesus dos Santos celebrated the fact she was the first woman to be accepted by JBS Without Frontiers. After spending 12 years at the Lins (SP) unit working as a deboner and meat cutter, she traveled to Canada in the second

half of 2018. Living abroad is a dream come true for Janaína. Even before she was accepted, she had started taking English classes to get used to the new language.

"I'm flattered. This is a massive reward for me. It is a big step forward in my career and my personal life. I have a lot of support from my family and, more importantly, the Company", she said.

JBS supports those accepted into the program throughout the immigration process and offers a package of benefits including accommodation and English classes. The program has been a success and has been expanded in recent years. In 2017, management personnel have been taking up positions at US units and from 2019, JBS Without Frontiers will also be open to Seara Team Members.

**DIVERSITY**

JBS is also committed to hiring people independent of race, religion, color, nationality, gender, sexual orientation, gender identity or age, including the disabled, at all its units.

The same principle applies to team member training and career development. Diversity is an important issue with the Company, which believes that success is based on the unique and diverse skills, origins and experiences of its workforce. JBS supports diversity and inclusion at all its facilities and offices and works hard to create a trusting and productive workplace environment.

JBS has people and operations at a wide range of locations and around 60 different languages are spoken at its facilities. To ensure that all team members are able to express and understand the Company's main messages, JBS supplies materials in various languages

and dialects addressing a wide variety of issues, such as benefits, safety and training. Each facility also offers unlimited access to Language Lines, which is available in over 200 languages and provides immediate access to clear communications.

At a number of units, local leaders from a variety of different ethnic groups are identified and promoted to help other team members adapt to the community and Company facilities. Additionally, as a US federal government contractor, JBS USA has a number of affirmative action programs as part of its Equal Employment Opportunity Policy.

In 2018, JBS continued to invest heavily in training, particularly for its leaders – more than 80,000 staff across all the Company's operations attended career development courses, which offered hundreds of thousands of hours of training.

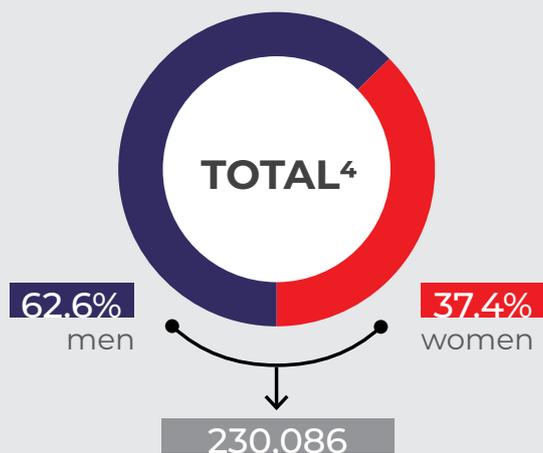
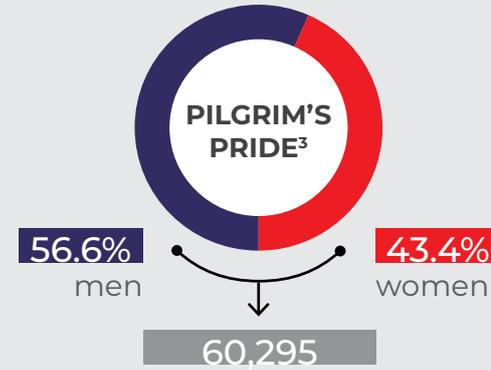
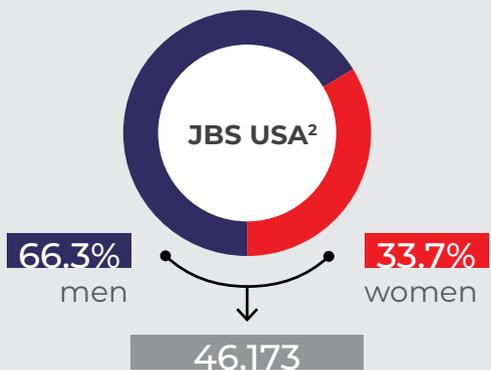
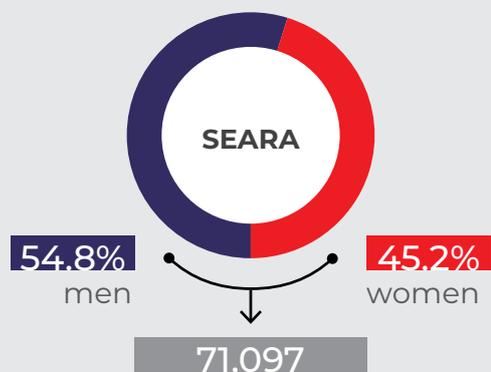
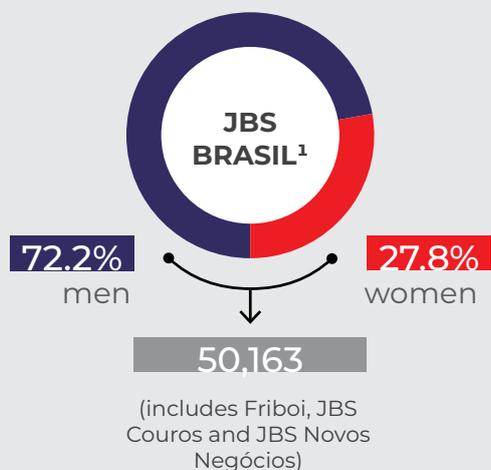
At JBS USA, this created a very stable management team in 2018. The Leadership Warehouse program alone trained over 9,000 Team Members, who attended more than 180,000 hours of training.

In 2018, one of the areas focused on Brazil was adapting Company processes to the e-social program, a system implemented by the Brazilian federal government to centralize employment information from every privately owned company in the country. Through good planning, controlling communication, JBS was able to fully implement the system at all its units, despite the challenge of being Brazil's largest private sector employer.



# TOTAL TEAM MEMBERS

GRI 102-8



<sup>1</sup> Includes JBS Couros operations abroad

<sup>2</sup> Includes operations in the US, Canada, Australia and New Zealand, except poultry-only factories

<sup>3</sup> Includes factories in the US, Europe, Mexico and Puerto Rico

<sup>4</sup> Includes 2358 Team Members at other Company operations



## PERFORMANCE

Another new initiative implemented this year was a merit cycle, which is used to assess and review all team member compensation. Previously, this process only included people who underwent JBS performance assessment (everybody working at the JBS head office in Brazil and production unit leaders – coordinators, supervisors, managers and directors).

At Brazilian units, performance assessment uses the 360° methodology to analyze team member attitudes and interpersonal relationships.

All JBS USA Team Members receive regular performance assessments. In 2018, the unit also mapped the salaries paid all of its units to increase the competitiveness of its compensation policy in every region where it operates. Alongside leadership training, this is intended to reduce or stabilize team member turnover rates which, in some locations, have been a challenge for the organization because of the job market landscape.



## JBS TRAINING PROGRAMS

### LEADERSHIP TRAINING

#### **Leadership Academy**

The Academy helps to develop leaders in Brazil address people management issues, based around the challenges JBS faces. The modules are provided by the in-house multiplier team, using the synergy of the business HR departments. All supervisors at the Couros unit were trained in 2018, covering 1,034 managers at 17 units. 1,796 management level staff were trained at Seara.

#### **In-house Talent**

This program offers professional growth and development opportunities for Team Members at all JBS businesses in Brazil in the production, maintenance, logistics and shipping areas. The goal is to identify talent and develop it, transforming participants into production supervisors. 273 Team Members were trained as part of the program in 2018.

#### **Corporate Leadership Forum**

This program helps to train management level staff in Brazil to better address people management issues. The program began in the second half of 2018 and was attended by 106 business and management area coordinators.

#### **JBS Without Frontiers**

This program offers in-house opportunities to Friboi staff willing to work in Canada as meat cutters or deboners. 200 Team Members enrolled for the 20 places available in 2018. JBS supports those accepted into the program throughout the Canadian immigration process and offers a package of benefits including accommodation and English classes. The program will be extended to include Seara staff in 2019.

#### **Summit**

This one-year JBS USA program brings together the groups 27 executives to provide intensive education on leadership issues. It is an opportunity for executives and leaders at JBS's various businesses to exchange best practices and resolve real-life problems at their facilities. As a result, participants gain greater insight into the Company's business units.



## TECHNICAL TRAINING

### **Seara University**

The distance learning platform offers various career development tracks and looks at operational, leadership and administrative activities. It is available to all Seara Team Members.

### **Quality Academy**

This is a development program for Quality personnel at Seara, which aims to: update technical knowledge; train multipliers to standardize fundamentals and attitudes; reduce non-quality costs; and provide professional training to support Quality assurance - "Understand what you do and doing what you really need to". Over 200 Team Members have already been trained.

### **Labor Lawyer**

This program selects and develops lawyers to work in JBS's labor area. Lawyers who have graduated within the previous two years can enroll. The 90-day course is held at JBS headquarters, in São Paulo, and addresses theory and practice and looks at behavioral, technical and legal issues. Eight lawyers were hired in 2018. The program is currently available at 11 group units.

### **Giro**

This is a Seara program focusing on operational excellence. 20 technical subjects have been catalogued and revised using modern techniques and methodologies

to improve correct execution of operational activities. Over 1,320 leaders have been trained as part of the project.

### **More and better sales**

This program offers training and development for everyone in the Commercial area, from sales personnel to directors, to transform knowledge into business outcomes. The issues covered include Self-knowledge, Coach Leader, Sales Routine, Negotiations and Structured Mentoring. Altogether, 16,376 hours of training were provided.

### **JBS USA Trainee Program**

This is a 12 month program to identify and develop future leaders rotating recent graduates through Company operations in the US, Canada and Mexico. The program helps people develop their leadership, process management and people management knowledge and skills.

### **Trainee**

This program focuses on the industrial area, selecting young people with potential (who have graduated from University within the previous two years) to train leaders capable of managing teams and processes at JBS's various units across Brazil. The selection process is run by factories to attract people from local communities. In 2018, the one-year program attracted over 5,000 candidates, from whom nine people were selected.

### **Valued Youth**

This program distributes information about JBS to young Brazilian university students and includes the Valued Youth Internet platform ([jovensdevalorjbs.com.br](http://jovensdevalorjbs.com.br)) and a Facebook profile.

### **JBS Internship Program**

This is a JBS USA intern program in the US which offers university students an opportunity to gain practical experience and develop their leadership skills. This is a 10 week summer program that has around 150 participants who are involved in practical learning projects that provide relevant workplace experience and help identify future JBS leaders.

### **JBS Internal Talent Program**

This program was created to identify members of the production team who have leadership skills and offers them the tools they need to accelerate their JBS careers. The program includes a four-month training rotation at a JBS USA facility, teaching leadership skill training and offering the opportunity to learn more from other leaders across the Company.

### **JBS Leadership Warehouse Program**

This includes six different programs for JBS USA managers, who are grouped by profile, for leaders with high potential, mid-level managers, production supervisors and recently promoted or hired managers.



### ***JBS Way of Leading***

This is a professional development program to provide Team Members with leadership skills. After Team Members have been mapped, they spend six months on a training rotation at a JBS USA plant being prepared to take up management positions.

### ***Elective Learnings***

These are supplementary, online training courses offered by JBS USA to any team member interested in improving their skills. The course addresses issues such as Cross-Generational Communication, Responsibility and Ownership and Creating Engaged Teams.

### ***People First***

This program provides specific training for all frontline JBS USA supervisors; there are four sessions throughout the year that focus on practical leadership techniques and team management tools. Topics include building trust and respect, the cost of turnover, responsibility, delegation and prioritization, communication and information sharing.

### ***Leadership Fundamentals***

Leadership Fundamentals is a new manager training program for Team Members who have been recently promoted or hired by the Company. This is a one-day program held eight times a year which exposes new leaders to

the JBS USA Values, Mission and Beliefs. It also offers basic leadership skills, such as effective team communication, delegating and performance management.

### ***Development Workshops***

This program was created in 2018 for Team Members holding corporate positions at JBS USA as part of efforts to meet their personal and professional requirements. Altogether, 400 hours of development workshops were held this year.

# COMMUNITY

JBS's operations have a significant social impact in the regions where it operates. There are several reasons for this. One of them is that many units are located some distance away from major urban centers, which means the organization is responsible for many of the direct and indirect jobs created locally. Another is that the organization is able to offer opportunities to many people who have no specific educational skills and who are able to learn a profession at the Company's production units. For example, in the US, Canada and Brazil, JBS plants are a gateway to the job market for immigrants from many different countries.

Additionally, **the organization continuously supports community development providing education and training courses for children and youngsters, professional training courses for teenagers and adults and training and social inclusion for the disabled.** Each business platform has the authority to decide how it will support its local community – through sponsorship, team member volunteering or direct investment.

JBS USA has a long history of partnering the wide variety of nonprofit organizations. To ensure its voluntary initiatives, sponsorships and donations have the biggest possible impact, the Company supports initiatives in all of its communities, many of which support schools, hospitals and welfare organizations.

Each JBS USA facility has an annual budget to support local communities and initiatives. Each unit independently manages its own activities, which means they can be adapted to meet the needs of local communities adjacent to each plant and increase team member engagement in the initiatives the Company organizes or supports. For example, some units choose to support initiatives that focus on children and adolescents by sponsoring school sports events. Others prefer to support projects to combat hunger. Many raise funds for Team Members and their families and implement volunteer programs.

However, every unit must follow a number of basic guidelines when they partner with the local

community and decide how best to better use their funding. JBS USA prioritizes organizations that support vulnerable groups, support youth development and welfare, encourage agriculture, support its own Team Members, promote diversity and help local communities. Based on these criteria, the human resources director and general manager of each facility have the freedom to contribute to the organizations they believe will have the biggest impact on their community, balancing financial support with volunteering hours.

In the US and Canada, JBS USA supports United Way, the American Cancer Society, March of Dimes, a Relay for Life, the American Red Cross and local teaching institutions, including state-run schools, universities and colleges.



**CASE:**  
**SUPPORT FOR THE MARSHALLTOWN  
 COMMUNITY**

JBS's commitment to local communities intensifies in times of crisis. In the small city of Marshalltown, in the state of Iowa, JBS USA did much to support the local population after a tornado damaged or destroyed 700 homes and injured 17 people in July of last year.

As a major local employer, JBS USA took an active role in efforts to rebuild the city. Teams of Team Members helped remove rubble, rebuild homes and distribute food. In August, the Company earmarked US\$ 1 million for community rebuilding efforts, including US\$ 200,000 for Mid-Iowa Community Action (MICA), a nonprofit organization that helps vulnerable children and families, as well as US\$ 200,000 for the Rebuild Marshalltown

Fund. Alongside individual donations from JBS and Pilgrim's Pride Team Members, the Company provided over US\$ 600,000 to help the Marshalltown team and the local community.

Supporting its Team Members, JBS USA committed to paying around US\$ 275,000 to cover working days lost and reduced working hours as a result of the plant's closure. It also invested an additional US\$ 350,000 to provide financial assistance for Team Members directly affected by the tornado and distributed food coupons people could spend at local supermarkets. This natural disaster changed the lives of local residents, but also showcased the immense amount of community spirit.

## JBS COMMUNITY ACTIONS AND PROGRAMS

### *Special Chefs*

Sponsored by Friboi since 2013, this initiative uses gastronomy to improve social inclusion for people with Down Syndrome. Projects include free workshops with well-known chefs, who teach youngsters recipes and how to use ingredients, as part of an effort to transform cooking into a tool to increase their independence, self-esteem and motor coordination. The program is free and serves 300 students every year.

### *Inclusion Program for the Disabled*

This program was created in 2018 to increase awareness, integration and adaptation for the disabled focusing on the workplace, local teams and common areas, it has helped improve the Company's ability

to attract and retain talent. JBS currently has a number of disabled people on its staff in various areas and businesses across Brazil.

### *Experimental Workshops*

JBS organizes these workshops partnering with public and private sector institutions to improve job market inclusion for the disabled. The project currently offers 14 workshops in Andradina (SP), Barra do Garças (MT), Barretos (SP), Campo Grande (MS), Itapetininga (SP), Ituiutaba (MG), Itumbiara (GO), Iturama (MG), Lins (SP), Marabá (PA), Mozarlândia (GO), Redenção (PA), Santana do Araguaia (PA) and Vilhena (RO). 215 people have already concluded the workshops and 147 have found jobs at JBS or other companies. The Company has invested more than R\$ 1 million in the project since it began.

### *Support for the Hospital of Love*

Friboi supports the Hospital of Love (formerly the Barretos Cancer Hospital) as part of the "Farming against Cancer" campaign which encourages livestock breeders and farmers, who are part of one of Brazil's strongest sectors of the economy, to cover the institution's monthly costs. JBS cattle suppliers are encouraged to donate R\$ 1 to the Hospital of Love for each animal they sell to JBS. The institution provides free healthcare to around 170 cancer patients across Brazil every year, based on 2017 figures. The healthcare it provides costs R\$ 37 million a month, however the institution only receives R\$ 15 million from Brazil's Unified Health System – SUS and the balance is covered by private sector contributions and donations.

## CASE: JBS CANADA CENTRE

JBS Food Canada sealed a partnership in 2017 with the government of Brooks, which is located in the province of Alberta, to refurbish a local community facility. The Company donated US\$ 1 million to expand the JBS Canada Center and build a multisport arena, football center and area for children, as well as make improvements to the gym and curling facilities. Curling is an Olympic sport and very popular in Canada.

Maybe even more important was the work done to double the size of the local library. Many of the 14,000 residents are new Canadian citizens who have immigrated from other countries, which means Brooks is a multicultural town where over 100 languages are spoken. The library will help these new residents become more familiar with local history and feel they are an active part of the community.



CASE:  
**GERMINARE INSTITUTE**

JBS is the largest backer of the Germinare Institute, a nonprofit organization that provides free, high quality, full-time education to students from the sixth grade of lower school to the third grade of middle school. Its methodology supplements the traditional curriculum, with activities that focus on encouraging entrepreneurship. The project helps to train business leaders supported by JBS volunteers who bring their own practical experience into the classroom. When the students finish middle school and the second track professional training, they receive a Business Management technical diploma.

Victor Salvatore, now a sales supervisor at Seara, graduated from the Germinare Institute In 2018 and believes the program played an important role in him finding a job so quickly. “The students go through a two-year internship, which is something other schools do not offer. From the outset, we come into contact with management material and we can bring together theory and practice, offering a macro view of the corporate environment”, he said.

The program focuses on the commercial area and sales and helps youngsters with potential to take leadership positions at JBS, working as a career accelerator. One of the program highlights is the partnership with Colorado State University in the USA, which helps students increase their knowledge through short-term programs. “I spent 12 days studying management material and use that knowledge during university projects. I met students from several other countries and we had a lot to exchange”, said Victor.

Students from the Institute were monitored in 2018 to guide them towards opportunities at JBS. 26 youngsters were identified for leadership positions and 25 for technical and administrative posts. The Institute graduated 47 students in 2018 – and it has graduated 229 since it was founded in 2010.





# Our Sustainability



Effluent treatment plant in  
Jaguariúna (Sao Paulo)

# SUSTAINABILITY GOVERNANCE

JBS's commitment to sustainability underpins all Company areas and businesses in every country where it does business. Sustainability is based on the Company's ethical and transparent approach to business, as well as building constructive relationships with stakeholders and taking a responsible approach to its interactions with people, animals and the environment.

The Company has a number of well-defined goals for sustainability: improving risk management (principally risks and the supplier chain); reducing the business's environmental footprint (water, emissions, energy and waste), improving its eco-efficiency and relationships with society; and encouraging innovation. JBS's target is to be a leader in sustainable natural resource use, minimizing its demand and reducing the amount of waste it generates in order to increasingly improve the quality of its output.

At corporate level, the Company has two departments, one in Brazil and another in the USA, responsible for managing and communicating this area, as

well as engaging business units across the value chain in sustainability management. The Brazilian department monitors operations in Brazil and repercussions in other countries, while the US team focuses on the North American, Canadian, Australian, New Zealand, Mexican, Puerto Rican and European markets.

The sustainability areas also liaise between JBS and its main stakeholders – the market, customers, suppliers and consumers, etc. – building a constant dialogue between all stakeholders.

In terms of governance, the Company also has the JBS Sustainability Committee, which is responsible for addressing global and strategic issues. This committee reports directly to the Board of Directors. Jerry O'Callaghan, Board Chairman, also became a member of the Sustainability Committee in 2019.

All of the main sustainability leaders at JBS met in 2018 at the JBS USA head office in Greeley (CO) to discuss and identify strategic global guidelines the Company should implement from 2020 onwards.

**JBS INVESTED OVER  
R\$ 1.92  
BILLION  
IN SUSTAINABILITY  
PROGRAMS, PROJECT  
MANAGEMENT  
WORLDWIDE IN 2018**



# MATERIALITY AND STAKEHOLDER ENGAGEMENT

GRI 102-40, GRI 102-42, GRI 102-43, GRI 102-44, GRI 102-47, GRI 103-1, GRI 103-2

Because of the Company's wide range of operations, its businesses and areas define their own targets and procedures to achieve more sustainable production, which includes developing environmental and safety policies that comply with country and industry standards.

The same process applies to stakeholder dialogue and engagement, where the Company builds relationships focused on sustainable development at local level.

However, this wide range of situations and approaches has a common thread, which

is the Company's values, the precautionary principle and the materiality matrix, which presents the five main sustainability priorities for JBS and its stakeholders.

As part of the process of developing the sustainability materiality matrix, the Company took into account its operational methodologies and conditions worldwide, based on interviews with JBS's top executives. The result of these conversations was cross-referenced with interviews involving representatives from the Company's main stakeholders (investors, suppliers, domestic and foreign customers, governments

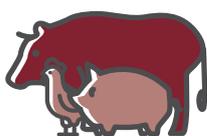
and organized civil society), to produce an outcome in line with the Company's high sustainability requirements.

Materiality matrices were then developed for each business based on this diagnosis. These were used at a forum involving sustainability teams from all regions to map the five issues that best represented the Company's global challenges. As a result of this consensus-based methodology, JBS materiality does not include any weighting or prioritization. These five themes are of great significance when formulating Company strategy and help to guide its activities.

## JBS'S 5 GLOBALLY MATERIAL SUSTAINABILITY PRIORITIES



TEAM MEMBER HEALTH AND SAFETY



ANIMAL WELFARE



PRODUCT INTEGRITY



WATER MANAGEMENT



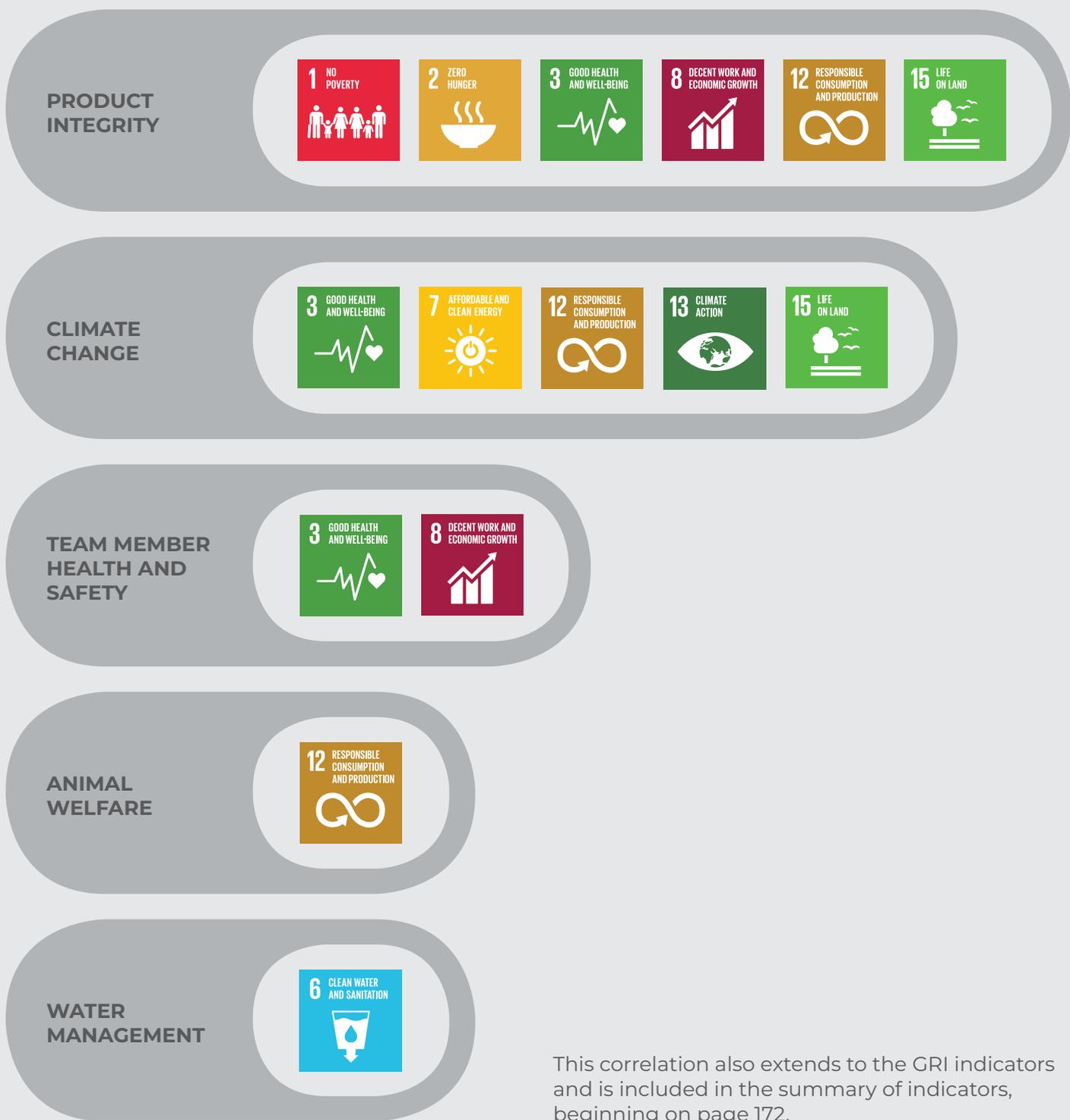
CLIMATE CHANGE



## MATERIALITY AND SDGS

In 2015, the United Nations launched its 2030 agenda, an action plan to make the planet more sustainable, as well as its Sustainable Development Goals (SDGs), which includes 17 objectives and 169 targets underpinning the agenda's main issues. Although it has not officially signed up to the SDGs, JBS uses this platform as a point of reference for sustainability initiatives. The Company believes that its strategic issues have a strong connection with some of the SDGs.

### RELATIONSHIP BETWEEN STRATEGIC ISSUES AND SDGS



This correlation also extends to the GRI indicators and is included in the summary of indicators, beginning on page 172.

## TARGETS FOR 2020

In 2016, the JBS USA Sustainability Department implemented a Sustainability Program with a number of targets for the US, Canada and Puerto Rico businesses to achieve by 2020. The program defines 30 performance indicators that are based on the results achieved between 2013 and 2015 at over 60 factories.

Based on guidelines the Company drew up at a meeting of its global teams in September 2018, JBS will be setting up a program of long-term targets for the entire Company.



\*Scopes 1 and 2 do not include animal generated emissions

### STAKEHOLDER COMMUNICATION CHANNELS

JBS and group companies have a number of communication channels including:

AUDIENCE	CHANNELS
<b>WIDER SOCIETY</b>	<p>www.jbs.com.br (Brazil)                      www.jbssa.com (USA)                      www.jbssa.com.au/ (Australia)                      jbsfoodcanada.ca/ (Canada)                      www.pilgrims.com/                      https://www.moypark.com/en (Pilgrim's Moy Park)                      br.linkedin.com/company/jbs</p>
<b>INTERNAL</b>	<p><b>JBS Intranet:</b> publishes news and information about the Company and HR-related information.  <b>Find Out More:</b> a newsletter distributed twice weekly to Brazilian Team Members  <b>Heads-up:</b> a management newsletter  <b>Communicating Results:</b> a quarterly management meeting in Brazil to discuss Company results  <b>HR Reports, Always Do The Right Thing News, Releases, e-mail marketing, JBS TV, among others</b> - keeping people informed about events involving JBS businesses.  <b>JBS News Roundup:</b> a daily newsletter with the main events involving JBS USA, competitors and the market  <b>Pilgrim's Moy Park Magazine:</b> a quarterly magazine  <b>Ombudsman:</b> welcomes criticism, questions and suggestions about internal processing operations and other day-to-day work-related issues  <b>Hotlines</b> to anonymously report work-related or ethical issues:                      JBS USA: Best Work Environment Hotline                      Pilgrim's: Prideline                      JBS Australia: Complaints Hotline                      Pilgrim's Moy Park: Support Assistance Helpline  <b>Engagement Surveys</b>  <b>Open Door Policy:</b> a program to communicate directly with Company leaders where Team Members can present issues affecting their performance or the workplace environment</p>
<b>CUSTOMERS AND CONSUMERS</b>	<p><b>Customer Service 2.0:</b> Friboi, including the toll-free number (0800 11 5057) and online channel (available at <a href="http://www.friboi.com.br">http://www.friboi.com.br</a>)  <b>Customer Service:</b> Seara, available via a toll-free number (0800 47 2425), e-mail and social media.</p> <ul style="list-style-type: none"> <li>• Consumer Hotline: 1-800-312-1470, available from Monday to Friday in the USA during business hours</li> <li>• FreshTrace™</li> <li>• SAP Cloud for Customers</li> <li>• Chicken Check In Platform</li> <li>• The website of each business and brand</li> </ul> <p><b>JBS NEWS:</b> a monthly newsletter reporting on JBS sustainability initiatives in Brazil and at its leather operations worldwide.  <b>Sustainability Spotlight:</b> a weekly report highlighting business sustainability issues</p>

AUDIENCE	CHANNELS
<b>MEDIA</b>	<b>Specialized support services</b> in each business <b>Media Room</b> ( <a href="http://jbs.com.br/imprensa/">http://jbs.com.br/imprensa/</a> )
<b>SHAREHOLDERS AND INVESTORS</b>	<b>IR areas in Brazil and the US</b> <b>IR website</b> Quarterly results telephone conferences <b>JBS Day</b> <b>United States customer service areas</b> (Pilgrim's) <b>IR website</b> (Pilgrim's)
<b>SUPPLIERS</b>	<b>JBS Connection</b> ( <a href="http://www.conexaofriboi.com.br/">http://www.conexaofriboi.com.br/</a> ) <b>Website</b> for each business

THE JBS ETHICS LINE IS AVAILABLE TO ALL OF THE COMPANY'S STAKEHOLDERS. THE LINE IS AVAILABLE TO TEAM MEMBERS AND CAN ALSO BE REACHED BY CUSTOMERS, SUPPLIERS, INVESTORS, SHAREHOLDERS AND OTHER STAKEHOLDERS 24 HOURS A DAY, 7 DAYS A WEEK, IN PORTUGUESE, ENGLISH OR SPANISH. COMPLAINTS IN BRAZIL CAN BE MADE CALLING 0800 377 8055. FOR FURTHER INFORMATION, VISIT [WWW.LINHAETICAJBS.COM.BR](http://WWW.LINHAETICAJBS.COM.BR)





# PRIORITY ISSUES: TEAM MEMBERS HEALTH AND SAFETY

**J**BS is committed to the integrity and well-being of its direct and indirect Team Members. Globally, the Company understands it needs to take both preventative and corrective measures in order to eliminate accidents and provide safe working conditions, which includes equipping staff with individual and collective protective equipment, improving workplace conditions and implementing economic and quality-of-life programs.

**In 2018, the Company invested around R\$ 300 million globally** to improve structures as well as purchase and adapt equipment and physical infrastructure.

## POLICIES

As in other areas, health and safety management follows the Company's global principles and is based on regional programs and local action plans.

Our health and safety policies are mainly disclosed via training and education programs. These initiatives provide guidance in various languages with training on specific tasks and include departmental safety meetings and monthly updates. There are also incident investigation procedures to help prevent, reduce, mitigate and eliminate

injuries, diseases and fatalities. This helps the Company implement more effective corrective action plans.

**All JBS facilities comply with local Occupational Health & Safety laws and regulations.**

## MANAGEMENT

JBS has specialist teams working globally on Occupational Health & Safety. These teams are responsible for mapping risks, assessing investment requirements and putting corrective action plans into place at their respective business

divisions. These teams also receive intensive training. All units have an emergency brigade.

## JBS

JBS monitors the main safety indicators on a daily, weekly and monthly basis, prioritizing fast responses to health and safety issues.

Health and safety targets are checked monthly at all units and business divisions, reporting any changes in frequency and severity indicators and improvement initiatives.

## JBS HEALTH AND SAFETY PRINCIPLES

- Motivate, inform, develop, train and qualify Team Members, making them responsible for ensuring the Company offers a safe and healthy working environment;
- Anticipate and prevent accidents, in the belief that every accident could be avoided;
- Take steps to continuously improve processes, machinery and equipment and take steps to control, eliminate or minimize incidents;
- Guarantee compliance with legal regulations, the Self-Management Health and Safety Program and other health and safety requirements;
- Build and support a Health and Safety culture through leading by example, individually taking responsibility and monitoring health and safety as a team.



Similarly, the Company also monitors accident action plans and any outstanding legal nonconformities raised during ISS safety inspections, in addition to the mandatory training indicators for each position.

In Brazil, all of these issues are managed at each production unit in line with the Self-Management Health and Safety Program (PSSAG), which brings together the rules and principles used to standardize occupational health and safety procedures, internal processes, programs and legislation. The program is intended to encourage preventive action and monitor team member health by carrying out occupational health exams. The program also encourages people to adopt healthier habits as part of corporate campaigns focusing on team

member health. Two nationwide campaigns are run every year addressing health and welfare issues that are relevant to the Company's teams, as well as ad hoc campaigns at each plant.

Health and safety issues JBS USA operations are addressed through a culture of prevention and team member engagement. Each unit has a safety committee whose members are drawn from local staff. The committee meets on a regular basis to analyze workplace risks and propose innovative strategies to mitigate them.

Safety data are shared internally and there are specific annual safety targets for the Company and each facility. There are also constant effort to identify risks and correct deficiencies before

incidents occur, which includes training and education programs for teams in the US and Puerto Rico, in line with Occupational Safety and Health Administration (OSHA).

Teams in Mexico monitored data from the government's Labor Department and local health and safety regulations, which comply with OSHA standards. The Company Health and Safety Management System in Canada is aligned with Alberta's Occupational Health & Safety Act.

**R\$ 300  
MILLION**  
**INVESTED IN SAFETY  
WORLDWIDE**

Additionally, JBS USA Beef, JBS USA Pork and Pilgrim's also have occupational health medical services, discovered by experts who support ongoing improvement in the Company's practices; they also support programs at each individual facility to reduce risks to Team Members. One example is the JBS USA Ergonomic Improvement Program, which was created to control or eliminate conditions or activities posing ergonomic risks in any particular location.

In Europe, health and safety are also critical factors in any business decisions taken by Pilgrim's Moy Park. The Company involves its workforce in its health and safety programs and encourages leaders to take an active role in identifying and managing risks as well as analyzing performance. Programs comply with RIDDOR (Reporting of Incidents Diseases and Dangerous Occurrences) regulations issued by the Health Safety Executive.

#### **CORRECTIVE ACTIONS AND CONTROLS**

JBS has a number of control, monitoring and corrective programs and initiatives for any non-compliance discovered at any of its global operations to

ensure that all Team Members comply with Occupational Health & Safety policies and systems and minimize risk.

All JBS USA plants undergo three different annual audits focusing on safety management systems, fleet safety and occupational health. Each Pilgrim's unit undergoes daily safety assessments (five times a week) based on the DuPont Behavior Based Observation (BBS) process.

**In Brazil, JBS carries out audits based on local legislation and internal procedures. Any nonconformity is monitored by the safety committees locally and by the corporate committee** (which is made up of all business HR directors and managers from the Specialist Occupational Medicine and Safety Engineering Service - SESMTO, which analyze information from all of the divisions, Ministry of Labor audits and independent customer audits.

Pilgrim's Moy Park carries out regular internal and external audits. Internally, safety teams visit operational areas every week and carry out monthly audits to analyze any problems detected during their visits.

Engineering teams also carry out regular, planned preventive maintenance using computerized systems. There is also a mandatory health oversight system at all units to ensure team member welfare is monitored and protected.

External audits take a deeper look at every part of the business, however they have a particular focus on industrial facilities to ensure full compliance with all Occupational Health & Safety requirements. Factories regularly invite specialists to address issues such as noise, dust, lighting etc.

#### **PERFORMANCE**

JBS trained more than 135,000 Team Members in 2018 to guarantee compliance with its policies and practices.

**JBS TRAINED  
MORE  
THAN  
135,000  
TEAM MEMBERS IN  
2018 TO GUARANTY  
COMPLIANCE WITH  
ITS POLICIES  
AND PRACTICES**



**In Brazil, JBS registered a consistent reduction in the number of accidents with lost time (50%) and the rate of lost days (73.5%) in 2018.** This is the result of improved health and safety management at the Company and additional investment in this area.

Steps the Company took to strengthen its safety culture include week-long bimonthly corporate awareness campaigns at all plants and business divisions.

The campaigns are planned to reinforce the links between work and family, friends and leisure, and an attempt to engage Team Members in looking out for themselves and those around them and convince them to take care of and be taken care of by their workplace colleagues.

**In 2018, JBS USA implemented a new Safety Observation Process to ensure Team Members are**

**able to accurately identify risks and nonconformities in the workplace.** This process can be used to collect and analyze data and implement training plans to avoid future problems.

The goal is to set up additional key performance indicators (KPIs) including preventive indicators to strengthen the accident prevention culture and eliminate unsafe activities. In parallel, the Company will increase its investment in robotics to eliminate situations and tasks that pose a significant risk of accidental occupational diseases. **The goal is to reduce the rate of incidents by 10% by 2020.**

In 2018, the Company's Mexico operations developed a National Safety Plan which includes the Health and Safety System and is intended to protect team member integrity with the ultimate goal of reaching zero accidents. According to the plan, the Company has

taken steps to improve 80% of its workplace equipment and implement a monitoring and oversight system.

In Europe, Pilgrim's Moy Park has developed a Safety Index, a key indicator revealing safety performance at each of the Company's operations. The Safety Index is based on the frequency that injuries occur, the number of accidents with lost time and the number of lost days.

Since 2012, the Pilgrim's Moy Park SI has dropped from 11.5 to 0.70, which represents an impressive improvement in operational safety. **The highlights are the plants in Danwick and Dungannon, which have achieved 4.9 million and 1 million hours without accidents, respectively.**



**TYPES OF INJURIES, INJURY RATES, OCCUPATIONAL DISEASES, DAYS LOST, ABSENTEEISM AND NUMBER OF WORK-RELATED DEATHS**

GRI 403-2

		2018						
		Brazil/ South America <sup>1</sup>	JBS USA	Pilgrim's			Australia	Canada
				Pilgrim's US/PR	Pilgrim's Mexico	Pilgrim's Moy Park		
<b>ACCIDENTS</b>	Lost time	455	283	114	29	25	273	29
	Without lost time	3,806	1,792	797	257	97	437	N.A.
	Number of total accidents	4,261	2,075	911	286	122	710	N.A.
<b>INJURIES (FREQUENCY RATE)</b>	Lost time	2.12	0.81	0.36	0.38	0.21	13.29	1.07
	Without lost time	17.77	5.14	2.53	2.46	0.85	24.62	N.A.
	Total Injuries	19.89	5.95	2.89	2.73	1.07	37.91	N.A.
<b>LOST DAYS (SEVERITY RATE)</b>	Lost days with accidents	4,261	6,169.21	2,410.75	398	193	N.A.	830
	Lost days rate (LDR)	95	17.70	7.66	0.01	1.69	N.A.	30.50
<b>DART RATE</b>	Days away, restricted or job transfer rate	N.A.	4.15	1.56	0.2	0.11	N.A.	N.A.
<b>FATALITIES</b>	Typical accidents	1	0	0	2	0	0	0
	Commuting accidents	0	0	0	0	N.A.	0	N.A.
	Total	1	0	0	2	0	0	0

1 Friboi, JBS Couros, Seara and Novos Negócios

N.A. - Not applicable

N.A. - Not available

		2017				
		Brazil/ South America	JBS USA	Pilgrim's	Australia	Canada
<b>ACCIDENTS</b>	Lost time	885	260	276	279	8
	Without lost time	3,138	1,412	816	426	245
	Number of total accidents	4,028	2,290	1,092	705	253
<b>INJURIES (FREQUENCY RATE)</b>	Lost time	4.23	0.75	0.58	14.6	0.32
	Without lost time	15	N.A.	N.A.	22.22	N.A.
	Total Injuries	19.23	6.6	-	33.77	N.A.
<b>LOST DAYS (SEVERITY RATE)</b>	Lost days with accidents	22,191	6,973	2,296	N.A.	N.A.
	Lost days rate (LDR)	359	20.11	9.91	N.A.	26.95
<b>DART RATE</b>	Days away, restricted or job transfer rate	N.A.	4.82	2.46	N.A.	N.A.
<b>FATALITIES</b>	Typical accidents	3	0	1	1	0
	Commuting accidents	5	N.A.	0	N.A.	N.A.
	Total	8	0	1	1	0

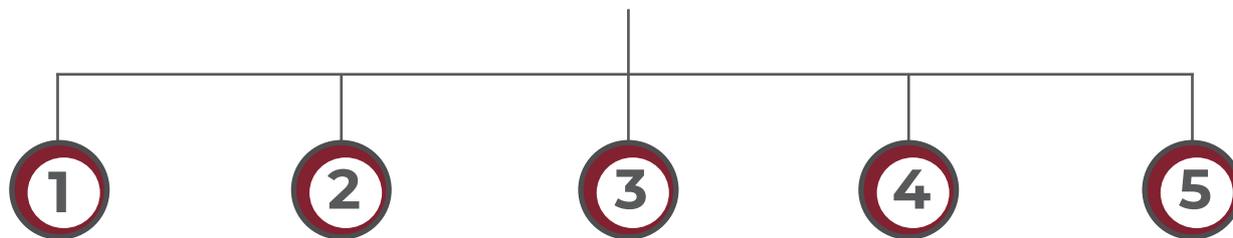
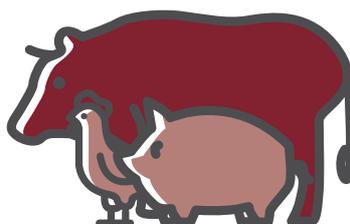
# PRIORITY ISSUES: ANIMAL WELFARE

JBS has a basic commitment to ensuring animal welfare, which is why it is one of the Company's five strategic global sustainability issues and is one of the Company's basic values. **JBS product quality is intimately linked with the health and welfare of all the Company's animals. The Company therefore focuses on ensuring that animals receive appropriate care and treatment throughout their lifecycle.**

JBS has animal welfare programs at all of its business units, which prioritize the issue from birth to slaughter. These programs involve the adoption of appropriate policies and practices and include monitoring, training and documentation across all phases of the Company's extensive value chain. **All of the Company's actions and initiatives are fully implemented at all JBS operations and aligned with the five fundamental animal freedoms.**

Best practices in animal welfare are closely related to JBS's success. This is why work routines at all operations include production techniques and policies that comply with humanitarian slaughter principles. This is a non-negotiable issue for the Company, which it handles very strictly. **In 2018, the Company invested R\$ 88.2 million worldwide in order to improve animal welfare practices across the organization.**

## FIVE FUNDAMENTAL FREEDOMS



**FREEDOM FROM HUNGER AND THIRST**

**FREEDOM FROM DISCOMFORT**

**FREEDOM FROM PAIN, INJURY OR DISEASE**

**FREEDOM TO EXPRESS NORMAL BEHAVIOR**

**FREEDOM FROM FEAR OR DISTRESS**

## MANAGEMENT AND GOVERNANCE

All JBS business units have multidisciplinary teams managing animal welfare issues and each team is specialized

in a particular animal species.

There are also corporate animal welfare teams which are responsible for ensuring everyone complies with the procedures and policies set out in the Company's animal welfare programs. They also produce and improve Company practices and help develop technical specifications suppliers are required to adopt.

### IN ORDER TO ENSURE THAT ALL RECOMMENDATIONS ARE FOLLOWED, JBS HAS THE FOLLOWING PROCEDURES:

- Internal and external training courses for Company Team Members and suppliers;
- Frequent internal audits guarantee best practices are in place and identify any corrective action required;
- There is a target dashboard which is monitored by animal welfare supervisors;
- And the Company is constantly reviewing the need for any additional investments or changes to its processes.

JBS has Quality Assurance staff at each of its production units and corporate teams responsible for supervising and implementing the animal welfare policy – which includes assessing facilities and equipment, training programs and providing ongoing monitoring. All staff who have contact with animals receive animal welfare training. At beef processing operations in the US, Canada and Brazil, these Team Members are specialists in humane treatment and are certified by the Professional Animal Auditor Certification Organization (PAACO). In Australia, the Quality Assurance managers also receive animal welfare training and are certified by the Australian Animal Welfare Certification System (AAWCS).

Additionally, all Company operations comply with local technical standards and legislation. In Brazil, Seara and Friboi comply rigorously with all Brazilian legislation. Units in the US comply with regulations from the US Department of Agriculture (USDA), the Food Safety Inspection Services (FSIS) and the National Chicken Council (NCC) and National Pork Board regulations.

Canadian units comply with the Meat Inspection Regulations issued by the Canadian Food

Inspection Agency (CFIA) and Australian units comply with the Australian Standard for Hygienic Production and Transport of Meat Products for Human Consumption. In Mexico, production complies with the government's Buenas Prácticas Pecuarias en la Producción de Pollo en Engorda, program, which is published by the Secretariat for Agriculture, Livestock, Rule Development, Fishing and Food (SAGARPA) and the National Agriculture and Food Health, Safety and Quality Service (SENASICA). In Europe, all Pilgrim's Moy Park chicken farms are approved by Red Tractor.

In addition to complying with the animal freedom and humanitarian slaughter principles as well as local regulations in each country where it operates, JBS also complies with the number of religious guidelines. It does so because it exports to many different markets. The Company's different approaches comply with its customers' religious requirements.

Importantly, JBS is not involved in any type of genetic engineering or cloning practices.



### INTENSIVE TRAINING

JBS carries out routine training for all producers and Team Members to guarantee full compliance with all animal welfare guidelines. In 2018, these training courses were attended by over 13.3 thousand people globally.

Internally, on-site teams, factory staff and drivers all received training. For example, all Friboi Team Members sign a document stating they are aware of the Animal Welfare Policy and animal treatment guidelines and responsibilities – as well as the sanctions that may be applied if those guidelines are infringed. There is also an e-learning platform with courses on animal welfare best practices, which includes videos on related techniques.

**The Company's integrated producers and cattle suppliers also receive technical guidance, training and support for all of its animal welfare policies, procedures and guidelines.**

Any breach of Animal Welfare Program policies by Team Members or suppliers will attract disciplinary action and may lead to termination of employment or the relevant raw material supply agreement.

**OVER  
13.3  
THOUSAND  
TEAM MEMBERS AND  
PRODUCERS RECEIVED  
ANIMAL WELFARE  
TRAINING IN 2018**

### CONTROL AND ASSESSMENT

JBS animal welfare programs are constantly evaluated using key performance indicators (KPIs) and are verified by internal audits as well as independent consultants and domestic and foreign customers.

Most of the items that are verified involve practices that go beyond what is legally required, reinforcing JBS's commitment to pursuing best practices in this area. JBS operations also undergo certification audits by organizations such as the Global GAP, at Seara units, the National Feedlot Accreditation Scheme (NFAS) in Australia, and PAACO, at JBS USA and Friboi operations (*for more information about certification, see pages 166 and 167*).

Friboi has developed a Supply Chain Seal ([jbs.com.br/sustentabilidade/bemestar-animal](http://jbs.com.br/sustentabilidade/bemestar-animal)) certifying Guarantee of Origin which includes animal welfare, streamlining the process of verifying customer and consumer requirements. Program audits are carried out by the Brazilian Certification Service (SBC). *For more information, see page 41.*

Furthermore, all Friboi cattle transport trucks are routinely audited – and must be classified as 'very good' to continue operating – and drivers receive animal welfare training from an outside consultant. Factory teams also receive training. A standard procedure, Friboi operates daily and weekly checklists and monthly internal audits. This data is used to establish annual targets for this area.

**JBS USA addresses adequate and humane treatment of animals in its Standard Operating Procedures (SOPs).**

An Animal Health and Welfare scorecard effectively measures and monitors 19 indicators across all the Company's facilities. These items are weighted using a 100 point scale based on the eight most important areas which include compliance, annual (internal and external) audits, investment, transportation, management and health and losses. Failure to comply with any priority indicators will automatically result in an audit failure.

The process identifies best practices and opportunities for ongoing improvement. This data is used as a basis for setting animal welfare targets. Each facility in the US and Canada sets an individual and an aggregate target for animal health and welfare at every business unit. These targets themselves are then aggregated to establish an overall animal welfare target for JBS USA.

Animal welfare and handling practices during the pork and poultry breeding phase at Seara are defined in the Technical Guidelines (OTs) and address zootechnical parameters – such as housing density, the number of feed and drinking troughs, the heating and cooling system, water quality, nutritional levels, compliance with the five fundamental freedoms and environmental controls (temperature, humidity, ventilation, lighting and “bed” quality).

This data is periodically monitored by the Company's technical team, which also verifies the checklists and other control documents used by producers. Animal welfare supervisors also carry out quarterly inspections at Company plants. Quality teams carry out monthly and annual audits. Compliance targets are set based on performance outcomes. In 2018, results were not only above average, they showed progress compared with the preceding year.

**At Pilgrim's Moy Park, managers supervise implementation of the animal welfare policy across the integrated supply chain, frequently analyzing the audit system as well as the results and trends from the main indicators in this area, which are recorded daily.**

These indicators are determined in consultation with customers and are used to set targets and objectives. The standards meet Red Tractor or equivalent requirements. Furthermore, some customers have more rigorous specifications that exceed industry standards.

The board revises the animal welfare policy monthly and every farm undergoes audits carried out by independent certification bodies. An outside auditor checks each plant for compliance with Red Tractor standards to verify Assured Chicken Production (ACP) certification.

Any noncompliance is addressed using standardized operational procedures within a specific timeframe and steps are taken to



avoid the issue being repeated. Producers also have a financial bonus system based on their performance in relation to the main animal welfare indicators.

All beef processing facilities and many poultry factories worldwide have installed cameras to visually monitor animal welfare practices and indicators.

JBS USA has implemented a video auditing system at most of its facilities to provide staff with immediate feedback; the videos are audited by Arrowsight, an independent company, based on NAMI guidelines.

**Images recorded in Australia are routinely verified by the Food Quality and Safety team and by the Department of Agriculture Vet.**

Animal welfare teams in Brazil also monitor recordings and live images, which are included in the animal welfare audit.

## ANIMAL WELFARE IN PRACTICE

Routines at all operations include production techniques and policies that comply with humanitarian slaughter principles.

### Breeding

JBS has implemented a number of animal transport and handling procedures with guidelines for day-to-day operations and emergencies. **To ensure compliance with all guidelines, the Company has implemented mandatory checklists and reports and carries out regular audits.** Any nonconformities are addressed through corrective action plans, which are implemented immediately. All Team Members are required to undergo training to learn appropriate animal handling and delivery techniques.

All Company raw materials (chickens and turkeys) are from its own chicken farms or are provided by integrated farmers, which means the Company is able to monitor every detail of the entire process. JBS produces and supplies all consumables that farmers require, such as chicks, feed and medication, as well as the technical knowledge they require and veterinary assistance, which is provided by area specialists. A team of farm management specialists and veterinary surgeons periodically visit all poultry farms to ensure that the correct practices are being adopted.

The poultry units also use a specific animal welfare dashboard to monitor team training, handling, aviary infrastructure and transportation, among others. This data is used to monitor practices and implement continuous improvements to ensure that the five fundamental animal freedoms are respected (*for further details of the five fundamental animal freedoms, see page 110*). Indicators such as temperature, mortality, feed conversion, density, bed quality, foot calluses and other items are used to monitor the treatment the animals receive.

**Over 90% of Pilgrim's chicken farms provide electronic climate control to maximize comfort and protect birds from poor weather and disease.** All facilities undergo internal and external audits on a routine basis to guarantee compliance with the Animal Welfare Program, which includes appropriate transportation, handling and capture verification.

All Pilgrim's Moy Park poultry farms have windows that provide natural lighting and at many of them animals have access to toys like straw balls and perches to provide a richer environment. The birds are also free range and have access to outside areas during the day. Poultry farms are naturally vented and have lower population densities.

Almost all pork at JBS in Brazil is produced on the Company's own or on integrated farms. In other regions, pork is supplied by own, integrated or third-party suppliers. The same procedure adopted for poultry also applies to the Company's own and integrated pork production: farms receive technical guidelines and every farm undergoes technical monitoring and receives consumables from the Company.

JBS provides production manuals to third-party suppliers in the US to ensure they implement best practices. Production indicators are also monitored to identify compliance with the five fundamental freedoms.

Cattle are regularly inspected to avoid the tip or any other part of the horn coming into contact with the faces of other animals. JBS USA Live Pork implements procedures to protect against possible injury and to improve meat quality, such as tail docking and castration.

Pilgrim's does not make any physical changes to its chickens, it simply purchases birds from breeders who comply with rigorous protocols intended to minimize stress. At JBS Australia, castration and dehorning comply with rules issued by the National Animal Welfare Standards and Guidelines and all procedures must be carried out by a

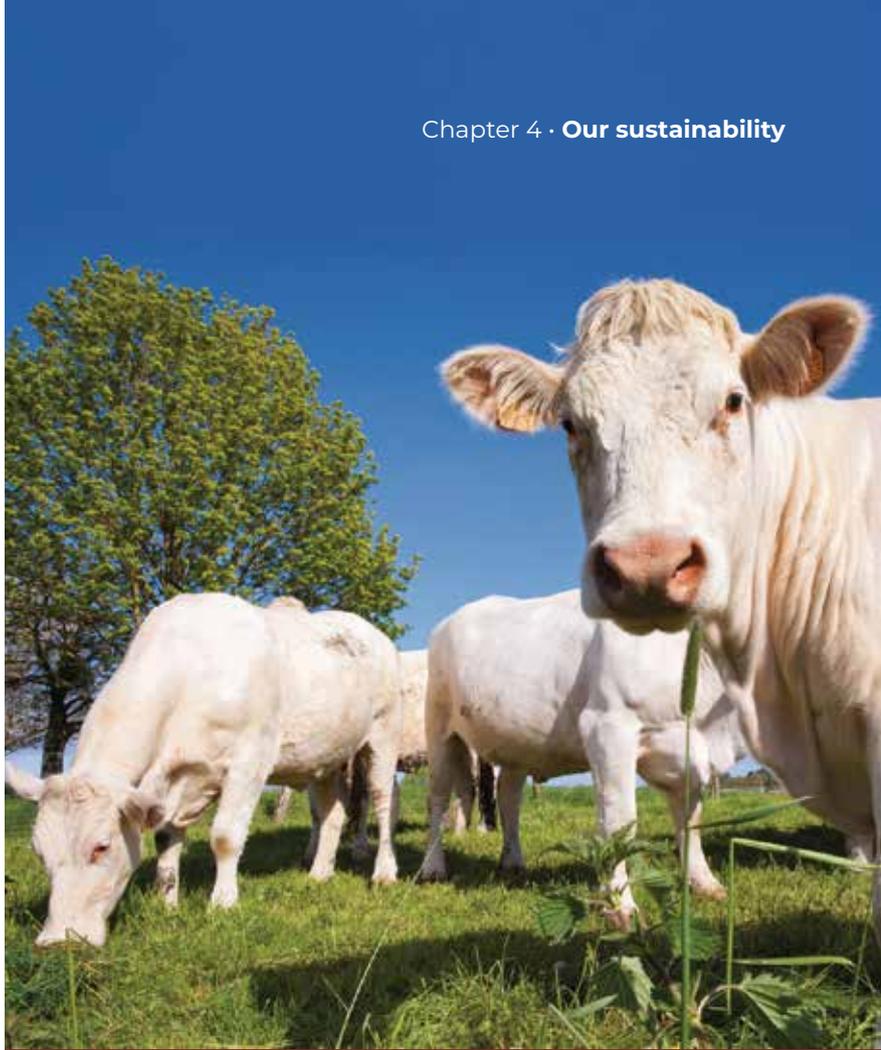
veterinary surgeon using local anesthetic.

There is no debeaking on Seara broiler farms in Brazil. On poultry farms, the laser process only affects males, to avoid injury to the female during copulation – the procedure also complies with best global animal welfare practices.

Teeth cutting has been abolished at farms producing Seara piglets. Tail docking is still employed in order to avoid cannibalism among adult hogs.

This is internationally recognized as the best procedure for ensuring that production complies with modern Animal Welfare standards. Surgical castration has also been abolished. The Company currently employs immunological castration, which is more comfortable and less stressful for piglets.

Cattle are supplied to the Company in many different ways, depending on the practices adopted in each region. Approximately 25% of the cattle JBS purchases in Brazil spend between 90 and 120 days in feedlots, but spend the rest of their time, until they are 2.5 to 3 years old, on pasture. The remaining animals, or 75% of purchase, spend their entire lives on pasture.



#### CASE: **BOVIWELL DIAGNOSTIC TOOL**

Developed by Pilgrim's Moy Park Beef Orleans in 2013 as an animal welfare assessment tool, BoviWell is a group of 10 indicators used to assess and certify best animal breeding practices on cattle farms. Inspired by the European Welfare Quality® protocol and the five fundamental animal welfare freedoms, BoviWell has already carried out 1,643 diagnoses on French milk and dairy farms.

The tool assesses animal welfare in each operation based on 60 factors that are grouped together into 10 indicators. Based on the results, farmers receive a quality certificate and are able to identify potential areas for improvement. Each diagnosis helps to improve the Pilgrim's Moy Park Beef Orleans Database and create a better reference point for future tool updates.

Over 100,000 animals have been observed since BoviWell's adoption. The results from February 2019 show that 88% of farms were classified as "Excellent" or "Superior".



Friboi has a number of farmer initiatives to ensure cattle suppliers comply with appropriate animal welfare practices. The main 2018 initiatives were:

- Ongoing verification of attendance at the four editions of the National Association of Intensive Livestock Breeding (Assocon) livestock school;
- Events with Dr. Temple Grandin (see the table on page 121);
- Delivering 5,000 animal welfare kits;
- Releasing the International Livestock Breeder Conference Manual (Interconf);
- Social Fuel Seal talks and kit distribution;
- Organizing the “Success Leaves Tracks” panel and distributing animal welfare material at the event.

In the US and Canada, cattle is bred on feedlots and purchased from third-party farms and at auction. JBS requires all

its suppliers to comply with government regulations and state or national animal welfare and quality certification programs and it monitors and assesses all its suppliers to ensure compliance with all requirements (for information see page 76).

JBS owns six feedlots in Australia. Reading risks of these units – such as nutrition, disease and extreme weather – are managed by identifying and implementing mitigation practices such as biosafety procedures, providing shelter and provisioning food and water.

Animals are inspected and treated on a daily basis. All activities are recorded so that results can be reviewed frequently. Animal welfare indicators are internally audited on a six-month basis and audited by an outside, independent auditor every year, in accordance with the National Feedlot Accreditation Scheme (NFAS). In 2018, the unit invested in the specialist veterinary hospitals at Beef City Feedlot and Caroonia Feedlot to improve animal welfare outcomes.



### Organic farming

JBS is always looking to provide its customers and consumers with options that meet their requirements and expectations, while maintaining its standard of excellence to guarantee the safety and quality of all its products. **The Company therefore invests continuously to ensure its product portfolio reflects wider consumer requirements and trends. As part of these efforts, JBS offers antibiotic free, organic, vegetarian and natural as well as traditional foods.**

What all of these product ranges have in common is the priority focus on animal health and safety. At JBS, ethical values, which are inherent to animal breeding, require adoption of best animal welfare practices because as far as the Company is concerned, this is simply doing the right thing.

**One of Pilgrim's brands is Just Bare, which focuses on organic chicken. In the US, the Company pioneered the use of high technology chicken production techniques, with processes that include gas-based stunning and**

automated deboning, among others. All products carry the American Humane Certified seal, which certifies the animals were bred humanely.

Pilgrim's Moy Park is the UK and Ireland's largest producer of free-range, organic poultry and has 110 small poultry farms producing organic chicken. Apart from being the biggest organic chicken producer, it was also the first to deploy this breeding method in the UK in the 1980s. The following decade it started breeding organic chicken.

JBS markets similar products in Brazil, which are called country or "natural" chickens. The Seara DaGranja range - which carries international animal welfare certification - supplies products made using chickens bred on exclusive farms without the use of antibiotics or anticoccidians (drugs used to combat avian coccidiosis). The animals also receive 100% vegetable feed to guarantee traceability throughout the production chain. Seara also has a special breed of free range chicken: Frango Caipira Nhô Bento.

In the US and Australia, JBS also produces organic beef. In 2017, JBS Australia began processing its first certified organic herd, sold under the Acres brand. Organic beef is produced on certified farms that comply with strict environmental and animal handling regulations. The new product will help JBS Australia serve rising demand in this niche market and increase its international competitiveness.

**JBS IS NOW THE  
WORLD'S  
LARGEST  
ORGANIC  
CHICKEN  
PRODUCER**



### Transport

At JBS animal transportation is an important phase for animal welfare and is carried out by specialist, trained teams using the Company's own or contract vehicles that have been specially developed to ensure animal welfare and avoid injury during transportation and minimize stress during

embarkation, transportation and disembarkation. Drivers receive instruction on safety procedures and how to react in the event of an emergency. Maximum driving times and distances are also specified in advance and drivers are required to comply with rest, meal and hydration procedures.

The entire JBS Transportadora cattle fleet in Brazil is equipped with a tracking system. This is used to detect brusque braking and acceleration, vehicle speed, maneuvering around curves and door blocking to directly improve animal welfare. It also improves animal comfort while, at the same time, reduce the risk of accident or injury while in transit. A large part of the fleet is equipped with hydraulic elevators to make it easier to onboard the animals.

### HOW ARE ANIMALS TRANSPORTED?



Animal transportation from farms to meatpacking units complies with the following practices:



Maximum distances between farms and meatpacking units are defined to guarantee animal comfort.



Transport routines are managed using indicators, such as cage density and weight during loading to guarantee appropriate practices are adopted.



Trained teams are used to load and unload trucks, using techniques that minimize animals stress.

In both Brazil and the USA, JBS uses its own and third-party fleets for animal transportation. The JBS fleet is constantly being renewed with more modern and efficient vehicles, which are built to provide better space and accommodation, with a hydraulic

elevator to better organize the animals' entry and departure. These features help to improve animal welfare, facilitating Team Members' jobs, reducing the number of animal injuries and thereby ensuring better quality products for consumers.

The entire cattle fleet undergoes at least 1 6-monthly audit to assess (in-house and third-party) driver training.

In the USA, JBS USA Carriers is responsible for safely transporting over 1.5 million cattle a year. The Company offers driver training on animal handling and safety. The training material is based on the Beef Quality Assurance Transportation (BQAT) program, a widely recognized industry standard for truck driver training.

Cattle shipping companies are audited on a daily basis to ensure they comply with JBS USA humanitarian handling standards and, depending on the country, with NAMI Transport Guidelines, the CFIA Health of Animal Regulations Livestock Transport Requirements and the Australian Standard for



the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption.

All shipping companies must also provide a document certifying that they understand and abide by JBS USA guidelines. Pork teams in the USA check shipping Company compliance with the National Pork Board's Transport Quality Assurance (TQA) program. Inappropriate animal handling results in immediate corrective action and may lead to contract termination.

At Pilgrim's, chickens are protected against extreme temperature and receive adequate ventilation during transportation. Food and water are removed during transportation as a matter of food safety, and the chickens are

kept in cages, but only for the shortest possible time in order to ensure poultry comfort.

At JBS Australia, third-party transportation of animals suffering from any type of condition or injury that could cause stress or pain during a trip is considered one of the main animal welfare risks. This is why the Company inspects every animal delivered to its facilities. With guidance from a local government veterinarian, JBS uses humanitarian euthanasia procedures if animals are suffering serious injury. If the Company determines an animal should not have been transported, it will prepare a report and work with local government to address the issue with the shipping Company and/or supplier.

**JBS USA CARRIERS SHIPS OVER**

**1.5 MILLION CATTLE**

**A YEAR USING VEHICLES SPECIALLY DESIGNED TO GUARANTEE ANIMAL WELFARE**

## Slaughter

JBS operations all comply with humanitarian slaughter principles to guarantee appropriate handling from the time the animals arrive at meatpacking units, including animal stunning. **JBS uses the best equipment available on the global market and its plants are staffed by trained teams responsible for monitoring the receiving of animals and ensuring their welfare up to the point of slaughter, in order to avoid any type of suffering.**

Audits and checks of Company facilities provide metrics that assess performance across each stage of the procedure, from the time animals are received until they are slaughtered. At JBS USA and Friboi, independent auditors also carry out video audits.

Poultry are kept in a holding warehouse at appropriate temperatures where they are constantly monitored. The same procedure applies to hogs, which are allowed to rest in their bays. US pork facilities use controlled atmosphere stunning technology.

In the US and Canada, beef and pork facilities have implemented animal welfare programs in line with guidelines from the North American Meat Institute (NAMI) and local regulations.

Program compliance is verified daily by third-party auditors. All facilities have voluntarily instituted the “Systematic Approach to Humane Handling and Slaughter” program, which is recommended by the US Department of Agriculture (USDA) for animal handling and covers four areas:

1. An initial site assesses the circumstances in which cattle may face excessive emotion, discomfort or accidental injury during transportation, containment or slaughter;
2. Adoption of facilities, training courses and practices based on rules intended to minimize the risk of undue excitement, discomfort or accidental injury;
3. Periodic audits of facilities and practices to ensure cattle are treated humanely;
4. Ongoing process improvements, based on internal and external audits, adoption of regulatory changes, performance trends and improvement opportunities identified during weekly animal welfare meetings.

Production facilities in Australia have adopted animal welfare programs that comply with guidelines from the AMIC Industry Animal Welfare

Standard - Livestock Processing Establishments and The Australian Standard for Hygienic Production and Transportation of Meat and Meat Products for Human Consumption, which address six factors:

1. Planning and management procedures;
2. Equipment and facility design and maintenance;
3. Team skills;
4. Humanitarian management and disposal of sick or injured animals;
5. Management to minimize stress and injury;
6. Humanitarian slaughter procedures.

## UNIVERSITY PARTNERSHIPS

**JBS partners with universities and well-known research centers and researchers to develop projects aimed at generating new solutions and/or improving current animal welfare practices.**

A technical cooperation agreement was signed in 2014 with the Animal Ecology and Etiology Study and Research Group (ETCO Group) at the Paulista State University (UNESP) in Jaboticabal and with world-renowned animal welfare specialist Dr. Temple Grandin, in order to intensify and expand efforts to improve animal welfare. This work is

based on research that helps to solve animal welfare issues for cattle during all stages of the production process (breeding, transportation and slaughter).

Pilgrim's Mexico has partnered with the National Association of Federal Establishments Inspection (ACETIF) and National Association of Poultry Science Specialists (ANECA). Both organizations offer animal welfare refresher courses and assess farm performance. Pilgrim's Mexico helped the UAQ (Autonomous University of Queretaro) setup and run an Experimental Poultry Farm in 2017, as part of an initiative that continued to be developed and improved in 2018.

Our animal welfare programs are also frequently reviewed by Dr. Temple Grandin and other animal welfare specialists from Colorado State University (see *table*), who work closely with JBS USA.



## INTERNATIONAL SPECIALIST

Temple Grandin is a researcher who is globally renowned for her work in animal welfare and regularly partners with JBS. She visited Brazil in 2018 as a guest of the Company to organize discussions about the best practices across the animal protein production chain.

JBS also sponsored an event where she met with more than 1,200 people in Brazil, including farmers, producers, industry experts, specialists, academics and journalists. Grandin and other specialists spoke at these meetings where the main goal was to educate people about the best animal welfare practices and emphasize the importance of this issue for the Company's business.

## COMMITMENTS

### Use of antibiotics

**JBS is committed to reducing antibiotics throughout its supply chain every year.** This means antibiotics are only administered when strictly required and on veterinary recommendation, to avoid compromising animal welfare and food safety. The Company does not use antibiotics on a preventive basis. It also records and tracks any type of antibiotic usage and trains its teams to ensure compliance with disease prevention, hygiene, monitoring and vaccination programs.

At JBS USA, all antibiotics are used under veterinary medical supervision and only to prevent, control or treat diseases, never to promote growth or food efficiency. The antibiotics policy also requires written permission from a veterinarian before antibiotics can be used, registration of any and all antibiotics that are administered and training programs to guarantee compliance with the Company's health and disease prevention programs.

**JBS also supports research that focuses on reducing the outbreak of disease and identifying products that can replace antibiotics** in order to further reduce the use of this type of drug.

JBS has always adopted a careful approach to antibiotic

usage. Given the growing concerns about resistance to antibiotics, US units have produced antibiotic usage statements for their cattle and pork supply chain partners to guarantee compliance with the Company's principles.

Some businesses have developed specific antibiotic policies. For example, Pilgrim's has eliminated antibiotics at all its hatcheries since 2016 and is in full compliance with the FDA 209 and VFD 213 guidelines. Antibiotics are only used under strict supervision by USDA certified veterinary doctors and only to prevent, control or treat disease. The unit's antibiotics policy is reviewed annually.

Pilgrim's Moy Park complies fully with industry regulations and requires authorization from the veterinarians who care for the birds before antibiotics can be administered. All drugs used are licensed by the UK Veterinary Medicines Department and are subject to an intensive set of tests prior to being approved for use. Approvals for drugs used at poultry farms are inspected by auditors from the Red Tractor Scheme and local animal health inspectors, as required by law.

Pilgrim's Moy Park also maintains an Antimicrobial Handling Forum focused on educating poultry farmers

about antimicrobial resistance and adopting best practices to reduce the use of antimicrobial products. It also collects a wide range of data to give the poultry industry and regulators a clear understanding of antimicrobial trends.

Pilgrim's Moy Park also has a Food Safety Forum and an Antibiotics Management Forum to implement practices that protect chicken and turkey health and support food safety. These forums are staffed by outside specialists who provide the Company with the latest scientific developments.

At JBS Australia, the approach varies depending on the market where the product is being processed. For example, cattle used by the Great Southern brand must be free of antibiotics and any other substances. Even if there are no regulations in place, antibiotics are only administered when recommended by veterinarian.

As part of its commitment to animal welfare, JBS USA treats all sick animals with antibiotics, as and when required, and then removes them from its antibiotic free, natural and organic programs.



ALL PILGRIM'S  
HATCHERIES HAVE BEEN  
**ANTIBIOTIC  
FREE**  
SINCE 2016

**Collective gestation**

In 2014, Seara committed to using collective gestation for all its pork production in Brazil, completely eliminating gestation in individual bays.

The goal is to have all farmers using the system by 2025.

The Company is therefore supporting its integrated suppliers as they go through this transition. 50% of its hog breed stock is currently produced cage-free.

JBS USA Live Pork was also committed to eliminating collective gestation by 2018, which was fully accomplished by the end of the year. From 2019, all pork will be produced using a cage free system.

**JBS USA 2020 Program**

As part of JBS USA's 2020 Goals program, operations in the US, Puerto Rico and Canada will commit to achieving 90% or better on their animal welfare scorecards.

**Use of cage-free eggs**

By 2020, all eggs used as ingredients in Seara products will be purchased exclusively from egg-laying chickens bred outside cages. In 2017, JBS committed to suspending purchases of eggs from chickens bred in cages in Brazil, in line with the Company's animal welfare guidelines. Seara is the Company's only business division that purchases eggs to use as ingredients.

# PRIORITY ISSUES: PRODUCT INTEGRITY

**A**t JBS, product integrity means respecting the highest food safety, quality and sustainability standards. This is why the Company is constantly investing to improve its operational, manufacturing and supply procedures to guarantee product integrity. This includes the adoption of social environmental practices, such as responsible raw material procurement and building closer relationships with suppliers, in addition to third-party certification for best practices in the Company's processes and routines.

JBS sets the bar for value chain management and has taken a unique approach to responsible raw material procurement.

As its raw material suppliers have adopted best sustainability practices, this had a direct impact on the quality of JBS products and the Company plays a role as an agent for change and innovation in every production chain it is involved with. This involves developing initiatives that help improve management processes and develop best social and environmental practices among its suppliers, basing its approach on supply relationships and guarantee of origin.

## SUPPLIER RELATIONSHIPS

JBS organizes a number of initiatives to transform suppliers into business partners, such

as helping to improve their management processes and develop best social and environmental practices across the value chain, which subsequently improve the quality of the raw material they supply to the Company.

One of the highlights in this area is the Company's commitment to eliminating slave labor:

**JBS has been a signatory of the National Pact Institute to Eradicate Slave Labor since 2007 and a member of the National Pact Institute to Eradicate Slave Labor (InPACTO) in 2014, as part of efforts to identify and eradicate slave labor in Brazil.**

Below is a list of some of the initiatives we have been implementing with suppliers.

## Cattle breeders

### Quality Ranking

This is a tool used in Brazil that brings together raw material quality management and livestock breeder communications, linking raw material technical parameters – animal weight and age, fat finishing and gender – with a quality bonus policy. Animals obtain either a green light (desired standard), yellow light (admissible standard) or red light (undesirable standard), making it easier for breeders to understand the importance of improving the quality of cattle supplied to the Company.

Following classification, JBS offers breeders bonuses linked

to carcass quality. This program sets JBS apart on the market and encourages a higher percentage of higher quality raw material, with a lower incidence of animals classified as undesirable.

## Connection Management

The Connection Management initiative was launched in Brazil to improve management capabilities of mid-size livestock breeders supplying between 300 and 2,000 animals annually. It offers a range of tools that help increase efficiency in every link of the beef production chain, from breeders to the end consumer. Implemented in 2018 in partnership with the Inttegra Institute, the program includes 30 strategic livestock breeders in the states of Mato Grosso, Mato Grosso do Sul and São Paulo.

## Friboi Connection Website

The Friboi Connection Website ([www.conexaofriboi.com.br](http://www.conexaofriboi.com.br)) helps improve the Company's relationships with livestock breeders, whether or not they are JBS suppliers in Brazil. The website supports discussion, distributes relevant information and helps producers generally improve their businesses. It also provides easier access to JBS, providing livestock breeders interested in partnering with the Company with information on JBS's culture and working methods. The website is divided into three main areas:

- I Want to Sell – a channel for contacting JBS in order to sell cattle which provides information on selling options as well as the livestock improvement projects implemented by the Company.
- I Want to Find Out More - in this section, livestock breeders can find information, news, daily prices and technical information they can save, share or print.
- I Want to Connect - here, visitors to the website can contact their nearest meatpacking plant and find

answers to frequently asked questions.

Friboi Connection also provides access to the Cattle Breeder Website ([pecuarista.jbs.com.br](http://pecuarista.jbs.com.br)), where farmers can consult all previous data on animals from their farms that have been slaughtered and their status in terms of JBS social and environmental criteria. JBS also provides photographic information on finishing classes with validation from academics, industry associations and specialists to ensure that

carcass grading is transparent and auditable.

#### Giro do Boi Platform

This platform includes a website for livestock breeders with a social media profile and daily TV program. Broadcast on the Rural Channel, the Giro do Boi program is an important source of information for people across the industry. The main highlight is the Brazil Tour, with information on daily prices JBS practices throughout the country.

## SOCIAL FUEL SEAL

This is a federal government program that JBS has been supporting for over 10 years to guarantee that small, family farmers will be able to sell their output to biodiesel manufacturers, helping to support family farming.

This initiative, which is executed by JBS Biodiesel, a JBS Novos Negócios Company, will further support social and economic development in farming communities throughout the country and create additional opportunities for the Company, as beef tallow is the second most important source of raw material for the Brazilian biodiesel industry.

Small-scale livestock breeders were also invited to join the project in 2017 as part of a joint initiative by JBS Biodiesel and Friboi. The Company has a team of agricultural engineers, farming technicians and veterinarians that offers livestock breeders free technical support, financial planning guidance, preset sales options, bonuses for cattle quality and guarantees to buy 100% of all contracted cattle.

The team also analyzes potential cattle producers who might join the program to ensure they comply with environmental and employment legislation.

In 2018, 11,000 head of cattle were purchased in São Miguel do Guaporé, Rondônia, generating more than R\$ 27 million in income for 259 families, which was eight times more than they received in 2017. The Company expects to purchase more than 27,000 head of cattle in 2019 and 2020 and, as production increases, the target is to extend the initiative to include other families, reaching 470 breeders across the region by the end of next year.

### **Poultry suppliers**

All JBS units operate on an integrated basis, partnering with families who breed poultry in order to guarantee raw material sourcing. The companies offer producers all the consumables they need to rear safe and healthy pork and poultry and providing guidance on production processes, environmental practices and animal welfare.

JBS tightly manages every stage of the production process, from genetic selection of breeding animals and animal processing to point-of-sale delivery. This affords the Company greater control over sanitary and nutritional issues – minimizing the risk of contamination and epidemics – and guarantees product quality, food safety and cost efficiency.

In Brazil, Seara has a group of over 300 external technical staff and veterinarians who carry out technical and health visits before and during any purchases or supplier certification procedures. They carry out all necessary on-site verifications to check compliance with supplier contracts and the requisite environmental licensing.

In Mexico, Pilgrim's runs a program to develop and monitor suppliers, which includes several audits. Pilgrim's also recently implemented an Electronic Market System, through which the Company is able to procure raw material and build more efficient relationships with suppliers, increasing transparency and creating additional business opportunities.

In Europe, Pilgrim's Moy Park poultry suppliers also require independent feed, breeding and

slaughter certification as well as Global Food Safety Initiative (GFSI) for any processing and deboning facilities. Suppliers must also comply with the Company's internal policy, the Meat Technical Guidance and other specifications as well as attend monthly supplier meetings by telephone and quarterly site meetings.

### **Pork suppliers**

JBS units use one of two formats: integration, which is the same system used for poultry, or independent

**JBS HAS STRICT CONTROLS FOR ANIMAL HEALTH AND NUTRITION AND PROVIDES GUIDANCE ON BEST ANIMAL WELFARE PRACTICES**



suppliers. In both cases, the Company has strict controls for animal health and nutrition to ensure food quality and safety and comply with internal and customer requirements.

In Brazil, Seara guidance and training for poultry farmers is also made available to pork producers. The Company has external technical staff and veterinarians who carry out technical visits to ensure all suppliers have adopted appropriate production

practices and structures and hold the requisite environmental licenses.

In the USA, JBS Pork USA also takes steps to ensure all supply chain producers take the utmost care with their animals. This involves farm visits to check best management practices are being implemented and Team Members are being properly trained. Based on the information they collect, feedback is provided to support continuous improvement.

All JBS pork producers in Australia sign formal agreements detailing the animal quality and welfare requirements they are expected to meet to continue supplying the Company.



### GUARANTEE OF ORIGIN

At JBS, all raw materials purchases comply with federal and local regulations and adhere to responsible procurement principles. If any wrongdoing arises or any service fails to comply with best practices, the supplier's contract is terminated.

In addition to complying with relevant regulations, JBS has a number of mechanisms to ensure raw material from across the production chain is transformed into products offering guaranteed integrity.

#### Beef

In Brazil, JBS has a robust social and environmental monitoring system to verify whether its cattle suppliers comply with the social and environmental criteria set out in its Raw Material Responsible Procurement Policy, to guarantee supply chain sustainability.

The system monitors a wide range of issues, from deforestation of native forest on indigenous land, in environmental conservation

areas or areas embargoed by the Brazilian Institute for the Environment and Natural Resources (IBAMA), to ensuring suppliers do not employ child or slave labor.

Around 80 thousand registered Brazilian cattle suppliers are assessed daily using satellite imagery, farm geo-referencing data and information from government agencies. This exclusive JBS monitoring system covers over 59 million ha in the Amazon region and 437 Brazilian cities - an area equivalent to the size of France.

If it detects farms that fail to comply with any of the Company's social and environmental criteria of the Public Livestock Commitment, the system suspends trading with the supplier and blocks purchases until the situation has been corrected. The entire cattle procurement process and the Social and Environmental Monitoring System are audited annually by independent, third-party auditors.

**IN ITS MOST RECENT AUDIT, IN 2017, THE COMPANY OBTAINED THE BEST RESULT SINCE AUDITING BEGAN IN 2014, WITH 99.99% OF PURCHASES IN COMPLIANCE\***

For greater transparency, the audit reports can be viewed on the Company website and are available in English and Portuguese.

Every year, a representative sample of all beef raw material purchases is taken during the audit. The analysis is based on an average sample of 10,000 cattle purchases from suppliers located in the Amazon Biome.

\* the full report is available at [https://jbs.com.br/wp-content/uploads/2018/11/JBS\\_Relat%C3%B3rio-Compromisso-Publico-da-Pecuarria-2018-DNVGL\\_PT.pdf](https://jbs.com.br/wp-content/uploads/2018/11/JBS_Relat%C3%B3rio-Compromisso-Publico-da-Pecuarria-2018-DNVGL_PT.pdf)





In Brazil, Friboi employs a satellite monitoring system to certify sustainable supplier management and that it sources meat from farms that are operating legally and comply with relevant labor and environmental legislation.

In Brazil, the Company also has the Supply Chain Seal, which is audited by third-party and verifies animal welfare, sustainability quality criteria during all phases of the process (*further information, see page 41*).

The United States and Canada units require all cattle suppliers to provide a statement

expressing their compliance with government regulations and national animal welfare and quality certification programs. In the US, cattle supplier relationships are regulated by the U.S. Department of Agriculture's Grain Inspection, Packers and Stockyards Administration.

In Australia, all animal suppliers must provide the National Vendor Declaration (NVD), a document allowing product tracking. When the NVD is signed, the producer declares it is compliant with the Livestock Production Assurance (LPA) program, certifying the food safety practices adopted by the farm, independent of auditing.

The Australian unit also runs the Farm Assurance Program which involves JBS buyers visiting and inspecting suppliers as well as external audits carried out by independent certification body to verify raw material quality.

Before the cattle leave the property, they are marked using a NLIS device so the animals can be tracked from the farm where they were bred. This information is also recorded on a nationwide database.



### Poultry

In Brazil, Seara employs modern traceability systems to quickly identify and isolate any farm that might pose a quality or health risk. It also monitors poultry treatment at every stage of their lives and throughout the production process and provides a structure for each phase in the production chain supporting sustainable development throughout the process.

In Europe, all suppliers must supply a statement from the British Retail Consortium (BRC) guaranteeing they undergo annual safety and quality audits. Suppliers are also required to comply with product quality and occupational safety criteria provided by the ISNetwork assessment system. Pilgrim's Moy Park also has a tracking system for animal feed and raw materials covering the production, processing and distribution phases. These tools help the Company guarantee food quality and safety. The new supplier approval process includes prequalification, where all companies must comply with the Company's environmental requirements and receive approval from the Quality Department. For example, all poultry suppliers must be certified by the British Retail Consortium (BRC) or an equivalent organization, such as IFS or FSSC 22000, approved by Red Tractor. Poultry farms are audited by independent and approved certification bodies.

### Pork

In Brazil, the Seara guidelines that apply to poultry breeding also apply to pork.

In the US, JBS USA Pork units require all family-based pork suppliers to obtain certification and evaluation from Pork Quality Assurance (PQA) Plus, which is managed by the National Pork Board. Random audits are also carried out by an independent third-party under the "Common Food Industry Audit" principles, a PAACO-certified pork industry platform aimed at producers, packers and processors. These guidelines offer greater well-being and food safety guarantees to consumers.

At JBS Australia, hogs, like cattle, receive a NLIS device when they leave the farm so they can be tracked from source. A quality certificate must also be obtained from Australian Pork Industry Quality Assurance (APIQ), which includes a number of animal welfare and environmental requirements.

All poultry suppliers are audited annually by an independent third-party and poultry farms may be visited without notice. Animals are expected before being slaughtered and there are random checks for drugs or chemical residues in the meat. APIQ certification is verified prior to any pork being processed.

### Wood

Forestry biomass used to generate and obtain thermal energy is only purchased from suppliers who have been certified by federal, state or municipal agencies or environmental departments. In doing so, JBS operations in Brazil are able to ensure compliance with the company's Responsible Raw Material Procurement Policy, which prohibits timber purchases from illegal sources. Audits are also conducted annually and when the raw material is received for the duration of the supplier's agreement with the Company.

Wood suppliers who do not comply with the JBS responsible procurement policy are excluded and prohibited from selling their products to any group business or unit.

# PRIORITY ISSUES: WATER MANAGEMENT

**W**ater management is not just a critical issue for JBS and food industry sustainability: it is a basic element of the production chain and essential for animal and vegetable development and for ensuring product and process sanitary standards as well as facility, equipment and utensil cleaning.

As such, sustainable water usage is a priority at all Company units and also the development of projects and strategies to maximize efficient water usage and reuse and minimize the need to develop new water sources. In 2018, the Company invested more than R\$ 26.8 million on management and measurement initiatives to reduce water usage and reuse water worldwide.

Extreme environmental events that increase water scarcity in regions where diverse actors use water for a wide variety of reasons – in industry, for agriculture or for human consumption – are a major

challenge for the Company but also an opportunity to put positive initiatives into practice.

This means building partnerships at various levels of government, with hydrographic basing committees, communities and other actors in territories where the Company is present, in addition to developing mechanisms and programs to increase water monitoring efficiency, boost sustainable and conscientious usage and encourage reuse.

JBS's approach to water management is, like many other issues, decided at corporate level, however specific targets and procedures are decided by each business area. A number of indicators are used including control over water sources and effluent disposal, wastewater treatment programs and reuse and recycling strategies.

In the past several years, JBS has carried out a detailed global diagnosis to measure hydrological risk across its

operations. This was intended to identify units at greatest risk, mitigate the chance of water shortages and increase usage efficiency.

The study resulted in the Sustainable Water Management Program which mapped internal (qualitative and quantitative) information and external (hydrographic micro basin) information which was used to develop a water criticality map to identify the hydrological risk profile for each unit in Brazil. The program was managed by the JBS Sustainability Committee with support from a Technical Committee, which helped to manage business unit governance processes.

As a result, Brazil has identified the Brazilian units facing the greatest hydrological risk and has undertaken projects to minimize the risk of water shortages, increase water reuse and usage efficiency and set targets for all its plants. An ongoing awareness program has also been developed for factory Team Members. Every production unit also controls water used based on production intensity in line with annual water usage guidelines.

A priority water issue at Seara, for example, is the focus on

**TOTAL ENVIRONMENTAL INVESTMENT**  
**R\$ 721 MILLION**

increasing reuse, identifying areas where water is being wasted, replacing equipment and changing some of its processes and all of these initiatives have focused on increasing water usage efficiency.

JBS USA not only has a corporate target of reducing water consumption intensity by 10%, a goal to be reached by 2020 as part of the Sustainability Program, it also has a number of programs at individual units. Each unit is expected to achieve specific goals by managing critical issues, resources and other variables. This requires adoption of the Environmental Management System (EMS), continuous auditing and mapping opportunities to implement best practices, as well as monitoring changes in overall water usage and water intensity (the water used per ton of product or water used per animal).



## PERFORMANCE

All JBS operations around the world are increasing their monitoring efforts, capturing rainwater and investing to reuse water at various stages of their respective production processes.

JBS USA is committed to improving its environmental indicators by 2020 and reducing water usage by 10% and its units are taking steps to improve their practices. Some of these initiatives include new water meters (Louisville) and plant efficiency updates (Beardstown). At the Cactus tanning plant in Texas, a Company team identified an opportunity to reuse water in the leather cooling and washing process, saving around 300 thousand liters of water a day.

**In 2018, JBS captured 180,700,000 m<sup>3</sup> of water,** mainly from surface sources (e.g. river) and underground sources (wells).

## REUSE

(GRI 303-3)

Water reuse and recycling are two of the biggest water-saving opportunities. This is why the Company is working hard to reuse water at all JBS facilities. Reused water is mainly used for outside cleaning and equipment cooling, based on current health standards. Importantly, local legislation at country level limits the number of operations where water can be reused.

**In Brazil, leather operations are developing initiatives to recycle the water used during their industrial processes, such as rewetting leather, cleaning gases, cooling machinery and filtering water** – to eliminate waste. These efforts have saved more than 15,000 m<sup>3</sup> of water every month in 2018.

A 2017 JBS USA initiative at the Omaha beef production plant in Nebraska reuses water from the food safety assurance process after it has been filtered, helping save over 115 thousand cubic meters per year.

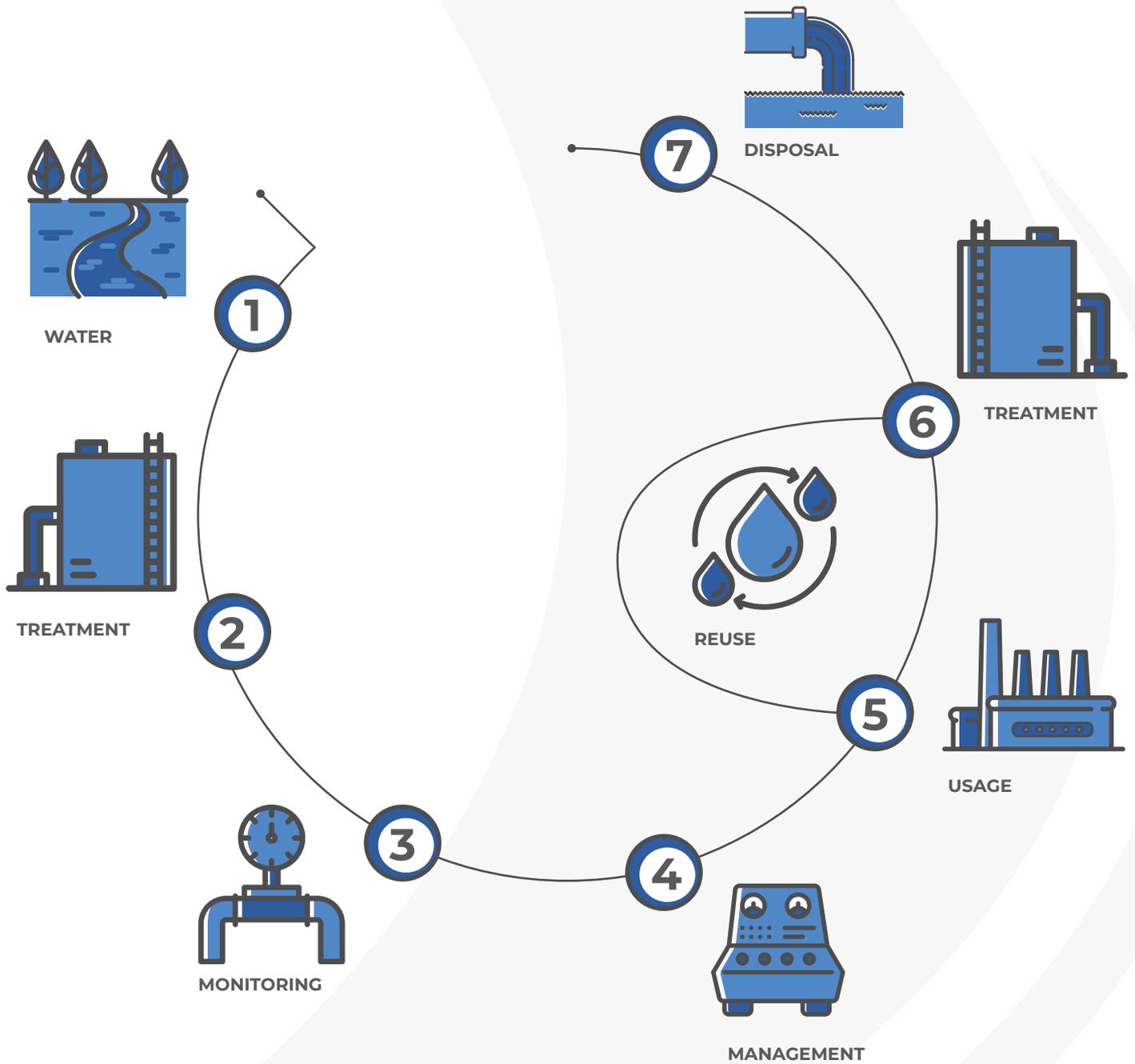
This success resulted in the initiative being adopted at other regional units. The Green Bay (Wisconsin) and Tolleson (Arizona) units have also implemented this system and saved 59.2 thousand and 56.8 thousand cubic meters of water respectively in 2018. The system was also adopted at the Plainwell facility at the beginning of 2019.

One of the biggest initiatives in Australia was to recycle water used to clean cattle. Water reuse reached 35% at the Dinmore facility. Longford & Scone reported 10% reuse.

In Europe, the use of reverse osmosis technology has reduced the amount of water used by boilers. New cooling systems have also helped reduce the number of cooling towers, which has cut water usage and effluent discharge.

**As a result of all these efforts, JBS recycled the equivalent of 3.36% of all water captured globally.**

## THE JBS WATER CYCLE



**WATER CAPTURED BY SOURCE - JBS GLOBAL**

GRI 303-1

	2018		2017		2016	
	Volume (in m <sup>3</sup> )	%	Volume (in m <sup>3</sup> )	%	Volume (in m <sup>3</sup> )	%
<b>SURFACE</b>	53,606,088.20	29.66	53,363,792.28	29.57	91,403,560.00	47.87
<b>UNDERGROUND</b>	60,090,783.29	33.24	47,410,504.62	26.28	68,147,158.88	35.69
<b>PUBLIC AND THIRD-PARTY SUPPLIERS</b>	10,669,079.54	5.90	16,886,962.75	9.36	31,202,680.86	16.34
<b>RAINWATER</b>	158,451.27	0.08	172,538.48	0.10	128,790.84	0.07
<b>OTHER SOURCES</b>	56,204,208.47	31.09	62,604,435.54	34.70	78,966.00	0.04
<b>TOTAL</b>	<b>180,728,610.78</b>		<b>180,438,233.66</b>		<b>190,961,156.58</b>	

**WATER REUSE INCREASED  
IN 2018. WORLDWIDE,  
THE COMPANY CURRENTLY**

**REUSES 3.36%  
OF ITS WATER,  
EQUIVALENT TO MORE THAN  
6 BILLION  
LITERS**



**EFFLUENTS**

Plants have modern treatment stations to collect and appropriately treat the effluent liquid produced by its production processes, complying with legal regulations. **In 2018, the**

**Company invested over R\$ 63.7 million modernizing and improving effluent efficiency.**

All of the wastewater from JBS operations is transported to the Company's own treatment stations or public treatment systems. The Company is constantly monitoring wastewater treatment

station performance and local government agencies constantly monitor compliance with legally required physical and chemical standards.

Globally, JBS generated 146.6 million m<sup>3</sup> of effluent, up 25.4% in 2017.

**81% of the water captured and used in JBS's industrial processes is treated and safely returned to the environment.**

The only exception is the effluent sent for treatment by the public network.

**IN 2018, THE COMPANY INVESTED OVER**

**R\$ 63.7 MILLION**

**MODERNIZING AND IMPROVING EFFICIENCY OF WASTEWATER TREATMENT**

**GLOBAL VOLUME OF EFFLUENT GENERATED AND TREATED BY JBS**

GRI 306-1

	2018		2017		2016	
	Volume (in m <sup>3</sup> )	%	Volume (in m <sup>3</sup> )	%	Volume (in m <sup>3</sup> )	%
<b>VOLUME DISCARDED – BODY OF WATER</b>	71,791,122.65	48.97	59,887,054.39	51.24	63,754,353.85	43.68
<b>VOLUME DISCARDED – FERTIRRIGATION</b>	19,827,579.71	13.53	19,010,574.02	16.27	12,401,476.06	8.50
<b>VOLUME DISCARDED – PUBLIC SUPPLY NETWORK</b>	49,505,829.21	33.77	22,917,222.07	9.36	23,862,252.40	16.35
<b>VOLUME DISCARDED – OTHER TYPE OF DISPOSAL</b>	454,819.74	0.31	714,499.03	12.88	656,105.54	31.48
<b>TOTAL</b>	<b>146,599,140.71</b>		<b>116,867,242.00</b>		<b>145,965,651.83</b>	

## JBS ENVIRONMENTAL MANAGEMENT

Resource management and greenhouse gas emission (GHG) reductions are part of JBS's wider environmental management efforts, which also involve treating waste and focusing on improving eco-efficiency through the adoption of innovative and efficient solutions. In 2018, JBS invested more than R\$ 721 million in environmental improvements, including environmental management at its factories and investment in other projects.

The results of the Company's ongoing improvements can be seen in the results and assessments on the Driving Sustainable Economies (CDP) platform, which monitors and supports corporate sustainability policies at major companies.

JBS adopted the CDP program in 2015, including the Water program – focusing on water resource management –; the Carbon program – for GGE management –; and CDP Forests – which assesses corporate initiatives and policies to prevent deforestation usually linked with the main agricultural commodities – such as cattle, soybeans, wood and palm oil.

In CDP Forests, JBS received a B for cattle and timber and a B- for wood and soybeans. In CDP Carbon, the Company received a B, which means it is one of

the top 20 Brazilian companies out of a total of 150 that were evaluated, and one of the 55 top food companies in the world, out of a total of 273 that have joined the program.

The data survey used by the study is collected using a theme-based questionnaire that assesses risks and opportunities, governance, strategies, compliance, traceability, procurement policies, chain engagement and target-setting. Companies are classified in 8 categories (A to D-), with A considered the “Leadership” category and D the “Disclosure” category. JBS is also a member of CDP Forest Supply Chain, a program which encourages the value chain to take part in the program's assessments.

All of this work is based on the Environmental Management Policy and Environmental Management Systems at the Company's various business, which provide guidelines and indicators guiding the Company's activities in all of these areas. The corporate environmental teams supervise operational environmental performance and provide assistance to address specific problems, as and when they arise. Cases producing the most significant results are shared and replicated when possible at both regional and global level.



# PRIORITY ISSUES: CLIMATE CHANGE

**J**BS is taking a number of steps to reduce its carbon footprint and deliver products that generate less of an environmental impact. This includes joining initiatives to measure and reduce greenhouse gas emissions from the Company's production processes, the energy mix and transport logistics.

**JBS has produced an annual inventory of greenhouse gas emissions in Brazil since 2009, based on the international GHG Protocol methodology. It is also published an annual inventory since 2012, which can be viewed on the Public Emissions Records Platform maintained by the Brazil GHG Protocol Program.**

This inventory was increased in scope to include all global operations the same year. Greenhouse gas emissions produced directly – by Company operations (scope 1) – and indirect energy emissions – as a result of energy consumption and steam purchases (scope 2) – indirect supply chain emissions (scope 3) are measured annually *(for further information, see page 142)*.

The Company is also a member of other global and local platforms, such as the CDP, the B3 (Sao Paulo Stock Exchange) Carbon Efficiency Index (ICO2),

the Paraná Climate Seal and the Sao Paulo State Climate Protocol, managed by the two states' Environment Secretariats. JBS produces an annual greenhouse gas emissions inventory for all these initiatives. This information is critical for understanding the challenges in the Company's carbon chain and for defining emissions management strategies, as well as other initiatives that need to be taken throughout the value chain.

Friboi has increased energy efficiency by automating its machine room (in Goiânia -GO, Alta Floresta-MT and Lins-SP), increasing productivity and reducing greenhouse gas emissions by cutting power consumption by 11 million kWh. The R\$ 4.2 million the Company has invested in recent years will generate R\$ 4.9 million in savings in 2019, and reduce emissions by 824.92 tCO<sub>2</sub>e.

At the JBS Couros unit based in Mato Grosso, treating wastewater from skin processing and reusing it for fertirrigation has also reduced greenhouse gas emissions by 45.69 tCO<sub>2</sub>e. The process treated 23.3% of the 700,000 liters of effluent generated every day. Each liter of wastewater that is treated is equivalent to a kilo of fertilizer.

In the US, emissions are reported to the Environmental Protection Agency (EPA) as part of the SmartWay program for Shipping companies and via 40 CFR 98 (the Greenhouse Gas Reporting Rule) for beef, pork and poultry facilities. **JBS USA operations have a public commitment to reducing greenhouse gas emissions and natural gas consumption by 20% and reducing electricity usage by 12% by 2020.**

In Europe, Pilgrim's Moy Park is part of the European Union Emissions Trading System (ETS) and complies with the protocols that are part of the Energy Savings Opportunities and Climate Change Agreement for the agricultural and industrial sectors, and is also a signatory to the Federation House Commitment emissions agreement. The Company takes an active role in discussions and outside activities with a view to influencing public policy in this area. Internally, the Company takes steps to engage its Team Members and value chain in carbon footprint management.

## **GREENHOUSE GAS MANAGEMENT EFFORTS**

As it works to improve its greenhouse gas emissions measurements, the Company is also working hard in other

business related areas. The Company's notable efforts to avoid deforestation throughout the value chain are focused mainly on its Brazilian cattle suppliers.

With support from a social and environmental monitoring system that uses satellite imagery of supplier farms, JBS is able to control its cattle suppliers in the Legal Amazon, where the total area of the Amazon Forest is located (*for further information, see page 33*). The program helps to reduce the Company's carbon footprint and domestic greenhouse gas emissions – the result of deforestation caused by opening up new areas for agriculture.

The Company is also focused on other stages of the production process that represent the bulk of its submissions. Here, the Company has initiatives to reduce its dependence on fossil fuels; improve energy consumption awareness; change the Company's energy mix to focus more on renewable energy; increase efficiency of industrial wastewater treatment; and improve logistics for its own and third-party fleets in order to reduce distances and increase efficiency.



**PERFORMANCE**

JBS measures the greenhouse gas emissions from its operations every year and reports them as part of scopes 1, 2 and 3. In scope 1, it reports direct omissions, i.e., emissions for which the organization is directly responsible. This includes emissions from the Company’s own fleets, the fuel used to generate heat or energy, the lakes used for wastewater treatment and enteric fermentation from animals on Company feedlots etc.

Scopes 2 and 3 refer to indirect energy emissions and other indirect emissions that come from sources the Company is not responsible for, or is only indirectly responsible for. Examples of scope 2 emissions are electrical energy emissions. Scope three includes emissions from third-party fleets, commercial travel, waste decomposing on third-party properties etc.

Although the significant reduction in scope 1 and 2 emissions is mainly the result of selling the Company’s US feedlot operations, JBS continues to move ahead with the adoption of best practices in order to reduce its carbon footprint. Initiatives to reduce JBS’s direct emissions focus mainly on the volume of fossil fuels it uses and overall power consumption. It is also taking steps to obtain a cleaner energy mix, use waste to generate energy, improve efficiency of industrial wastewater treatment and increase logistics efficiency for its own and third-party fleets.

**EMISSION BY OPERATION IN tCO<sub>2</sub>e (JBS GLOBAL)**

GRI 305-1

	2018	2017	2016
<b>SCOPE 1</b>	4,363,800.82	5,516,869.14 (*)	6,084,483.08
<b>SCOPE 2</b>	1,536,269.49	1,780,515.80 (*)	1,814,793.76
<b>SCOPE 3</b>	652,048.41	580,081.37 (*)	613,885.64 (*)

(\*) Data revised since the Company’s previous report.

JBS Transportadora and JBS USA Carriers, as well as the pork, poultry and beef businesses, are focusing heavily on distribution route optimization in order to reduce greenhouse gas emissions. For example, Seara has a team of routing specialists who have been trained to use a specific software program that creates more intelligent routes, which helps reduce costs and increase productivity. Correct routing can reduce the number of vehicles, the distance traveled, fuel spending, labor and freight by up to 40%.

The biggest effort in the supply chain comes from the Company’s engagement with its suppliers, particularly cattle suppliers, and efforts to protect forestry areas adjacent to pasture and farmland.



**ENERGY**

JBS believes its biggest contribution to reducing emissions across its value chain comes from its adoption of best practices related to increasing the use of renewable energy and improving energy efficiency.

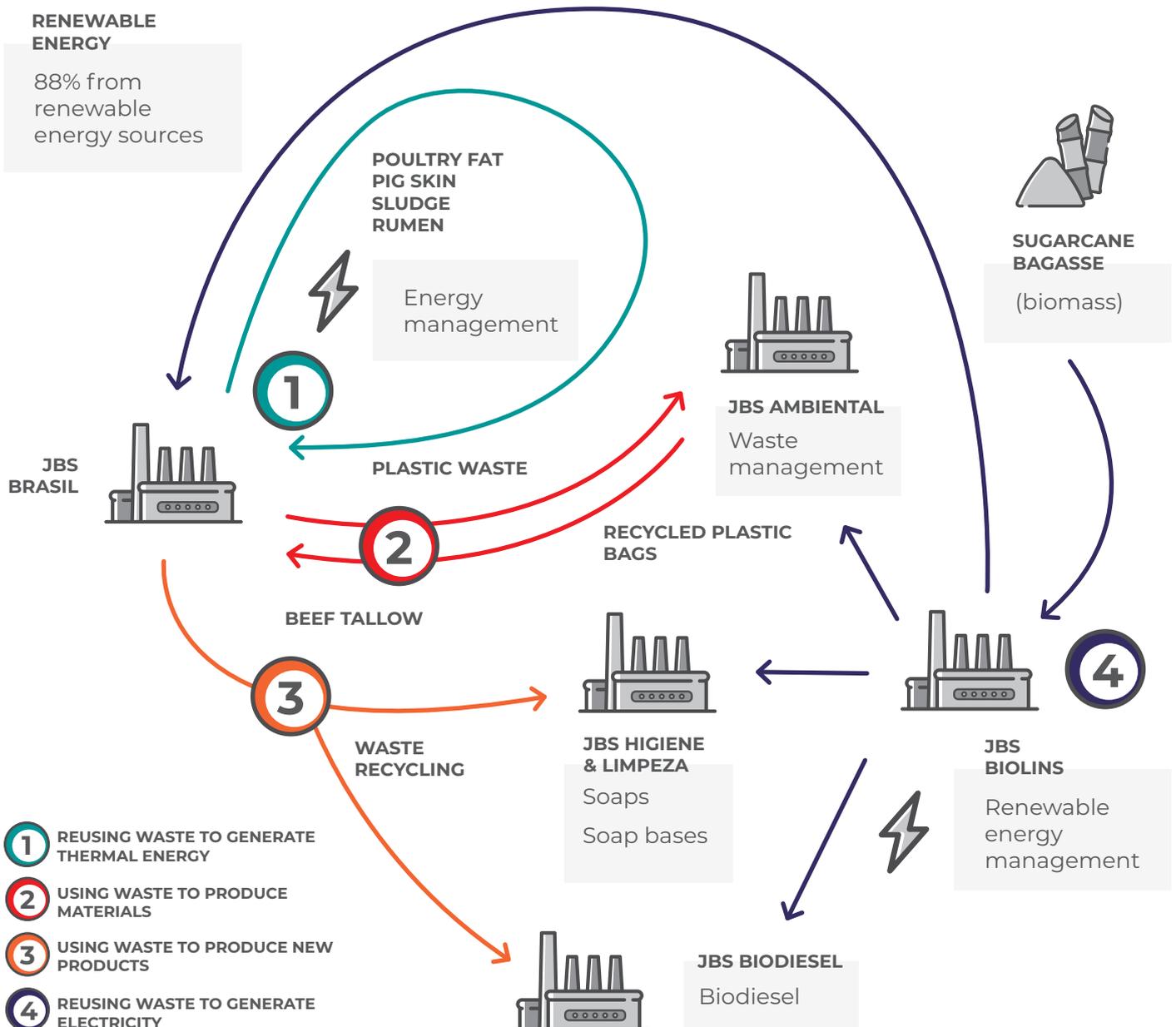
This is a priority issue for both emissions management and overall eco-efficiency and

is backed by a well-defined strategy and funding for implementation. Globally, the Company invested over R\$ 160 million in energy efficiency projects in 2018.

In Brazil, the Company reuses waste material to generate energy.

**GLOBALLY, JBS INVESTED MORE THAN R\$ 160 MILLION IN ENERGY-EFFICIENT PROJECTS**

**REUSE AND CIRCULAR ECONOMY**



## STRATEGY

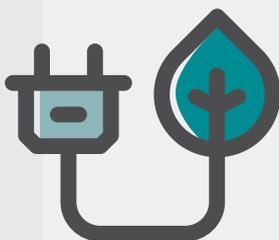
A major energy management trend at JBS's Brazilian operations is to migrate to the Free Energy market - which offers lower costs and improved performance; automation - which cuts costs using more efficient equipment; replacing convention lights with LEDs; and reducing natural gas consumption to replace it with cleaner fuels.



### COGENERATION

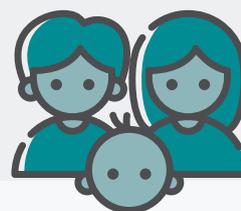
JBS has a cogeneration unit in the interior of the state of São Paulo. Biolins, which is located in the Lins Industrial Park, produces steam and thermal energy from biomass (sugarcane bagasse and eucalyptus chips). Biolins runs a thermal plant capable of generating around 45 MW of energy per hour, sufficient to supply a city of 300,000 inhabitants.

Around 33% of this electricity is used to supply the Meat, Leather and Novos Negócios plants based at the Lins industrial complex. The remainder is distributed to JBS units and sold on the free energy market. The steam produced by the plant supplies the adjacent JBS units. Biolins alone generates the equivalent of 22.5% of all energy used by every JBS plant in Brazil.



### SOCIAL FUEL

JBS Biodiesel also buys beef tallow from small-scale livestock breeders in the São Miguel do Guaporé region in Rondônia. This product has been bought as part of the Federal Government's Social Fuel Seal program. JBS has a technical team that provides livestock breeders with information about the program, technical support, financial planning guidance, preset sales options, bonuses for cattle quality and guarantees to buy 100% of all contracted cattle. In 2018, the project generated around R\$ 27 million in income for the 259 families involved in the project, or an average of around R\$ 104 thousand per family.



## BIOLINS, A JBS COGENERATION UNIT, ALONE GENERATES 22.5% OF ALL THE ENERGY USED BY EVERY JBS PLANT IN BRAZIL



3

### MONITORING

At JBS USA, energy efficiency improvements also have a significant impact on air quality and help reduce greenhouse gas emissions. In 2018, JBS USA selected two facilities to implement a complete energy efficiency measurement and monitoring program for the rendering process. As these were relatively new plants, there was no track record for energy improvement efforts, however performance analyses of new technologies could lead to their adoption at other factories, including older ones.

4

### LED LIGHTING

The Grand Island beef production unit has replaced all its lighting with an LED system and installed more than 1,500 movement sensors. The process, which was concluded at the end of 2018, should cut power use by 3%. Similar projects have been implemented at the pork production areas in Marshalltown and Ottumwa. Also in 2018, Pilgrim's Sumter replaced its boilers with more efficient units and resized the equipment to minimize thermal losses. Pilgrim's Guntersville took a similar path.



## PROJECTS

### AUTOMATION

In 2017, Friboi invested to automate machine rooms at three of its units in Lins (SP), Goiânia (GO) and Alta Floresta (MT), which improved productivity and operational control and increased energy efficiency. This helped reduce emissions by 824.92 tCO<sub>2</sub>e in 2018.

### TIRE RECYCLING

JBS Transportadora sends its used tires to cement and asphalt companies where they are used as an alternate fuel or to make rubber-based materials instead of sending them to landfills. In 2018, this helped reduce emissions by 123.95 tCO<sub>2</sub>e.

### FERTIRRIGATION

Around 700 thousand liters of water are used per day to process cattle skins in the city of Collider (MT). The waste, which contains nutrients that can be used as fertilizer, undergoes chemical and biological treatment and is subsequently used for pasture fertirrigation instead of being disposed of. This fertilizer replacement helped reduce emissions by 45.69 tCO<sub>2</sub>e in 2018.

### RECYCLED COOKING OIL

JBS Biodiesel partners with JBS Ambiental in the Friendly Oil project, which collects cooking oil from over 300 collection points in 20 cities around the state of São Paulo. 3.5 million liters of cooking oil were recovered in 2018 and reused to make biofuel. This could reduce emissions by up to 4313.94 tCO<sub>2</sub>e compared with the volume of biodiesel used with the volume of traditional diesel used by machinery and vehicles.

### PACKAGING CHANGES

In 2018, Friboi launched a new packaging format for its Fiambre Kitut (Luncheon Meat) product, which now comes in cylindrical cans as well as the traditional pyramid format. The new format uses less raw material, helping to reduce emission by 89.14 tCO<sub>2</sub>e annually.



**PERFORMANCE**

In 2018, Friboi met and exceeded its Kwh target for each head of cattle processed. It achieved this with greater control over its operational processes, such as the economic value-added (EVA) project and efforts to monitor energy consumption and improve productivity.

This helped the Company achieve its goal of cutting power usage by 12% and increasing eco-efficiency.

JBS USA plans to switch all its beef and pork production facilities to LED lighting systems.

In Australia, a group of production units invested in biogas capture systems, helping them improve energy efficiency.

JBS increased its use of renewable energy in 2018, which now represents 18% of all the energy the Company uses directly, underlining the trend detected in 2017.

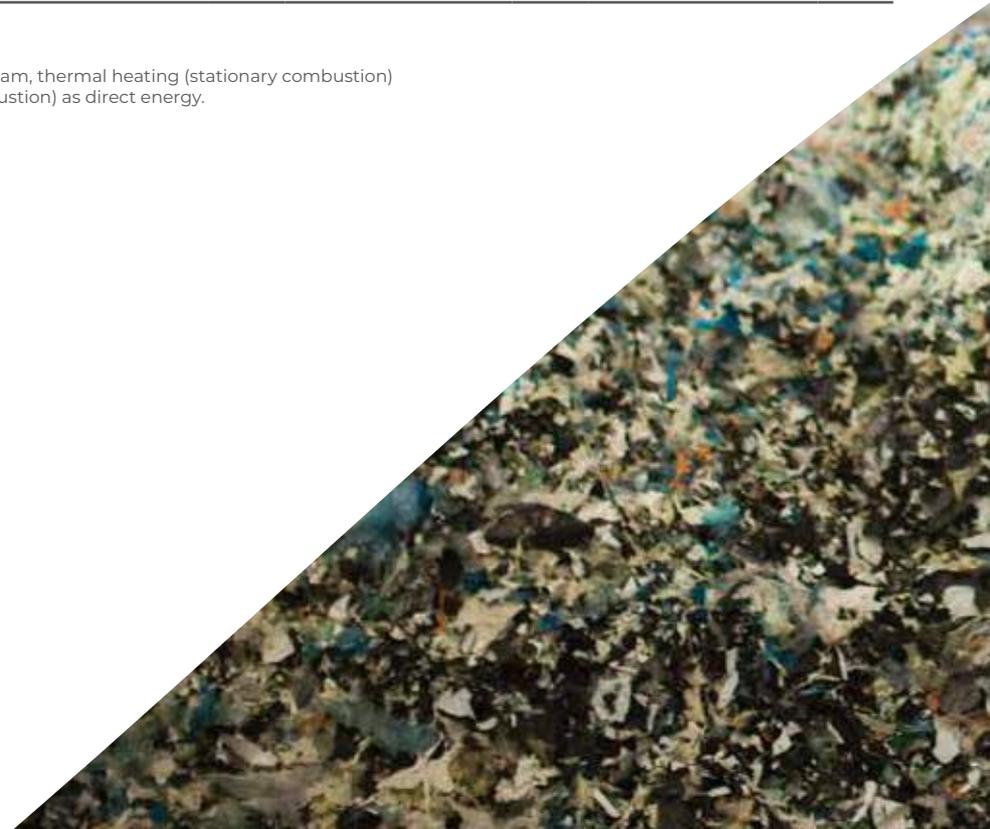
In Brazil, 91% of all direct energy consumption comes from renewable sources, compared with 88% in 2017. Including boiler fuel as an energy source, this figure rises to 98.6%.

**ENERGY MIX (IN GJ)**

GRI 302-1

TOTAL GJ* - DIRECT ENERGY	2018		2017		2016	
TOTAL GJ	170,378,507.35		177,659,805.16		224,892,963.81	
NON-RENEWABLE GJ	139,743,639.54	82%	148,787,882.85	83%	194,292,090.82	86%
RENEWABLE GJ	30,634,867.82	18%	28,871,922.31	17%	30,600,873.00	14%

\* Including electricity generation, fuel used to generate steam, thermal heating (stationary combustion) and fuel used to operate the Company fleet (mobile combustion) as direct energy.



### SOLID WASTE

As part of its efforts to reduce emissions, JBS has also been managing the solid waste generated by its production processes and post-consumption packaging. The main goal is to correctly dispose of and properly treat this type of waste. This avoids environmental impacts such as methane (CH<sub>4</sub>) emissions from decomposition, creating one of the greenhouse gases.

The Company is therefore committed to recycling or using as much waste as possible in order to avoid using landfills or other disposal methods and to supporting efforts to increase post-consumption packaging recycling across the country using reverse logistics programs.

IN 2018, THE COMPANY  
INVESTED OVER  
**R\$ 8.3**  
**MILLION**  
TO IMPROVE WASTE  
MANAGEMENT



## PACKAGING

JBS is committed to reducing or recycling materials and increasing the waste usage or recycling system to reduce the amount of waste sent to landfills and encourages reuse in the production chain.

Packaging is a critically important item for food protection and safety from the moment it leaves the factory until it arrives on the consumer's table. When packaging is thrown away, this generates waste that needs to be properly disposed of.

**All JBS operations invest in research and development to discover ways of reducing and optimizing packaging usage, particularly packaging that does not come into direct contact with food, thereby reducing the amount of waste produced and associated costs.**

For example, there are annual packaging waste reduction targets in Brazil. Many paths are taken to identify opportunities, either on a daily basis with ad hoc efforts to reduce waste or by developing new technologies. One of these initiatives is automatic assembly for boxes used to package poultry based products. Compared with a manual process, this reduces the amount of cardboard used

by 15%. Resizing product bags and boxes also helps to optimize truck space.

**JBS Ambiental is also working to increase the amount of plastic produced by JBS operations that is recycled. In 2018, this figure rose to 6,041 tons compared with 5,233 tons in 2017. This figure is expected to jump to over 14.5 thousand tons in 2019.**

JBS USA not only has product packaging reduction targets, but also researches alternative materials that can be recycled and adopts technology to reduce the amount of packaging while maintaining product safety. In 2018, one pork unit reduced the amount of packaging it was using and increased conservation of cardboard boxes used to ship products by replacing the shelves used to transport them – in some cases, the shelving would damage the boxes.

In order to stop disposing of boxes with plastic linings – which are needed to stop products coming into contact with the cardboard – the unit replaces the lining and the boxes can now be reused several times a day. This has saved an average of 200 boxes a day.

The new cans made on a production line in Brazil require less water, electricity, LPG and natural gas to be produced. The unit in Lins (SP) makes 907.8 tons or 20.4 million units annually but by reducing the weight from 65.1 g to 44.5 g, it has cut energy usage by 32%. Water, LPG and natural gas costs fell approximately the same.

Based on can production volumes, the Company estimates that this will eliminate 89.14 tons of carbon dioxide equivalent (CO<sub>2</sub>e), which is the equivalent to a small gasoline powered car circling the world 16 times or 624 trees being planted. Packaging innovation has also had a significant environmental impact by helping to reduce the CO<sub>2</sub> emissions produced by each shipment.

In Europe, Pilgrim's Moy Park was the first company to commit to reducing domestic food and packaging waste across the supply chain. Its efforts reduced the volume of cardboard and plastic used by 46% and 43% respectively. The amount of metal (2%) and other materials (9%) used by packaging was also reduced.

### ENVIRONMENTAL LABELING ON PRODUCT PACKAGING

The R&D teams in Brazil have been working on changing packaging to comply with Environmental Labeling regulations issued by the Brazilian Association of Technical Standards – ABNT (ABNT NBR 16182) since 2014. The regulations standardize the symbols used to instruct people how to properly dispose of post-consumption packaging. This includes separating wet and dry waste for selective collection and subsequent triage. This supports ongoing improvements to the recycling chains for various materials.



## REVERSE LOGISTICS

JBS believes that the closed cycle, i.e., reusing and recycling waste, is critical for sustainability. As a result, the Company has a number of ongoing initiatives to identify such opportunities.



At Seara, the pallet center manages a number of processes, including collection, procurement, shipping and plant supplies, among others. As a result, the level of wood being reused has risen 41%. This was achieved by adapting the pallet collection targets; changes to the logistics network to reduce pallet shipping; a factory supply study; collecting pallets from customers in various regions across the country; and improving shipping Company accountability. The team of controllers also organized a number of training courses and adapted several processes.



JBS Biodiesel recovered millions of liters of cooking oil to produce biofuels. JBS Biodiesel partners with JBS Ambiental in the Friendly Oil project, which runs programs to raise people's awareness about the importance of properly disposing of cooking oil and collects cooking oil from over 300 collection points in 20 cities around the state of São Paulo. Throughout the year, the initiative collected around 3.5 millions of cooking oil.

As each liter of cooking oil can produce 0.8 liter of biodiesel, reverse logistics for this material will represent a 4,313.94 ton reduction in carbon dockside equivalent from using 100% green biodiesel in machines and vehicles.



The tires used on trucks that transport JBS products are also disposed of responsibly. JBS Transportadora currently refurbishes around 1,100 tires every month and sends around 500 and usable tires to a nonprofit organization created by the Araraquara (SP) tire industry which disposes of the tires correctly. In Brazil, unusable tires are used as an alternative fuel in the cement industry, to manufacture shoe soles, asphalt, rubber sealant, vehicle mats, rainwater ducts, sports flooring and industrial flooring.

80% of the 500 tires collected every month are sent for co-processing at cement or asphalt factories. In addition to not sending 420 tons of rubber to landfills, this initiative generates revenue for the Company and reduces the equivalent of 123.95 tons of greenhouse gas emissions, based on an average weight of 70 kg per truck tire.



JBS USA has also taken steps to recycle as much as possible at its units. The Company recycles 80% of lean paper, which is sent to recycling centers of paper manufacturers; 95% of pallets, which are returned to suppliers for reuse; 95% of all metal used; 95% of clean plastics, which are shipped to a recycling center or reused to make new products; and 95% of high density polyethylene plastic bags, which are sold to their original manufacturer and reused to package the Company's subsequent orders.

### REDUCTION IN BRAZILIAN PACKAGING VOLUMES

The R&D areas also focus on reducing the amount of primary packaging (which comes into direct contact with product) as well as secondary and tertiary packaging. These efforts have already improved the Company's 2018 results. There was a 8.4% reduction in packaging weight per product last year.

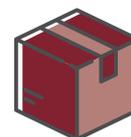
OVER  
**73% OF COMPANY PACKAGING MATERIAL**  
 COMES FROM RENEWABLE SOURCES

## PACKAGING MATERIALS – BRAZIL

	BY TYPE OF WASTE (TON)	
PLASTIC	18.30%	non-renewable
ROLE	0.51%	renewable
CARDBOARD	72.16%	renewable
METAL	9.01%	non-renewable
POLYSTYRENE	0.01%	non-renewable
CELLULOSE/WOOD	0.01%	renewable



**32.55%**  
 PRIMARY AND  
 SECONDARY  
 PACKAGING



**67.45%**  
 TERTIARY  
 PACKAGING

### CASE: REVERSE LOGISTICS PROGRAM

In Brazil, JBS has a nationwide program to support reverse logistics for packaging, which aims to reduce the amount of waste sent to landfills and increase recycling in Brazil. Some of the steps that have been taken include training courses for people who collect recyclable materials and investment in equipment and facilities for related cooperatives and associations.

JBS is a member of the Industry Packaging Accord and the Prolata Program, an initiative run by the Brazilian Association of Steel Packaging (Abeaco)

in five regions of the country. Prolata works in three areas: centers to receive large volumes of waste, cooperatives for recyclable material collection – for social inclusion – and voluntary delivery points for consumers.

Among other initiatives taken as part of the Industry Packaging Accord, in 2018 JBS also became a member of the City+ Program which supports selective waste collection and collection cooperatives in seven Brazilian cities.

## PROLATA

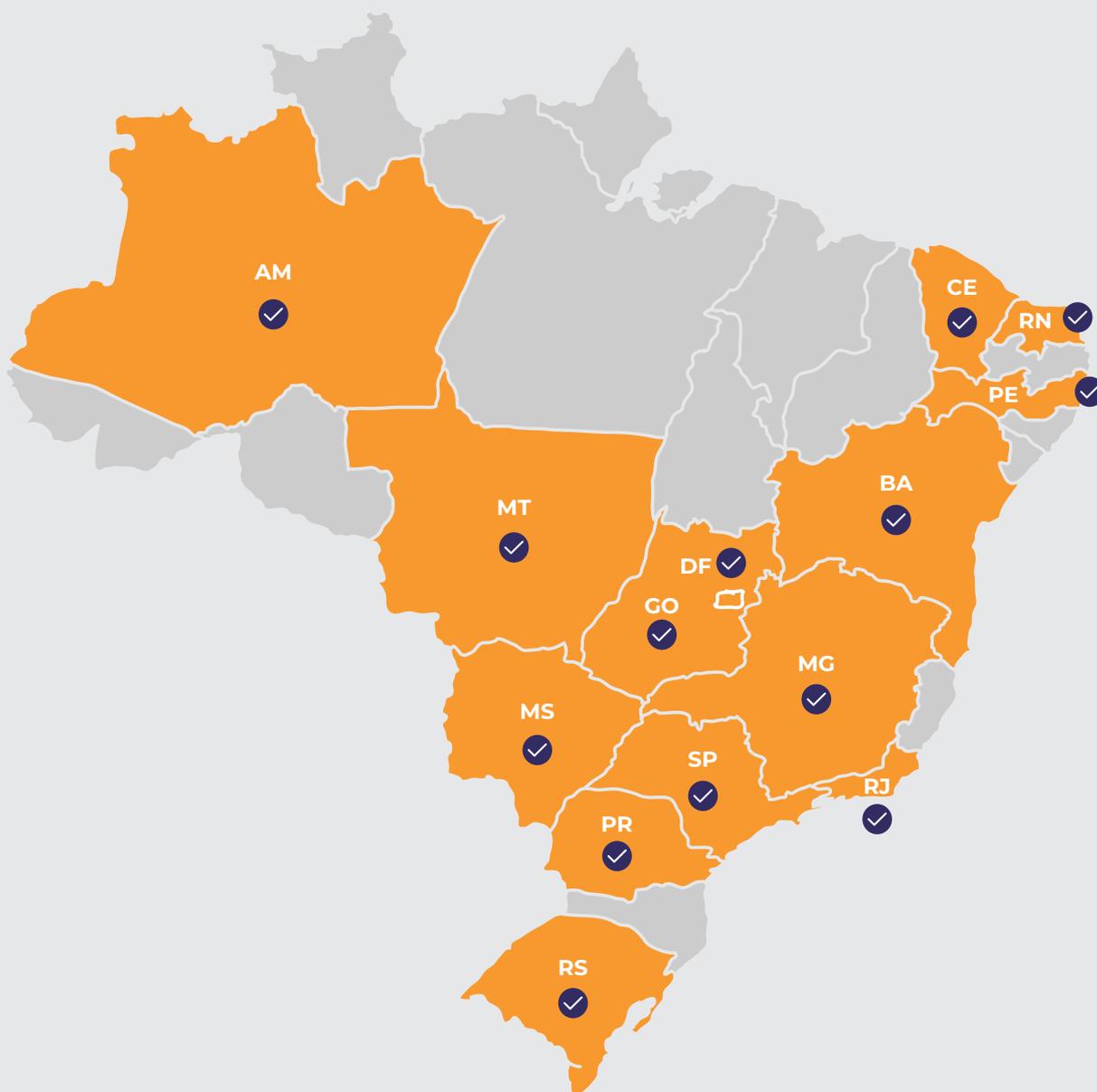
In Brazil, JBS has a nationwide program to support reverse packaging logistics which aims to reduce the amount of waste sent to landfills and increase recycling in Brazil. In accordance with Law 12.305, which created the National Solid Waste Policy in 2014, JBS is a member of the Industry Packaging Accord and the Prolata Program.

Prolata is managed by the Brazilian Association of Steel Packaging (Abeaco) and works in three areas:

- Distribution/collection centers which can receive large volumes of waste;
- Recyclable material collection cooperatives: which involves social inclusion efforts;
- Voluntary Delivery Points: for the end consumer.

According to figures from Abeaco, the program recycled more than 15,000 tons of steel.

### PROGRAM AREA:



 initiatives

## PACKAGING SECTORIAL ACCORD

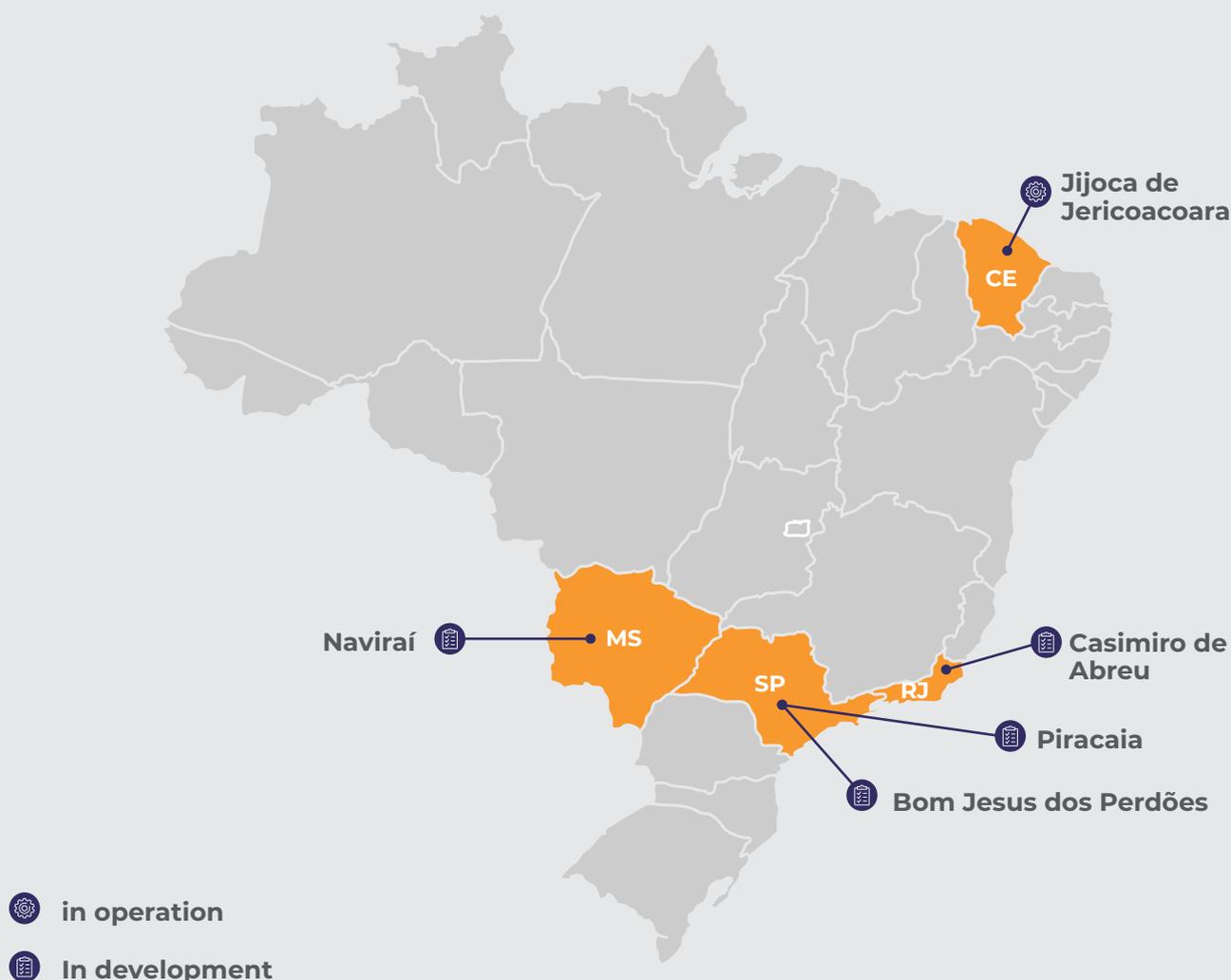
JBS is taking the following steps to comply with the Industry Packaging Accord:

- 1) In 2015 it joined the ILOG to support creation of the Center for Recyclable Material Processing in Maringá, in the state of Paraná. The Maringá Center, alongside other centers involved in the program, have collected approximately 9,500 tons of waste.
- 2) It supports the National Association of Collectors (ANCAT) which, between 2015 and 2017, was responsible for selling around 90,000 tons of recyclable materials with support from collection cooperatives.
- 3) It created the JBS Reverse Logistics Program: cooperatives in the states of São Paulo and Mato Grosso do Sul sold more than 650 tons of

recyclable materials through 2017. The Program includes training courses for people who collect recyclable materials and investment in equipment and facilities for related cooperatives and associations.

- 4) It supports the Separate Don't Stop Program, an initiative managed by the Coalition for Environmental Awareness and Education that uses social media and initiatives in São Paulo to educate people about correct waste disposal.
- 5) In 2018 JBS also became a member of the Cidade+ Program which supports selective waste collection and collection cooperatives in seven cities. The program is currently running at the following locations:

### PROGRAM CIDADE+ AREA:



**INDUSTRIAL WASTE**

All JBS units worldwide manage waste on a day-to-day basis and have the following targets:

- To reduce the volume of waste generated during production.
- To support material recycling.
- To ensure waste is correctly disposed of and reduce the amount of waste sent to landfills.
- Reduce costs and generate income.

The practices the Company has adopted reflect current legislation in each country where it operates.

In Brazil, recyclable materials are separated and collected by recycling companies. JBS also partners with composting companies which transform organics into compounds that can be used as fertilizer. Non-recyclable and hazardous waste is separated and disposed of correctly.

The Company has a Solid Waste Management Plan that provides guidelines on correct waste disposal.

JBS Ambiental correctly disposes of some of the post industrial waste produced by a number of group factories, assessing the legal background of each customer or service provider.

**JBS AMBIENTAL**

JBS Ambiental is a unit that manages solid waste, recycling solutions and the circular economy for the business.

Concepts like the circular economy, where waste from one production chain becomes raw material for others, is not just a part of JBS's day-to-day business, it is central to the business model at JBS Novos Negócios. Several of the Company's operations use

materials that were previously disposed of to create new products.

JBS Ambiental manages the waste from its own business and provides services to a number of JBS plants around the country. It also develops products and solutions using industrial waste. Part of this material is reused in JBS operations as trash bags, shrinkwrap, pallet protectors and trays.

**JBS AMBIENTAL VOLUMES MANAGED**

		2018
	PRODUCTS	TOTAL
<b>RECYCLABLES</b>	Cardboard (Kg)	3,060,700
	Recycled Plastics (Kg)	2,841,358
	Metal (Kg)	6,101,052
	Others (Kg)	2,271,239
<b>TOTAL</b>		<b>14,274,349</b>

**JBS AMBIENTAL PRODUCTS**

		2018
	PRODUCTS	QUANTITY
<b>AMB PRODUCTION</b>	Trash bags	5,012,200
	Shrinkwrap	742,000
	Pallet protectors	247,975
	Trays	212,070
<b>TOTAL</b>		<b>5,472,245</b>

Between 2017 and 2018, JBS Ambiental's trash bag output rose by 300,000 units and the bags are used by all JBS factories in Brazil.

This business model generates value for the production chain, increases profit and reduces the environmental impact from JBS operations.

JBS USA has a long-standing strategy to continuously improve waste management which has helped increase recycling and reduce the amount of waste disposed of in landfills. In Europe, waste management has been outsourced where it is subject to local regulations and monitored by government agencies.

## **2,906 TONS OF RECYCLED RESIN**

**WERE ALSO PRODUCED  
AND WILL BECOME NEW  
PRODUCTS**



## PERFORMANCE

## VOLUME OF OPERATIONAL WASTE GENERATED

GRI 102-48, GRI 306-2

	2018		2017		2016	
WASTE VOLUME - NON-HAZARDOUS	2,161,726.18	98.65%	1,868,472.41*	99.50%	2,074,680.96*	92.27%
WASTE VOLUME - HAZARDOUS	29,542.03	1.35%	9,356.68	0.50%	173,718.63 *	7.73%
TOTAL VOLUME	2,191,268.21		1,874,553.2		2,248,399.59	
1. LANDFILL/ INDUSTRIAL - OWN	23,533.82	1.07%	22,828.2	1.22%	34,474.01	1.53%
2. LANDFILL/ INDUSTRIAL - THIRD PARTIES	304,171.29	13.88%	245,691.31	13.11%	418,800.36*	18.63%
3. COMPOSTING	645,828.42	29.47%	637,852.68	34.03%	713,883.12*	31.75%
4. INCINERATION	14,273.75	0.65%	10,732.44 *	0.4%	11,328.59	0.50%
5. RECYCLING	377,462.21	17.23%	399,072.37	21.29%	325,037.78*	14.46%
6. ENERGY REUSE	111,986.3	5.11%	57,438.97	3.06%	51,765.57*	2.30%
7. COGENERATION	38,834.48	1.77%	28,277.42	1.51%	7,371.52	0.33%
8. FERTIRRIGATION (LAND FARM)	584,400.37	26.67%	387,726.4	20.68%	465,224.22	20.69%
9. OTHERS	90,777.59	4.14%	88,209.4	4.71%	220,514.43	9.81%

\*Data adjusted since the 2017 Sustainability Report.

There was a 17% increase in the volume of post-industrial waste. The main reasons for this are the increasing volume of waste used for fertirrigation at the US and Australia beef units and the 95% increase in waste reused to produce energy at Pilgrim's Moy Park. **Altogether, approximately 112,000 tons of waste were reused to generate electricity.**

**1.2 million tons of waste were reused, representing 53.58% of all waste generated.** This waste was used for composting, recycling, energy reuse and cogeneration.

## JBS USA RESULTS

# 80%

of clean cardboard was recycled and sent to recycling centers or paper manufacturers for reuse

# 95%

of clean and non-compensated plastics were collected and shipped to a recycling center or reused to make new products

# 95%

of pallets were returned to their suppliers for reuse

# 95%

of high density polyethylene (HDPE) plastic bags were returned to manufacturers for reuse, creating a closed cycle

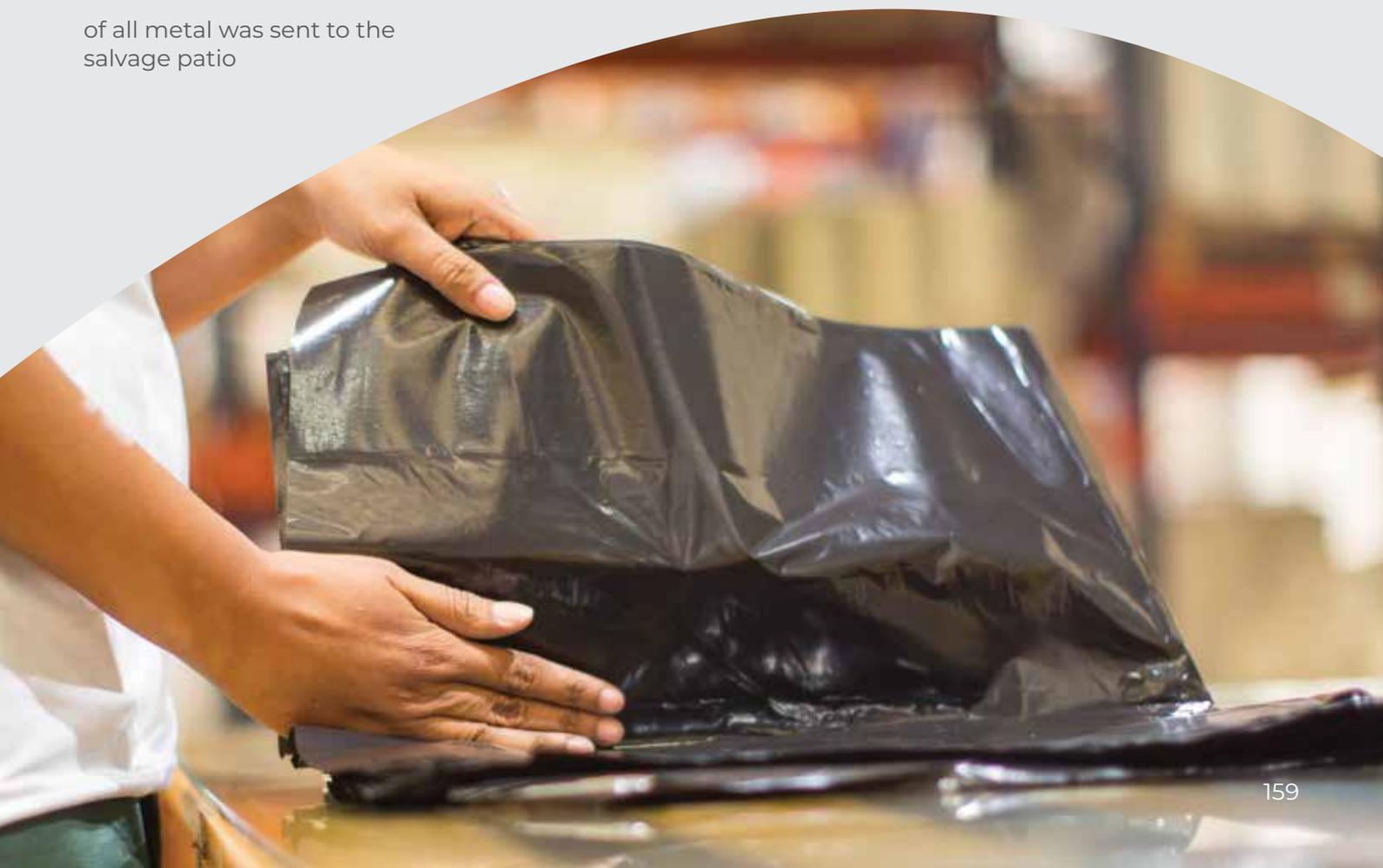
# 95%

of all metal was sent to the salvage patio

**PILGRIM'S MOY PARK IS COMMITTED TO**

# **NOT SENDING WASTE TO LANDFILLS**

A large proportion of the 200,000 tons of organic waste produced in 2018 was used to generate energy at anaerobic digestion plants and at a traditional renewable electricity plant. The remainder was recycled or used for circular economy initiatives.





Our

# Performance



JBS plant in Amparo - SP

# FINANCIAL RESULTS

GRI 102-48

In 2018, JBS repeated the excellent results it delivered in 2017, with significant achievements in various areas. This performance underlines the Company's ongoing focus on operational efficiency and its investments in innovation and quality. The deleveraging process was one of the year's highlights.

## NET INCOME

Net revenue was R\$ 181.7 billion, equivalent to US\$ 49.7 billion. This is 11.3% higher than 2017 – the highest in the Company's history.

# R\$ 181.7BN

Up 11.3% compared with 2017

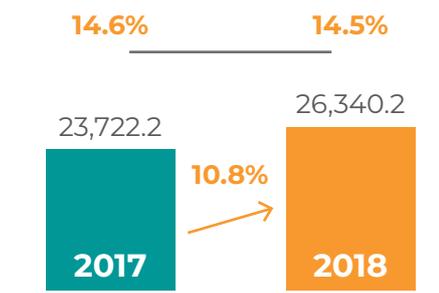


## GROSS PROFIT

Gross profit rose to R\$ 26.3 billion, a 10.8% increase compared to 2017. Gross margin was stable at 14.5%.

# R\$ 26.3BN

In 2018, the gross margin was 14.5%

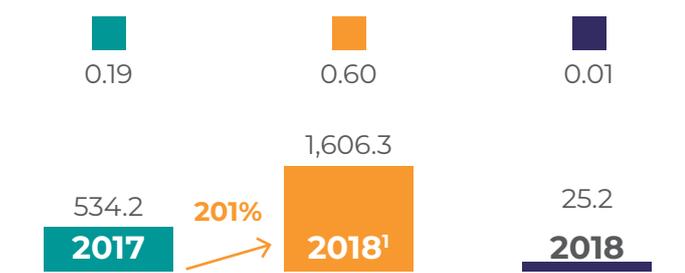


## ADJUSTED NET INCOME

JBS ended 2018 with adjusted net income of R\$ 1.6 billion and net profit of R\$ 25.2 billion. Profit per share was R\$ 0.01.

# R\$ 1.6BN

■ Earnings per share

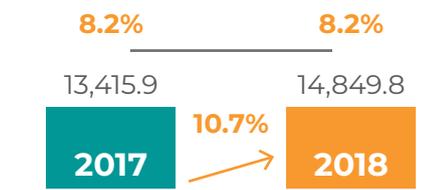


## ADJUSTED EBITDA

Adjusted EBITDA rose to R\$ 14.8 billion, an 10.7% increase on last year's figure. EBITDA margin was stable at 8.2%.

# R\$ 14.8BN

EBITDA margin was 8.2% of net revenue



<sup>1</sup> Excluding the effect of signing up to the Farm Tax Regularization Program (PRR - Funrural), net of tax effects.

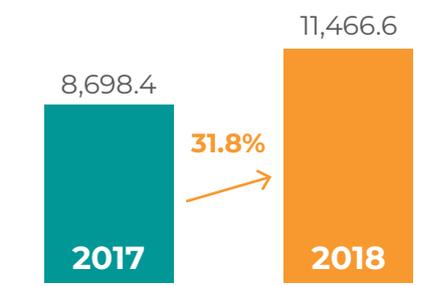
Note: graphs are in R\$ millions.

## OPERATIONAL CASH FLOW

In 2018, the Company generated R\$ 11.5 billion in cash from operations, up 31.8% year on year.

# R\$ 11.5BN

Up 31.8% compared with 2017

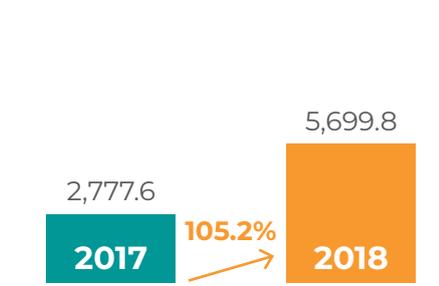


## FREE CASH FLOW

Free cash flow was R\$ 5.7 billion, a 105.2% improvement on 2017.

# R\$ 5.7BN

Up 105.2% compared with 2017



## NET DEBT AND LEVERAGE

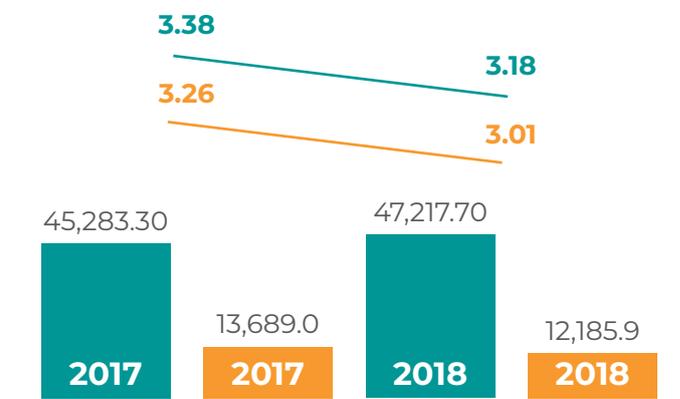
Net debt in BRL rose from R\$ 45.2 billion to R\$ 47.2 billion in 2018, while leverage dropped from 3.38x to 3.18x during the year. In dollars, net debt fell from US\$ 13.7 billion to US\$ 12.2 billion by the end of 2018, and leverage fell from 3.26x to 3.01x.

Leverage in US\$ at the end of 2018 was

# 3.01x

Leverage in R\$ at the end of 2018 was

# 3.18x



■ Net Debt (R\$)      ■ Net Debt (US\$)  
— Leverage (R\$)      — Leverage (US\$)

# BUSINESS UNITS RESULTS

## SEARA

In 2018, Seara's net revenue reached R\$ 17.7 billion, 1.1% higher than 2017. Seara reported an EBITDA of R\$ 1.5 billion, down 1.6%, and an EBITDA margin of 8.7%, compared with 9.0% in 2017. Operational performance was affected by rising soy meal and corn costs and by events such as the truck drivers' strike, which reduced the housing volume of animals for slaughter.

Throughout 2018, Seara focused on business profitability, increasing consumer preference, expanding its customer base and continuing its investment in new product development and innovation – many of which received important recognition in Brazil and abroad. As a result, the repurchase rate reached 75% in 2018, while the brand's presence in Brazilian homes increased to 77%.

## JBS BRASIL

In 2018, JBS Brazil, including the Novos Negócios and leather operations, posted revenues of R\$ 27.6 billion, up 17.1% on 2017. EBITDA was R\$ 1.2 billion, a recovery of 3,128.9%. EBITDA margin reached 4.5%.

The Company continues to focus on improving the channel and product mix in order to maximize profitability and strengthen partnerships with

key customers, adopting tailored initiatives to more efficiently meet their needs. The Company also organized a number of special programs involving its cattle suppliers in order to improve standardization and raw material quality.

## JBS USA BEEF (INCLUDING AUSTRALIA AND CANADA)

JBS USA Beef registered net revenues of R\$ 78.6 billion in 2018, a 13.7% increase compared with 2017, and an EBITDA of R\$ 6.3 billion, a 53.6% improvement on 2017, with an 8.0% margin. These results include the impact of a 12.7% depreciation of the Brazilian real, which rose from R\$ 3.19 per dollar in 2017 to R\$ 3.65 in 2018. In dollar terms, net revenues were \$ 21.5 billion and EBITDA was \$ 1.72 billion.

The landscape was positive in North America with rising cattle availability and stable processing capacity, as well as increasing demand for beef, which helped support prices at higher levels. 2018 exports were better than 2017, setting a new record.

JBS USA Beef continues to focus on increasing its export market share and profitability with a better mix of products.

The Company's performance in Australia was better than in previous years with more animals

available and rising exports to China and other Asian countries.

## JBS USA PORK

JBS USA Pork posted net revenues of R\$ 20.8 billion in 2018, a 4.8% increase compared with 2017, and an EBITDA of R\$ 2.0 billion, with a 9.6% margin. These figures include the impact from the BRL's depreciation. In dollar terms, net revenues were \$ 5.7 billion and EBITDA and was \$ 536.8 million.

Pork production capacity increased significantly in the United States in 2018, which had an impact on domestic prices. Falling pork prices partially offset the impact on industry margins. On the other hand, US pork exports rose 4% compared with 2017, despite Mexican and Chinese/Hong Kong tariffs on US products.

Plumrose ended the year posting record figures and continues to focus its efforts on increasing production capacity, growing sales and developing new products.

## PILGRIM'S PRIDE CORPORATION

Pilgrim's Pride registered net revenues of R\$ 39.9 billion in 2018, a 16.2% increase compared with 2017, and an EBITDA of R\$ 3.7 billion, with a 9.4% margin. These figures include the impact

from the BRL's depreciation. In dollar terms, net revenues were \$ 10.9 billion and EBITDA and was \$ 798.2 million.

In the US, Pilgrim's faced significant challenges in the commodities area, as well as a slower recovery from climate events affecting some of its units, which was partially offset by an improvement in results from the prepared foods segment, where sales posted a significant 15% increase. In Europe, results were affected by rising poultry feed costs and the European drought.

In Mexico, domestic sales of prepared foods increased by 33%, following the Company's investments in additional capacity and to develop the Pilgrim's brand, as well as its strategy to serve key customers more effectively.

**R\$ 78.6  
BILLION**

**(US\$ 21.5 BILLION)  
NET REVENUES POSTED  
BY JBS USA BEEF**



# ACHIEVEMENTS

JBS received a number of awards in various areas throughout 2018, reflecting the Company's commitment to continuous improvement and operational sustainability as well as its interactions with associations, companies, governments and academics as well as other actors able to contribute to the Company's knowledge and growth.

## AWARDS



### Transparency International Brazil

JBS was top of all food sector companies in the organization's 2018 report, classified as the company with the most transparent international operations. The Company came 9th on the overall ranking.



### Época-Reclame Aqui Award

For the first time Seara and Friboi were Customer Service finalists in the Food – Perishables, Frozen and Dairy Category, where they took 5th spot.



### RoSPA OHS Silver Award 2018 e RoSPA OHS Transport Safety Award

(for the fifth consecutive year) This is an award from The Royal Society for the Prevention of Accidents, based in London.

## CERTIFICATION

In addition to operational certificates, several JBS units also hold additional certificates that guarantee process and product quality and thereby guarantee access to additional markets.

### Global and regional

- **Global Gap** – This is an audit focusing on the farming production chain (breeders/hatcheries/broiler chicken farms).
- **AUSMEAT** – Certificate of Accreditation.
- **AUSMEAT** – Certificate of Attainment (Animal Welfare, HACCP GMP, Specified Risk Material).
- **AUS-QUAL BRC Global Standard.**
- **Meat Standards Australia.**
- **SWA** (Social Workplace Accountability) – Focuses on Social Responsibility and Sustainability and verifies working conditions, hired

workers and legislation that applies to each business and contracted hours.

### Food safety

- **Alo Free - C-** Certifies controls for medications and chemical products use to breed chickens.
- **British Retail Consortium (BRC)** – A prerequisite in order to supply European customers, this certificate is one of the toughest in the industry covering 326 criteria that look at factory safety and quality programs.
- **CFM** – Certification for food component standards to guarantee product safety.

- **GFSI** - Global Food Safety Initiative - Certifies the Company meets the organizations food safety standards. The initiative's members include many of the major players in global food safety.
- **Global Gap** – This is an audit focusing on the farming production chain (breeders/hatcheries/broiler chicken farms).

### Production practices

- **Halal Slaughter**- This means products are produced in line with the religious and cultural standards of Muslim countries.
- **Vegetable Chicken** – Certifies



that chickens are given 100% vegetable feed and no growth promoters, antibiotics or anticoccidians are used and guarantees traceability throughout the production chain.

#### Customer

- **McDonald's** – Certification monitors animal welfare, food safety and best manufacturing practices, among other criteria.
- **YUM!** – This audit is carried out by the Company that owns the KFC, Pizza Hut and Taco Bell Brands, focusing on three areas: quality system, food safety and farming (management, best practices and animal welfare).

#### ISOs

- **ISO 9001** – Refers to set of technical guidelines that establish a quality management model for organizations in general, whatever their size or business.
- **ISO 14001** – Environmental management quality standards.
- **ISO 17025** – This standard is used to standardize laboratory testing and calibration.

- **ISO 50001** – Certifies the Company adopts best energy efficiency practices.
- **OHSAS 18001** – Team Member Health and Safety Management System
- **IATF 16949:2016** (at Couros) – Quality Management System - Specific requirements for the automotive industry.

#### Social Responsibility

- **SMETA** – This is a social responsibility and sustainability audit required by European customers which verifies working conditions (hours worked, special equipment, health and safety etc.) and business specific legislation.

#### Environmental

- **ISCC** – This seal attests that companies are taking a responsible approach to reducing greenhouse gas affects, sustainable soil usage, protecting natural biospheres and increasing social sustainability.
- **Leather Working Group (LWG)** – A British organization which certifies companies that have adopted best environmental practices at tanning plants worldwide.

#### Animal Welfare

- **PAACO** - Professional Animal Auditor Certification Organization – Certifies that audits meet the requirements of the Association, whose members are animal welfare audit specialists in the US.
- **NFAS** - The National Feedlot Accreditation Scheme (NFAS) ) is a certificate issued by a committee of industry representatives in Australia, attesting that product audit practices and documentation comply with the association's standards.
- **ACP - Assured Chicken Production** – Certification from Red Tractor, the largest platform assessing UK farm and food Company practices.
- **Council Regulation N° 1099/2009** – European Union regulations for animal slaughter.

# JBS'S OUTLOOK

JBS's objective over the next several years is to ensure that the Company continues to grow through an ethical and responsible approach to business in every area. JBS is strongly committed to its value chain and will continue to support efforts to offer safe, high-quality and innovative foods in each of its markets.

To this end, JBS will continue to increase investment in diversity at all of its units, including both its production facilities and corporate offices, and it will continue to share best practices to provide each of its facilities with the flexibility they need so they are able to implement specific inclusion plans supporting their Team Members and their local communities.

Constant team training is one of the tools available to guarantee an attractive, supportive and motivating workplace environment and JBS will continue to focus on training, in addition to occupational health & safety. JBS will continue to support its planning, monitoring, control and audit activities and will invest in technology to increase safety at its facilities in addition to strengthening a culture of prevention in order to avoid workplace accidents and incidents.

JBS will continue to invest in initiatives to increase transparency, sustainability, efficiency and close relationships with its suppliers. Technology is an important aspect of achieving this goal, because it helps the Company manage more data and information more quickly and safely and encourages the development of alternative solutions that increase shared values and improve cost controls.

A number of environmental issues will be critical over the years ahead and will receive special attention. One of them is water management, as water is expected to become increasingly scarce in a number of regions where the Company operates. There will also be new regulations governing the way water is used and treated and how effluent and waste are managed. Another is energy consumption, where the Company needs to take steps to reduce consumption and adopt clean technologies and renewable sources.

Here, the Company will be increasing its investment in innovation in order to identify opportunities for improvement and to develop even more efficient solutions that will help reduce consumption and

increase reuse, recycling and packaging optimization.

Animal welfare will continue to be a JBS priority in the future. As in other areas, the Company will continue to focus on innovation and technology to improve its animal welfare performance, in order to comply with local legislation and customer and consumer requirements. It will also expand its partnerships with universities and industry associations to obtain certificates and share best practices across the value chain.

JBS will continue to improve its governance and compliance in line with its commitment to be an increasingly ethical, responsible and transparent company, in line with the best business practices, and to set the bar in this field.

In the business area, the Company will continue to focus on operational efficiency and development of high-quality, safe products that offer significant added value and which better meet the requirements of our customers and consumers, all of which will require additional investment in innovation and technology.

JBS's strategy is to increase cash generation and reduce debt,

both of which are important to support the Company's growth over the next several years. The Company will also continue to assess which capital structure best represents the Company's business model and is able to generate further value for shareholders.

Through these and many other initiatives, JBS believes it will be in a position to manage the risks that may arise in the coming years and will be able to further improve its environmental, social and financial performance, generating additional value for all Company stakeholders.

**JBS CONTINUES TO  
INVEST IN INITIATIVES  
TO INCREASE  
TRANSPARENCY,  
SUSTAINABILITY,  
EFFICIENCY  
AND CLOSER  
RELATIONSHIPS**



# **Additional information and GRI content index**

# ADDITIONAL INFORMATION

## MATERIALITY AND ITS BOUNDARIES

MATERIAL TOPICS	DESCRIPTION
<b>WATER</b>	Usage Reduction Targets; Management and Governance; Capture Sources; Eco-Efficient Practices; Reuse; Wastewater Treatment; Educational Activities
<b>ANIMAL WELFARE</b>	Management and Governance; Best practices for Animal Breeding, Transport and Slaughter; Certification; Audits
<b>PRODUCT INTEGRITY</b>	Responsible Social and Environmental Practices; Responsible Raw Material Procurement Supplier Environmental Assessment; Supplier Employment Practices Assessment; Forced Labor; Supplier Human Rights Assessment; Supplier Evaluation re. Impacts on Society; Certificate of Best Practices, Processes and Routines; Supplier-oriented Educational and Management Support Actions; Participation in Local and Global Issue-Related Forums
<b>CLIMATE CHANGE</b>	GGE Emissions Management; Supplier and Producer Engagement; Logistics Efficiency; Energy Efficiency; Renewable Energy Investments; Energy Usage Reduction Targets; Solid Waste Collection; Materials Reuse and Recycling; Volume Reduction
<b>TEAM MEMBER HEALTH AND SAFETY</b>	Occupational Health and Safety; Culture of Prevention and Engagement; Legal Compliance; Training

**RELATED TOPICS**

**WHERE THEY OCCUR**

Water (303)  
Effluents and waste (306)

Inside and outside the Company

Inside and outside the Company

Supplier environmental assessment (308)  
Supplier social assessment (414)  
Customer health and safety (416)  
Marketing and labeling (417)

Inside and outside the Company

Materials (301)  
Energy (302)  
Emissions (305)  
Effluents and waste (306)  
Supplier environmental assessment (308)

Outside the Company

Occupational health and safety (403)

Mostly inside the Company

# GRI CONTENT INDEX

GRI STANDARDS	DISCLOSURE	PAGE NUMBER RESPONSE	RELATED SDGS
<b>GRI 101: FOUNDATION 2016</b>	GRI 101: Foundation 2016	Throughout the report	
<b>GRI 102: GENERAL DISCLOSURES 2016</b>	<b>102-1</b> Name of the organization	18	
	<b>102-2</b> Activities, brands, products, and services	38	
	<b>102-3</b> Location of headquarters	18	
	<b>102-4</b> Location of operations	20	
	<b>102-5</b> Ownership and legal form	26	
	<b>102-6</b> Markets served	20	
	<b>102-7</b> Scale of the organization	20	
	<b>102-8</b> Information on employees and other workers	82	
	<b>102-9</b> Supply chain	48 - 77	
	<b>102-10</b> Significant changes to the organization and its supply chain	24 - 25	
	<b>102-11</b> Precautionary principle or approach	32	12
	<b>102-12</b> External initiatives	34	17
	<b>102-13</b> Membership of associations	34	17
	<b>102-14</b> Statement from senior decision-maker	8	



For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the Portuguese version of the report.

GRI STANDARDS	DISCLOSURE	PAGE NUMBER RESPONSE	RELATED SDGS
<b>GRI 102: GENERAL DISCLOSURES 2016</b>	<b>Ethics and integrity</b>		
	<b>102-16</b> Values, principles, standards, and norms of behavior	22	16
	<b>Governance</b>		
	<b>102-18</b> Governance structure	24	
	<b>Stakeholder engagement</b>		
	<b>102-40</b> List of stakeholder groups	98	
	<b>102-41</b> Collective bargaining agreements	82	8
	<b>102-42</b> Identifying and selecting stakeholders	98	
	<b>102-43</b> Approach to stakeholder engagement	98	
	<b>102-44</b> Key topics and concerns raised	98	
	<b>Reporting practice</b>		
	<b>102-45</b> Entities included in the consolidated financial statements	6	
	<b>102-46</b> Defining report content and topic boundaries	6	
	<b>102-47</b> List of material topics	98	
	<b>102-48</b> Restatements of information	158, 162	
	<b>102-49</b> Changes in reporting	-	
	<b>102-50</b> Reporting period	1/1/2018 to 12/31/2018	
	<b>102-51</b> Date of most recent report	2017	
	<b>102-52</b> Reporting cycle	Annual	
	<b>102-53</b> Contact point for questions regarding the report	6	
	<b>102-54</b> Claims of reporting in accordance with the GRI Standards	6	
	<b>102-55</b> GRI content index	172	
	<b>102-56</b> External assurance	Not applicable	

# GRI CONTENT INDEX

GRI STANDARDS	DISCLOSURE	PAGE NUMBER RESPONSE	RELATED SDGS
<b>GRI 302: ENERGY 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	140 - 148	7, 13
	<b>103-2</b> The management approach and its components	140 - 148	7, 13
	<b>103-3</b> Evaluation of the management approach	140 - 148	7, 13
	<b>302-1</b> Energy consumption within the organization	148	7, 13
<b>GRI 303: WATER 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	132 - 135	6
	<b>103-2</b> The management approach and its components	132 - 135	6
	<b>103-3</b> Evaluation of the management approach	132 - 135	6
	<b>303-1</b> Water withdrawal by source	136	6
	<b>303-3</b> Water recycled and reused	134 - 136	6
<b>GRI 305: EMISSIONS 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	140 - 142	13
	<b>103-2</b> The management approach and its components	140 - 142	13
	<b>103-3</b> Evaluation of the management approach	140 - 142	13
	<b>305-1</b> Direct (Scope 1) GHG emissions	142	13
<b>GRI 306: EFFLUENTS AND WASTE 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	138; 149 - 157	
	<b>103-2</b> The management approach and its components	138; 149 - 157	
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	<b>306-1</b> Water discharge by quality and destination	138	6, 12
	<b>306-2</b> Waste by type and disposal method	158	12
<b>GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	124 - 131	12
	<b>103-2</b> The management approach and its components	124 - 131	12

GRI STANDARDS	DISCLOSURE	PAGE NUMBER RESPONSE	RELATED SDGS
<b>GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT 2016</b>	<b>103-3</b> Evaluation of the management approach	124 - 131	12
	<b>308-2</b> Negative environmental impacts in the supply chain and actions taken	76	12
<b>GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018</b>	<b>103-1</b> Explanation of the material topic and its boundary	104 - 107	3
	<b>103-2</b> The management approach and its components	104 - 107	3
	<b>103-3</b> Evaluation of the management approach	104 - 107	3
	<b>403-2</b> Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	108 - 109	3
<b>GRI 414: SUPPLIER SOCIAL ASSESSMENT 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	28 - 29	8
	<b>103-2</b> The management approach and its components	28 - 29	8
	<b>103-3</b> Evaluation of the management approach	28 - 29	8
	<b>414-2</b> Negative social impacts in the supply chain and actions taken	32 - 33	8
<b>GRI 416: CUSTOMER HEALTH AND SAFETY 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	40 - 43	3, 12
	<b>103-2</b> The management approach and its components	40 - 43	3, 12
	<b>103-3</b> Evaluation of the management approach	40 - 43	3, 12
	<b>416-1</b> Assessment of the health and safety impacts of product and service categories	40 - 43	3, 12
<b>GRI 417: MARKETING AND LABELING 2016</b>	<b>103-1</b> Explanation of the material topic and its boundary	43	3, 12
	<b>103-2</b> The management approach and its components	43	3, 12
	<b>103-3</b> Evaluation of the management approach	43	3, 12
	<b>417-1</b> Requirements for product and service information and labeling	43	3, 12

# CREDITS

## COORDINATOR

JBS Sustainability, Investor Relations and Corporate Communications areas.

## GRI TEXTS AND GRI CONSULTING

Approach Comunicação

## DESIGN

Approach Comunicação

## PHOTOS

JBS Brasil and JBS USA Image Bank  
Julio Bittencourt  
Gladstone Campos / Realphotos

**Annual and**  
Sustainability Report  
**2018**



**Annual and**  
Sustainability Report  
**2018**

