



ANIMAL WELFARE REPORT 2022



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Introduction

This animal welfare report of JBS in Brazil describes the initiatives of the companies Friboi and Seara involving one of the company's four material sustainability topics: animal welfare. The information presented about this material topic refers to the period from January 1 to December 31, 2022.

In the following pages, we bring together transparent information for our stakeholders, including investors, customers, team members, suppliers and business partners, on issues involving management, production, transport and industry designed for good animal health and welfare practices across the entire value chain of our business. The document is the fruit of a compilation of data covering our operations in the beef cattle chain involving Friboi, and poultry and hogs involving Seara solely in Brazil . These operating units account for 18% (beef), 19% (poultry) and 14% (hogs) of JBS total global production.

Comments, suggestions, doubts or criticisms about the content of this report should be forwarded to the e-mails:

sustentabilidade@jbs.com.br and bemestaranimal@jbs.com.br



JBS

One of the largest global protein-based food producing companies, JBS is driven by the desire to feed the world with the best there is. With its head office in São Paulo, the company's business entails the processing, preparation, packing and worldwide distribution of raw animal protein in the beef, pork, poultry, fish, and prepared foods segments, the production of plant-based food and the cultivated protein sector. We are present in more than 20 countries on the five continents, with over 500 production units and sales offices located in Argentina, Australia, Brazil, Canada, Europe, Mexico, New Zealand, the United Kingdom, the United States, Uruguay and Vietnam.

We have a global and diversified food platform in addition to a vast portfolio of high value-added products and strong brands. We want to be the benchmark in profitable and sustainable production for a growing global population, while at the same time operating as agents of transformation in our surrounding communities.

In the cultivated protein-based operation, the company acquired shareholding control of the Spanish company

BioTech Foods, owner of a commercially viable technology in this line.

In addition, it will earmark investment of around US\$ 60 million to build Brazil's first research & development center for food biotechnology and cultivated protein, the JBS Biotech Innovation Center located in Florianópolis (SC). The Company is focusing its efforts on building specialized facilities for developing 100% Brazilian technology to produce cultivated protein and the pilot plant, in addition to acquiring the inputs needed for carrying out research. The Company will use this Center to develop new techniques that accelerate economies of scale and reduce the costs of producing cultivated protein, bringing forward its go-to-market.

Still on the research front, it is worth pointing out that we have an ethics commission on the use of animals for experimentation, consisting of animal welfare specialists and representatives of highly regarded non-governmental organizations (NGOs).



We have a
global and
diversified
food platform
in addition to a
vast portfolio
of high
value-added
products and
strong brands.



Our team members, around 260,000 worldwide, adhere to the same guidelines in regard to the aspects of sustainability – economic, social and environmental – innovation, food quality and safety by adopting best practices under the continuous guidance of the same [Mission and Values](#).

Our operations in Brazil cover the production of beef, chicken, pork, fish, lamb and plant-based food, in addition to prepared and frozen food products. The company also operates in correlated businesses like leather, biodiesel, collagen, natural wrapping, personal hygiene and cleanliness, metal packaging, transport and waste management solutions, recycling, and innovative operations that foster sustainability across the entire business value chain.

**ANIMAL WELFARE
IS ONE OF THE
COMPANY'S
MATERIAL TOPICS AT
THE GLOBAL LEVEL**

- Team member health and safety;
- Animal welfare;
- Product integrity; and
- Environmental management.

JBS sustainability strategies across our value chain



1 Assist farmers with stewarding natural resources and enhancing productivity.

Examples: soil health, habitat & water management; manure-to-RNG digestors; on-farm solar energy; feed additive trials; etc.



2 Source responsibly produced agricultural commodities

Examples: farm assurance programs; compliance monitoring & consulting services; human rights assessments; etc.



3 Produce sustainable food

Examples: LED lighting; 3rd-party animal welfare audits; anaerobic lagoons; AI & robotics; tallow-to-biofuel; etc.



4 Strengthen food systems and communities

Examples: nutritional food; community investment; free education; recyclable packaging; eco-friendly transportation; etc.



5 Operate responsibly

Examples: board oversight; safety protocols; anonymous grievance mechanisms; DE&/programs; leadership development; etc.



Friboi

Friboi

Beef market leader in Brazil, Friboi has **34 raw beef production units** across the country, responsible for one of the most complete portfolios in the sector. With a tradition of more than 70 years, it offers food to serve the more diverse profiles and consumption needs, and also exports to over 100 countries. Its activities are based on guaranteeing the origin, quality and safety of the food, ranging from animal welfare to delivery of the product to the consumer according to best sustainability practices in the value chain.

Friboi holds the “Most-Sold Beef in Brazil” seal acknowledged by consultants Nielsen. According to a Top-of-Mind survey by Instituto Datafolha in 2022, the company was re-elected as the most remembered beef brand in Brazil. Also in 2022, Friboi was elected by the subscribers to the Reclame Aqui consumer defense web site as the best in Food – Meats, and was the only one in the category to be awarded the Reclame Aqui RA1000 Seal representing a high degree of trust, quality and respect for the processes involving consumer affairs, with a rating above 90% in all established criteria.





Seara



With a history going back more than 60 years and 62 units, Seara strives to offer products that include quality, convenience, trust and innovation. The brand has consolidated its leadership in the frozen and plant-based categories (plant protein-based products). Its differentials are founded on quality and innovation, the strategic pillars that guide the company to produce food items increasingly aligned with the nutritional requirements and diversified palates of consumers. Seara is Brazil's second-largest exporter of chicken meat and pork, serving another 130 countries, primarily in Europe, the Middle East and Asia.

Differentiated products

Seara offers three products ranges that have international certification ([Certified Humane Brasil](#)) in animal welfare.



Seara Da Granja: The chickens are bred on exclusive poultry farms and their diet is 100% plant-based feed. Breeding does not involve antibiotics and anticoccidials. The process is guaranteed by the traceability of the entire production chain and by audits undertaken at feed plants and farmer partners.



Nhô Bento: This special range of chickens are bred in a cage-free environment, with environmental enrichment, access to external paddocks for grazing and they are slaughtered at a more advanced age than commercial chickens



Seara Orgânico: A range of organic chickens that receive balanced feed of 100% GM-free plant origin. In addition, the animals enjoy environmental enrichment with free access to external areas and are at total liberty to express their natural behavior. The products are certified by the Instituto Biodinâmico de Desenvolvimento Rural (IBD -Brazil's only certifier of organic products).





Plant-based

Aware of the growth potential of the segment, JBS has been investing in the plant-based market since 2020 in Brazil with the [Seara Incrível!](#) Product line, the aim being to increase the offering of food options through products of plant origin for an audience that enjoys this type of food. JBS is also committed to helping face the global challenge of feeding a growing population in a responsible manner. That is why it is investing in innovation and technologies to expand food options. The Incrível line, which became an independent business unit in 2021, consists of 100% plant-based GMO-free products , zero trans-fat, a source of fiber, lactose-free and with no eggs or milk derivatives. The product line is currently market leader in Brazil.

Further reading in the JBS
2022 Sustainability Report.





Animal welfare (AW) and sustainability strategy

One of the priorities of the JBS global agenda, the commitment to animal welfare (AW), respecting the demands of clients, consumer and society, follows a line of conduct that values life at every phase of the production chain.

In line with this principle, the company frequently invests in training sessions and programs that foster combined well-being (a concept that acknowledges the relations between animal welfare, the well-being of humanity and the integrity of the environment) in all its operations, with due regard for the five domains of the animals according to the best practices proposed by the Farm Animal Welfare Council (FAWC). Considered beings with feelings, in other words, with the emotional capacity to feel pain, fear, pleasure, happiness and stress, in addition to having a memory, the animals are handled according to best welfare practices to enhance their quality of life.





The five domains are:



Nutrition

Involving issues of deprivation of food and water, as well as malnutrition.



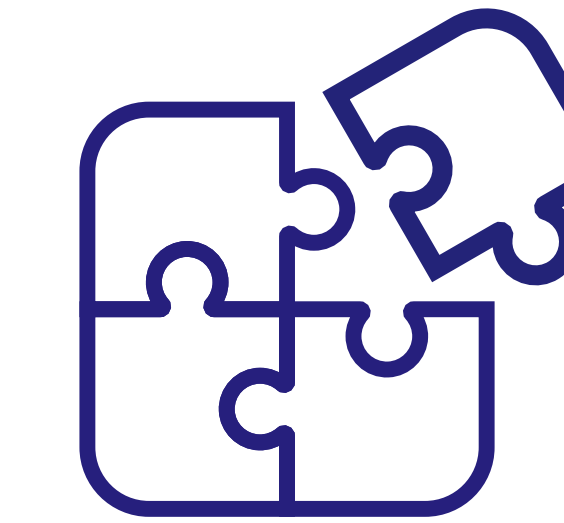
Environment

Involves environmental features like cold, heat, lack of space and stockmanship problems.



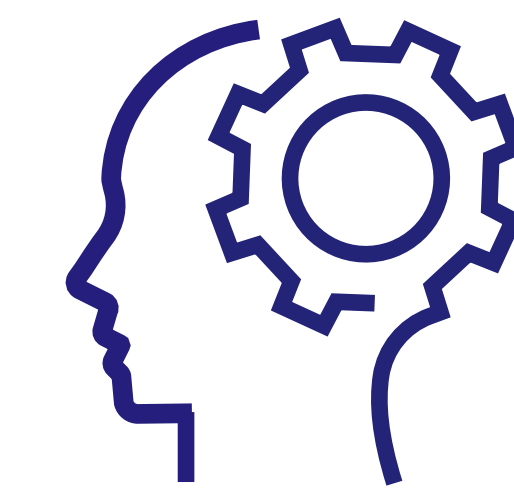
Health

Involves matters focused on illnesses, wounds and functional impairment.



Behavioral interactions

Refers to items involving restrictions on behavior and interaction with others or their own species.



Mental states

Involves aspects of negative mental states such as pain, hunger, thirst, fear, loneliness, anxiety and frustration.

Four domains cover physical components while the fifth represents the mental component, which is affected by the former.

In this way, we provide the conditions for the animals to be properly fed, watered and in good surroundings. We also provide proper health conditions so that the animals can express their natural behavior. All this leads to a positive mental state. And in this way we intend to raise the animals' quality of life.

Breeding of poultry, hogs and cattle involves our own operations as well as partnerships and third-party operations. Our teams are specialized in each species of animal and undergo technical enhancement on issues like animal health and safety. Moreover, the production

units receive technical and client visits and abide by legislations, manuals, protocols and the company's procedures and policies.

The units are frequently audited by domestic and external market clients whose analysis process verifies sanitary criteria, quality, animal welfare, traceability, and nutrition, to name but a few, in their analysis process.

In addition, the units operate under the SIF (Federal Inspection Service) and are frequently audited by the Ministry of Agriculture and Livestock Farming (Mapa).

The AW practices and initiatives adopted by JBS are concentrated in three phases: Animal breeding, animal transportation and processing.



The good animal welfare practices of JBS are part of the company's sustainability strategy.

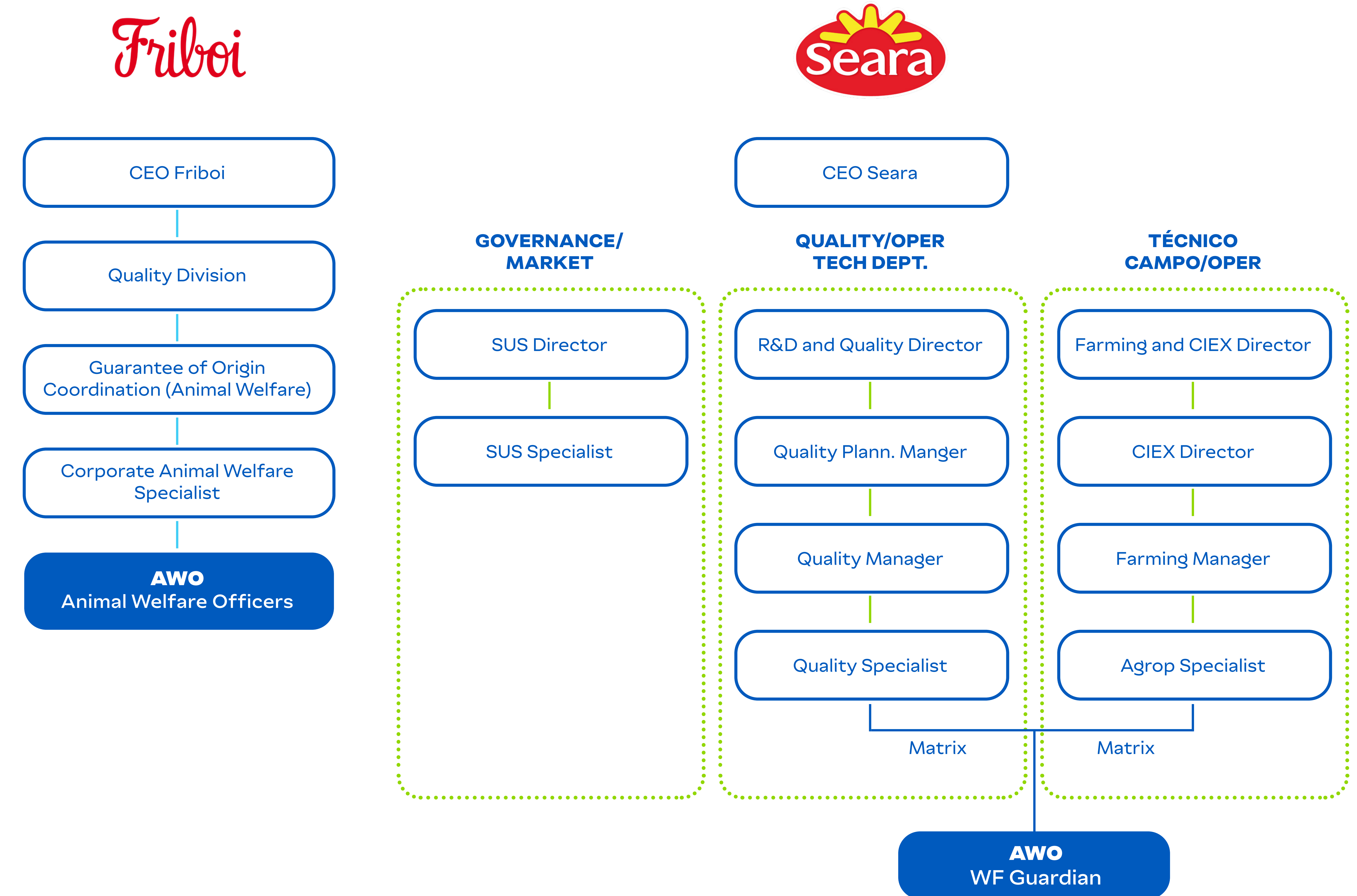
Management and governance

The good animal welfare practices of JBS are part of the company's sustainability strategy. Within this context, we created in 2017 the Animal Welfare Committee that sets out the guidelines for enhancing the set of animal welfare policies adopted for each species of animal at JBS.

Its duties include assessing and discussing key topics for the business, describing the procedures and implementing the necessary controls across the entire production chain to ensure continuous improvement of animal welfare at the JBS units. It is also the space where the strategies for informing and engaging the team members on the topic are analyzed. It consists of representatives and team members of the corporate sustainability, quality, livestock farming and processing areas, among others. In 2019, as a way of indicating our commitment to and engagement with this topic, we created the JBS Seal of Animal Welfare. And as a further means of engaging stakeholders and fostering good practices, JBS runs an annual Animal Welfare Campaign

AW Management Structure

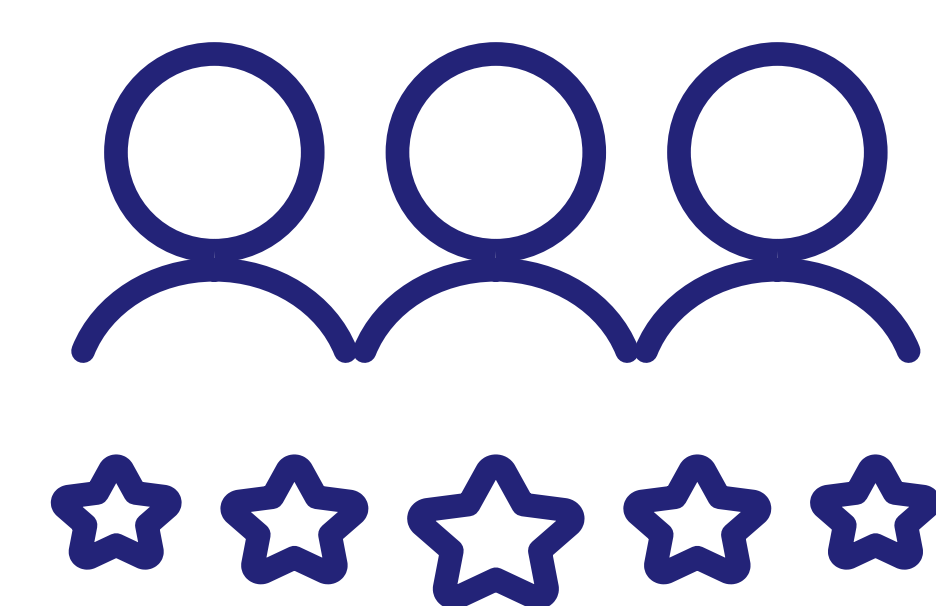
Currently, within the scope of animal welfare, JBS in Brazil is structured around the businesses of Friboi and Seara, as follows:





Highlights of AW operations (2022)

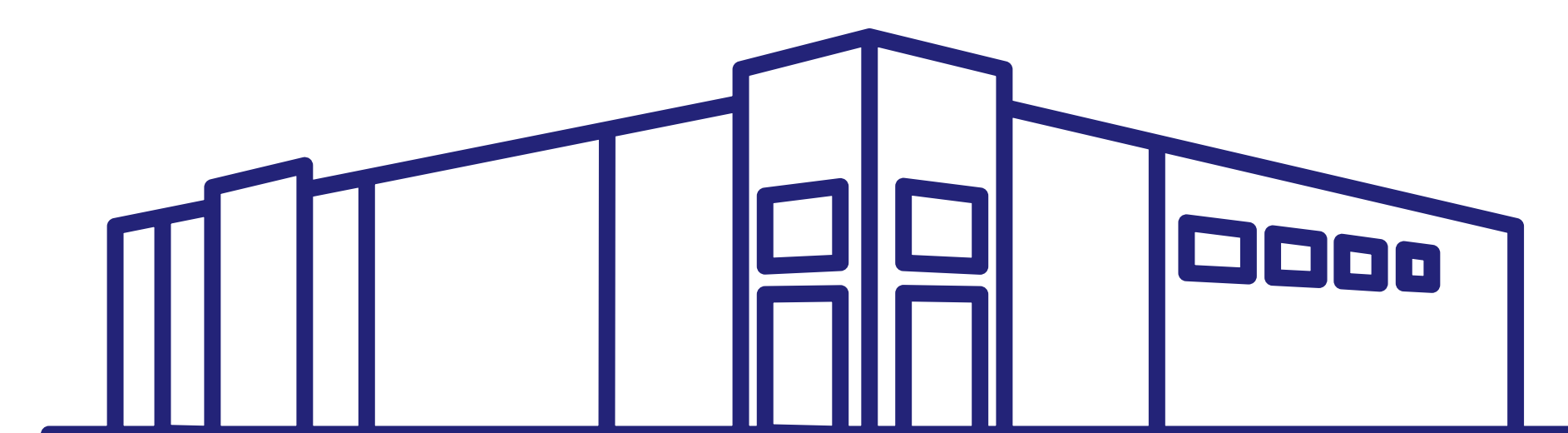
Around **R\$ 79 million invested by JBS** in initiatives in infrastructure, training, management tools, improved transportation and innovation



16,346
team members

that handle animals
received training

13,532 Seara
2,814 Friboi



• **19 Friboi units (55% of the total)**

certified according to the NAMI protocol by PAACO (Professional Animal Auditor Certification Organization) auditors, while **32 units (94% of the total)** are certified under the Supply Chain Seal protocol currently known as the Guarantee-of-Origin Program

31



Seara broiler chicken, pork and turkey plants (50% of the total) **underwent AW certification audits** according to the NCC (National Chicken Council) protocol by a PAACO auditor

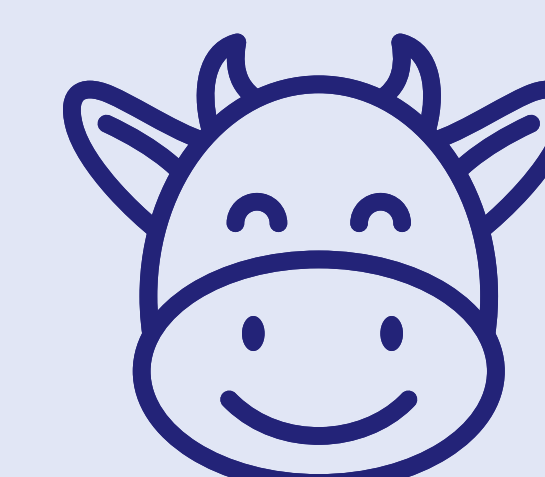


100%

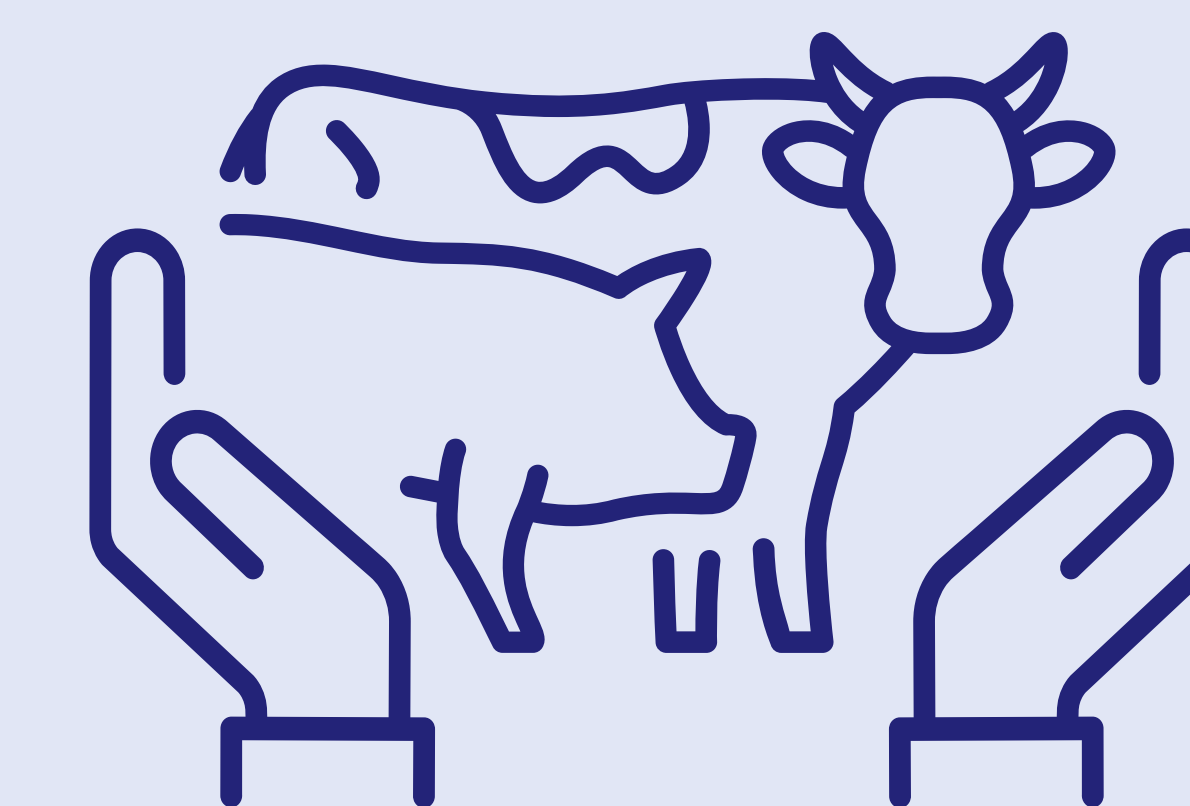
of the audits of Friboi and Seara by third-party transport companies **approved at the first attempt**



Minimum of **6 hours of darkness (poultry)**



In Brazil it is not common practice to dehorn beef cattle, **except in case of disease**, when indicated by a veterinarian



70%

of the animals (beef cattle) transported in **journeys of up to 8 horas**

100%

of the dairy cattle in the dairy ingredient supply chain for producing processed food rear their cattle untethered with access to grazing, **and no disbudding and dehorning**

75,64%

of hogs **in collective gestation**



How JBS fosters animal welfare

Cattle

At Friboi we adopt a wide-ranging and rigorous animal welfare program at our production units, covering applicable domestic and international legislation, in addition to the requirements of client protocols and recognized certifications. The initiative ranges from the loading of animals on the property of origin to the processing phases at the production units. In the case of farms participating in the Fazenda Nota 10 program, indicators are actually managed (further reading below in Fazenda Nota 10).

Every Friboi unit has a team member who is part of the Quality Assurance team for overseeing the implementation of the animal welfare policies. The facilities and equipment, training programs, and even the continuous monitoring of the procedures are submitted to evaluations.

Moreover, the program covers operating policies and procedures that are easily understood by production unit team members and cattle truck drivers – who

receive training at least once a year – in addition to preventive and corrective measures for promoting the health and welfare of the animals at every stage of the process.

Continuous improvement

Conduzimos auditorias internas periódicas em nossas unidades produtivas, presencialmente e por meio de sistema de câmeras de monitoramento, e estamos constantemente sujeitos a avaliações externas realizadas por clientes nacionais e internacionais, e organismos certificadores independentes, que verificam o atendimento aos padrões de bem-estar animal.

We carry out periodic internal audits at our production units, both in-person and using a monitoring camera system, and we are constantly subject to outside evaluations by Brazilian and international clients and independent certification organisms that assure our compliance with animal welfare standards.



Furthermore, we invest annually in purchasing the best equipment available in the market and in the continuous improvement of our facilities. We have partnerships with specialized companies, researchers and universities, strengthening our commitment to the topic.

The benchmarks that guide good stockmanship practices on the farms and in transportation and production include the Animal Handling Guide of the NAMI (North American Meat Institute); the WAP (World Animal Protection) manual on humane slaughter; the Legal Transportation of Cattle Book /DVD by the MAPA (the Brazilian Ministry of Agriculture and Livestock Farming); and the Good Stockmanship Practices Manual Of the Etco Group – the Animal Ecology and Etiology Studies and Research Group (Unesp, Jaboticabal-SP). In addition, we have internal Friboi technical materials about animal health and welfare intended for our suppliers and we adhere to Brazilian and international legislation on the topic.

The key Animal Welfare Outcome Measures (WOM) monitored by Friboi during internal and external audits by clients and the MAPA include:

- Bruising on carcasses
- Diseases identified at slaughter time
- Scorecard indicators (shocks, slippages, falls, efficiency of stunning on the first shot, poorly stunned animals in the bleeding chute)
- Travel time management during cattle transportation between the farms and the slaughterhouses
- Structural conditions of the cattle fleet
- Capacity of the cattle trucks
- Maintenance of the equipment and facilities involving the handling of the animals in the pens and at slaughter.

The indicators monitored can be seen in the schedule to this report.

The plants undergo weekly audits and daily monitoring. The report covering embarkation at the farms until disembarkation at the slaughterhouse is filled out by the cattle drivers who are accompanied by the quality assurance team at the units

At Friboi, the internal audits are carried out both internally and by third parties. In 2022, our target was to obtain at least 80% compliance in the audits, and we achieved 83%.



Poultry and hogs

Assuring animal welfare is a priority at Seara. It is our responsibility to care for the animals with respect, valuing life, aware of the specific needs of each species regardless of the breeding stage.

AW management and governance is structured into monthly working groups and quarterly committees, with meetings that discuss the key opportunities for each species and category of animal. The structure consists of technical teams and directorates with responsibility for the topic.

Seara has teams of specialists, masters and doctors in nutrition, production and animal health, responsible for assuring the best animal welfare maintenance technologies and practices. The company also has a technical team responsible for providing guidance and monitoring animal breeding and – jointly with the farmer partners – offering the best conditions in terms of environment, food, health and expression of the animals' natural behavior.

There are team members at our meat plants known

as animal welfare officers (AWOs) who are trained and dedicated to monitoring the animals from the time they arrive at the slaughterhouse until they are slaughtered.

Committed to the continuous evolution of our processes and the enhancement of breeding, we run projects in partnerships with famous research institutions and universities.

In addition to good practices, Seara has instructive guidelines like the Animal Welfare Policy of JBS Brazil; the public commitment to cage-free commercial laying hens (for our supply chain) and “collective gestation” for sows.

We also abide by the technical guidelines and internal manuals on specific good practices and animal welfare for each species and category of animal, as well as for each phase of the animal breeding and stockmanship process (like the procedure for catching and embarking/transporting poultry) that are used in internal training and capacity building for all personnel



involved in animal stockmanship (team members or third parties). Moreover, we have corporate regulations on good animal slaughter practices. The poultry and pork slaughterhouses underwent an animal welfare diagnosis carried out by BEA Consultoria and were also submitted to internal AW audits.

The key animal welfare outcome measures (WOM) monitored are:

- Mortality rate (on the farms and during transportation);
- Densities (during breeding and transportation – poultry – and resting pens – hogs)
- Use of medications,
- Incidence of pododermatitis,
- Discard of carcasses at the slaughterhouse,
- Transportation time,
- Total fasting time for slaughter,
- Desensitizing and
- Bleeding of the animals.

We carry out post-slaughter monitoring that allow us to identify opportunities during the origination process. All indicators monitored are checked and entered daily on the spreadsheets and on the company's internal IT systems. The indicators monitored can be seen in the schedule to this report.

JBS Ethics Line

JBS makes the “JBS Ethics Line” available to all stakeholders (team members, suppliers, investors, and clients, among others), free of charge, 24 hours a day, 7 days a week, in 17 languages. The service, which is provided by independent and specialized companies, is available for reporting irregularities or behavior that violates the **Code of Conduct and Ethics**, the **JBS Code of Conduct for Business Partners**, policies and procedures and the prevailing legislation, including with regard to animal welfare.



linhaeticajbs.com.br



0800 377 8055

JBS has a global animal welfare policy, and each business unit is at liberty to draw up its own guidelines.

Animal Welfare Policies

Global

[Política Global de Bem-estar Animal](#)

Brazil

[Política de Bem-estar Animal Brasil](#)

Friboi Animal Welfare Policy



Certifications, audits and acknowledgements

At Friboi there are two main certification audits. One of them is the AW by PAACO auditors within the protocol developed by NAMI in partnership with Dr. Temple Grandin, which is also used as the basis for the protocols of several clients.

We also have the Supply Chain Seal, audited by third parties under Friboi's own (periodically reviewed) protocol, which was developed based on Brazilian and international animal welfare legislations and client protocols, taking into account aspects like food safety, traceability and sustainability. Currently, 100% of the production units are certified and submit to an annual recertification audit.

In 2023, this protocol will be expanded to include the prepared foods units, demonstrating our continuous commitment to quality and

excellence across every process and product.

As acknowledgements, it is worth mentioning the report of the BBFAW (The Business Benchmark on Farm Animal Welfare), FAIRR, the book Germany and Brazil, and the Legal Transportation DVD of the MAPA.

At Seara, animal welfare is audited using NCC (National Chicken Council) and NAMI protocols by a PAACO auditor. We also receive annual audits under client protocols aimed at welfare, health and quality. The audits serve to validate the harmony of the practices employed in the process using the AW policies expected by the market and by clients. The third-party certifications and acknowledgements underline the progress and improvements in the area.





Innovation, technology and R&D

JBS adopts R&D practices to improve animal welfare and to engage in research, partnerships and projects for this purpose.

Cattle

At Friboi, over recent years we have engaged in and supported research in partnership with universities and companies to develop projects intended to improve AW, from farm to factory. Worthy of note are the partnerships with manufacturers of transportation and slaughter equipment, like the improvement in beef cattle trucks; the partnership with the new business area of JBS to develop non-slip floors (to reduce slippage and falls during handling); the development of equipment designed to reduce the use of the electric baton at the entrance to the slaughter room; and the stunning box that retains the animals to improve the desensitization rates.

Using another approach, we have projects involving team member capacity building with partner companies in producing videos about good stockmanship practices for on-line training with the Friboi University and JBS Transportadora. In 2022, we supported the *Confinar*

Bem training program for our suppliers and our own- and third-party feedlots, in addition to animal welfare training for our suppliers of beef raw material, jointly with Seara and Swift. In the case of the surveys, the first phase of the Hot Iron Branding Reduction project initiated in 2021 was concluded.

Our investments in animal welfare improvements at Friboi are divided as follows:

- Certifications, transport, campaigns, support for project research and development, equipment and infrastructure in the plants and feedlots, training and consultancy.
- Technologies and innovation. Some examples are: cattle trucks equipped with elevators, monitoring cameras, the Move Boi project, non-slip floors, hydraulic stunning boxes, desensitizing pistols, and on-line training at Friboi University.





Poultry and hogs

Seara has worked to adapt its construction standards in order to eliminate gestation crates (sow stalls) and to construct collective pens for hogs by 2025. In addition, we have adjusted curtains to allow in more natural light and we are including the use of objects for environmental enrichment on the farms (poultry and hogs) and at the hog slaughterhouses. There is also constant research into the issue of improving production techniques that afford opportunities for reducing invasive procedure practices like tail docking.

All personnel (contractors or team members) involved in breeding, transporting and slaughtering of the animals receive annual training in good practices and animal welfare. In the livestock farming chain there were 12,026 personnel, including technical teams, drivers and partner farmers. For the meat packing chain, there were 771 people (trained by the corporate area), 600 people by BEA Consultoria, while 135 AWOs (animal welfare officers) were trained for their official AW functions.



see Table in the Schedule



Suppliers, farmers and partners

We consider the relationship with our suppliers a primordial factor for the prosperity of the value chain. That is why we have embarked on a series of actions to achieve closer relationships with our stakeholders based on principles like trust, respect, ethics and transparency. The Code of Conduct for Business Partners contains guidelines so that suppliers can remain aligned with the standards of business adopted by JBS.

We also provide technical and managerial support, as well as training programs in best practices and development for promoting animal welfare and sustainability across the entire supply chains of Friboi and Seara.





Cattle

The requirements and guidance on animal health and welfare for the suppliers of Friboi are disclosed using technical materials. We also hold events like webinars and on-line trainings, such as the *Confinar Bem* program, as well as campaigns that distribute animal health and welfare kits, in addition to projects intended for disclosing good practices, such as reducing hot iron branding.

Hot iron branding reduction project

Hot iron branding is the oldest method for identifying cattle, used to indicate ownership and to identify individual steers. It is also used for the purpose of sanitary control of herds, as required by Brazilian legislation for identifying calves vaccinated against brucellosis.

One of the initiatives for guaranteeing animal welfare is the Hot Iron Branding Reduction project in beef production. With the support of Friboi and JBS Couros, the farms are adopting identification technologies that eliminate the suffering of the cattle. Branding the animals is replaced by earrings, buttons and tattoos using sustainable technological advances.

The initiatives of the project throughout 2021 and 2022 saw the participation of four partner farms and included the diagnosis of the situation; handling the identification of the farms (individual identification using electronic earrings, buttons and tattoos – and in identifying the month and year of entry or birth on the farm – using colored buttons; training and roll-out of good identification handling practices; and monitoring the evolution of the actions implemented.

On the partner farms, there were 64,000 fewer cases of hot iron branding during the year. On our site you will find the guidebook and the videos with tutorials about reducing hot iron branding.

One of the initiatives
for guaranteeing animal
welfare is the Hot Iron
Branding Reduction project
in beef production.





Gains from the project

- Changes in the attitude of the on-farm teams with respect to the animals and how they are handled;
- Better sanitary and animal husbandry ratings of the animals;
- Improved team well-being due to greater regard for safety and comfort while working;
- More attention to the quality of the farm facilities;
- Less working time spent on identifying the animals;
- Lower risk of accidents; and
- Source of inspiration for other farms to embrace the changes.

Giro do Boi Program

Giro do Boi is a journalism TV program, broadcast by the Canal Rural channel, dealing with issues involving beef cattle farming across the different regions of Brazil. It raises issues concerning animal welfare and its best practices, becoming a platform providing service and information to livestock farmers about animal health and welfare.

Besides transmission on the TV channel, the program reaches the audience via other communication

channels like YouTube, web sites and social networks, facilitating the sharing of content concerning animal health and welfare. In 2022, we had 1 million views of the program's reports about animal health and welfare.

Fazenda Nota 10

Launched in 2020, the initiative brings together Brazilian livestock farmers in the mission to make positive change on their farms using production and financial benchmarking involving farm team management, comparison and results management. To this end, it provides participants with high-performance management training that enables maximization of the results of beef cattle farms in Brazil, in addition to production and financial benchmarking involving farm management and teams.

Combining education and technology, the project aims to show what actually affects the business and shows the way forward for more efficient livestock farming, encouraging productivity.

The topics covered include animal welfare, genetics, regenerative livestock farming, human resources,



reproduction and nutrition. The animal health and welfare module consists of five sections: General aspects, nutrition and diet, the environment, health and stockmanship. The 450 farms that participated in 2022 were managed and monitored in animal welfare.

Highlights of the program:

- Discussion Forum: a space for exchanging experiences;
- Dedicated specialists for clarifying doubts and providing guidance on development processes and models;
- Specialized consultancy to support the animal health and welfare module;
- Support material: downloadable documents containing instructions for improving farm performance;
- Inttegra University: a university that runs a series of personnel development and enhancement courses; and
- Comparative Rankings: with exclusive information for participants.

Poultry and hogs

Seara works with over 9,000 suppliers with exclusive partner farm agreements. The partner farms receive training in stockmanship, animal welfare, compliance and environmental licensing. All suppliers of animal protein to Seara must comply with and ensure AW standards.

This is monitored and managed by the company's technical teams. In the case of specific production models (special lines such as Nhô Bento, Frango Seara Da Granja and Organic Chicken) or specific clients, the audits are carried out by external entities.

Ligados & Integrados program

The program transmitted on the Canal Rural TV focuses on matters of interest to the poultry and hogs chain. It is a benchmark in information for farmers in those sectors.





Animal welfare initiatives in three phases

Breeding

A fundamental stage in the management of animal welfare practices, breeding in each protein chain adheres to global benchmarks.

Cattle

With around 30,000 active cattle suppliers, the company encourages the adoption of best practices farms by running campaigns and staging talks and seminars, while also sponsoring supplier engagement programs. With each negotiation, our suppliers sign an undertaking about the rational use of veterinary products, as well as non-use of forbidden substances.

Through its digital platform Friboi also makes available technical materials on animal health and welfare prepared by its own technical team and partners, as well as manuals by the Etco Group on Good Practices in Stockmanship sponsored and re-launched by JBS.

Of all the animals slaughtered by JBS, the majority spend their entire life in pasture (59% of our cattle). The remainder spend the greater part of their lives in pasture (around 90%) . Those animals are kept in feedlots in the final





At Friboi
feedlots,
everything
revolves around
the animals'
comfort, from
their arrival until
they leave.

breeding stage for a period of around the last 90 to 120 days. At JBS Brazil, 41% of the animals slaughtered in 2022 spent part of their lives in feedlots. These systems in Brazil are more extensive in comparison with other parts of the world.

Of the total animals slaughtered, 4.4% originate from JBS feedlots where work is undertaken to foster and promote animal welfare through periodic training of the stockmanship team, continuous improvement of the facilities and implementation of corrective actions when necessary.

At Friboi feedlots, everything revolves around the animals' comfort, from their arrival until they leave. Before taking delivery, the fattening pens are cleaned, and the layout is reviewed to facilitate adaptation and access by the cattle to the troughs and drinking fountains. The quality of the water and the cleanliness of drinking fountains are regularly monitored. The diet is decided by specialists and reviewed daily. The cattle receive veterinary assistance, and the teams are trained in in-pen management and climatization by specialist partner companies.

Moreover, all Friboi units have a camera monitoring system in the handling pens, so that the work undertaken there can be remotely monitored.





The main objective is so that animals adapt more quickly to their new home and diet and that their fundamental freedoms are respected, and they achieve their maximum productive potential. The outcome of this work can be seen in animals that are more docile and less stressed out. In JBS's own holding pens the average minimum density applied is 12 m² per animal in the dry season and 18 m² in the rainy season. As environmental enrichment measures, the animals are raised in open environments with unlimited access to quality water. In addition, the facilities are structured and maintained in order to prevent any harm coming to the animals.

With regard to invasive procedures, in Brazilian livestock farming, including the feedlots of JBS, farmers do not usually perform de-horning or tail docking on the animals, unless so indicated by a veterinarian, due to a localized wound or disease. The slaughter rate of castrated animals at Friboi is less than 6%.

In regard to the dairy ingredient supply chain for producing processed food, 100% of the dairy cows rear their calves untethered, in groups, with access to grazing, and no disbudding and dehorning. After the weaning period, which takes eight to ten months, the calves are also kept in groups for the entire period.

Animal Welfare Library

Technical materials about animal health and welfare written by the technical team and partners, as well as manuals on Good Stockmanship Practices by the Etco Group sponsored and re-launched by the company are available for consultation on our [digital platforms](#). Here are a few examples:



Friboi Technical Materials on Animal Health and Welfare



Good Stockmanship Practices for New-born Calves



Good Holding Pen Stockmanship Practices



Good Holding Pen Stockmanship Practices



Good Stockmanship Practices in Identification



Good Stockmanship Practices in Transportation



Good Stockmanship Practices in Vaccination



Good Stockmanship Practices in Embarkation



Good Practices in Feedlot Stockmanship



Good Stockmanship Practices – Reduction of hot iron branding



Poultry and hogs

Seara poultry and hogs are bred by more than 9,000 partner farmers on farms where the environment, that is, lighting, ventilation, humidity, temperature, bedding quality (in the case of birds) and biosafety conditions are controlled. The farms undergo strict compliance assessments to ensure best practices during the breeding process.

Several procedures and controls are part of the routine for ensuring the AW parameters across the entire production chain, allowing the animals to express their animal husbandry potential. Structures and equipment are constantly adapted, and there are described emergency procedures in the event of anomalies.

A series of indicators is used to measure animal welfare conditions. They include:

- Mortality;
- Viability;
- Pododermatitis (poultry);
- Weight gain;
- Density;
- Fasting time; and
- Transportation time.

In the event of any deviations from these parameters, corrective actions are taken.

Other indicators

Poultry

The aviary bedding (lining of the shed floor) is comprised of dry, soft material that affords the animals proper comfort. The water quality is routinely monitored. To ensure proper nutrition, the diet is balanced and formulated with due regard for the different needs in the production phases. The food comes from our own feed plants where the quality of the inputs is supervised by trained technicians.

- There is no kind of beak treatment (or debeaking) of broilers in 100% of the birds.
- Exposure to light is controlled to ensure a minimum darkness period of six hours a day.
- 100% of laying hens that provide fertile eggs for the broiler chicken production chain are reared in cage-free systems.



Hogs

- 100% of the nurseries are air-conditioned, with automatic ambience control and are adapted to ensure best animal welfare parameters like air quality and temperature.
- Construction and/or adaptation of 219,250 positions for sows in collective gestation, an evolution of approximately 10% in relation to the previous cycle.
- Participation in discussions with animal protection organizations (World Animal Protection – WAP – and 3T Alliance).
- Provision of financial incentives for farmers to adapt their production structures to meet best animal welfare practices.
- 100% of the animals are not subjected to surgical castration since immunocastration technology is used.
- 100% of the animals are not subjected to having their teeth cut and/or reduced.
- actions are under way to create environmental enrichment “toys” on the farms, as well as in regard to proper stocking density capable of augmenting the environment to render it more complex, thereby stimulating the hogs’ natural behavior and, in this way, improve their level of welfare.

HIGHLIGHT

Seberi Unit, with 100% adaptation of the facilities to the collective gestation system for sows;



Ana Rech Unit with 100% environmental enrichment

Use of antibiotics, other medications and vaccines

Friboi and Seara are in the final phase of drawing up the Policy for the Responsible Use of Antibiotics. It is worth pointing out that at JBS practices like cloning and genetic engineering are not adopted in the supply chain.

The suppliers of Friboi receive guidance on the responsible use of antibiotics through the provision of technical materials, as well as about the importance of the presence of veterinarians to ensure animal health and food safety.

Seara has a detailed policy on the use of antibiotics and other substances. It is forbidden to use medications, vaccines and other substances not approved by Seara. Use of these products is subject to veterinarian prescription, and they are provided by the technical assistance team. We do not make prophylactic use of therapeutic antimicrobials. Seara does not use growth enhancers for hogs.

The company is continually working to promote the health of animals by adopting biosafety measures, vaccination and disinfection programs and the alternative use of probiotics, prebiotics, eubiotics and organic acids.

To protect the herds against possible disease, the farms are equipped with a sanitary safety structure with items like protective barriers, anti-bird screens, water monitoring and treatment and the proper disposal of production line waste. The function of these measures is to increase the biosafety of the herd.



Transportation

JBS constantly invests in projects for improving and modernizing the vehicles that transport animals, as well as in renewing its own fleet with the aim of increasing the safety and comfort of the animals during transportation. All drivers receive training at least once a year about good stockmanship practices. Preparation minimizes the stress of the animals during the route from embarkation to disembarkation.

In live animal logistics, the vehicles circulate taking into account the distance, travel time and speed during the journey.

Cattle

Friboi's priority is to source the animals from farms strategically located close to its units. Transportation involves JBS's own vehicles as well as those of service providers.

The vehicles and drivers are periodically audited by the quality assurance teams of the production units in order to enhance the quality of the service provided. The drivers also receive animal welfare training during the vehicle preparation, embarkation, transportation and disembarkation stages. In the course of the NAMI and Supply Chain Seal audits of third-party transportation, we received a 100% approval rate.

JBS Transportadora and Uboi

JBS Transportadora is the benchmark for live animal transportation. Its own fleet of cattle trucks is made up of more than 500 vehicles, renewed every three years and tracked by satellite to ensure the quality and safety and animal welfare during transportation, consists of a team of over 700 drivers trained in good stockmanship practices during transportation.

In 2020, JBS Transportador created Uboi, a service for transporting cattle between farms, feedlots, auctions and slaughterhouses. This is an application that enables small, mid-size and large livestock farmers to participate in a qualified live cargo transportation system. The service uses drivers trained in good stockmanship practices from embarkation to disembarkation, with the focus on animal welfare and a 24-hour central monitoring hub.





Highlights of the beef cattle transportation phase

- 9.9 million-plus animals have been transported since 2018 on modern trucks
- Camera monitoring of the animal welfare indicators during disembarkation at the slaughterhouse
- 4,750 audits of the cattle fleet carried out annually by the AWO (Animal Welfare Officer) to verify the conditions of the trucks
- More than R\$ 300 million invested in cattle truck fleet renovation since 2018, with trucks dedicated to animal welfare
- Joint fleet validation with the Etco Group, including research projects designed for improving the cattle trucks, with the emphasis on animal welfare
- JBS Transportadora operates in 28 Brazilian states with five types of cattle trucks.
- Equipment in the fleet guarantees animal welfare, where the journeys are monitored by a dedicated monitoring team using telemetry
- R\$ 2 million-plus invested since 2018 in good transportation practices for our cattle drivers using specialized companies.
- Average journey time of 6.4 hours, with an average distance between the farms and the plants of 238 km, with 70.72% of the journeys taking less than 8 hours in 2022.
- Signs on the rear of the trucks indicating the capacity per compartment, according to the weight of the animals.
- In 2022, we released videos with guidelines on good stockmanship practices during transportation for on-line certification at the university of JBS Transportadora and for training outsourced drivers.

Poultry and hogs

In live animal logistics at Seara, the vehicles circulate preferably using the best access routes, always taking into account distance, travel time and speed along the route. The averages distances covered are 54 km for poultry and 63 km for hogs. The maximum defined time is 12 horas for poultry and 18 hours for hogs. The average transportation time in 2022 was 1h10 for poultry and 1h40 for hogs.

The vehicles and drivers are periodically audited by the quality assurance teams of the production units in order to guarantee the quality of the service provided. 100% of the drivers receive training in safety, animal welfare and emergency procedures.

Industry

JBS constantly invests in innovation and improvements to its facilities, the acquisition of the best equipment and structures available on the market. In addition, it holds training sessions with specialized teams deployed at the production units to monitor the arrival of the animals, thereby ensuring their welfare until they go for processing. The performance at all phases is evaluated, monitored and logged on a daily basis.



Cattle

The operations adhere to the prevailing legislations and procedures based on the principles of humane slaughter. To comply with commercial requirements, we adopt religious guidelines respecting the cultural characteristics and the diversity of the markets in which we operate. These represent 5.62% of the animals slaughtered at Friboi but which not subjected to desensitization, according to commercial requirements.

Pioneers in the use of a camera system for monitoring animal welfare indicators within the beef cattle processing industry in Brazil, 100% of Friboi units are monitored by cameras, from when the animals are delivered until they are slaughtered in order to monitor animal welfare indicators.

Animal welfare officers (AWO) are deployed at the production units to oversee stockmanship and to carry out internal audits. We also work with Animal Health and Welfare Indicator Management Panels that contain analyses of items like pen and slaughter scorecards; infirmities and carcass bruising. The aim of the Move Boi Project is to promote the installation of equipment designed to convey the animals to the stunning box, observing the standards of animal and human welfare.

Move Boi assists with stockmanship, and its benefits include reducing the need to use electric batons while promoting unified wellbeing.

The stunning method used is a compressed air desensitization pistol without the injection of air. In 2022, 94.38% of the animals were desensitized at all active Friboi slaughterhouses. Of these, 99.6% were desensitized at the first attempt.

Poultry and hogs

The stunning method employed at the poultry facilities is the electronarcosis system (the birds' heads are immersed in an electrified water tank). The main methods used for hogs are the electric (electrocution) or gas system – (carbon dioxide). In 2022, the desensitization efficiency level stood at 100%. Possible deviations are controlled using corrective actions.

Over 1500 team members have been trained at the poultry and hog slaughter units and in the corporate areas, including those in charge of animal welfare, quality assurance analysts and coordinators and operational leaders. Training was given by a specialized consulting company accredited by MAPA for specialized pre-slaughter stockmanship.

100% of Friboi units are monitored by cameras, from when the animals are delivered until they are slaughtered.



Commitments



Friboi

In addition to the [JBS Global Targets for 2030](#), including those referring to animal welfare, for developing a global scorecard, the commitments of Friboi are reflected in the AW policies:

- [JBS Global Policies](#) 
- [Animal Welfare Policy - Brazil](#) 
- Friboi Animal Welfare Policy

Seara (Poultry)

Cage-Free Hen Eggs

Seara has taken on a commitment whereby by 2025 it will only purchase commercial eggs - used as ingredients in its products - laid by cage-free (free-range) birds.

In 2020, the company completed the target of exclusively acquiring eggs of cage-free origin as raw materials. However, in 2021 this scenario changed following the acquisition of the margarine and mayonnaise assets of Bunge. Those new products that are part of the Seara portfolio will have until 2025 to make the transition where the origin of the raw materials is concerned. In 2022, the volume of cage-free eggs

acquired accounts for 54% of the total purchased.

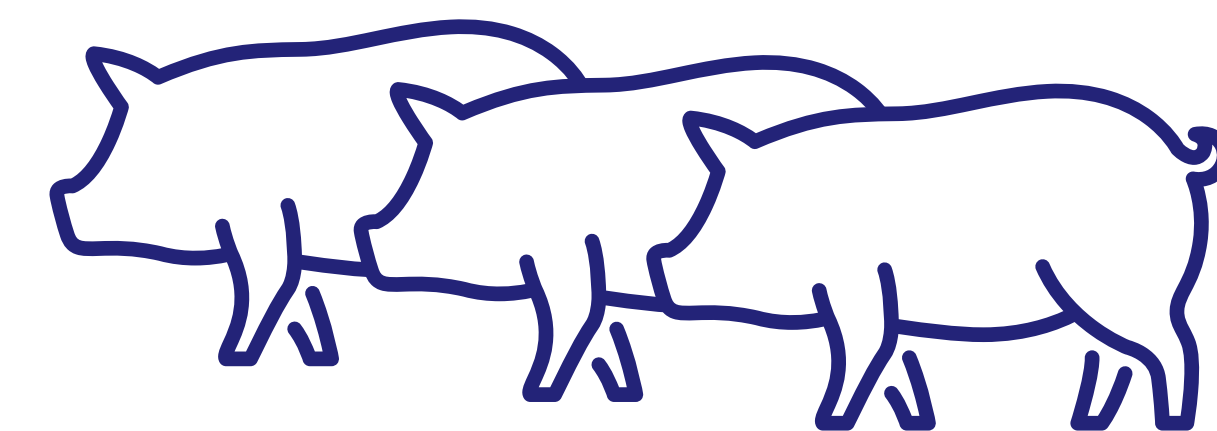
The commitment ensures that the birds have total freedom of movement, whereby they can spread their wings, stretch, perch, take dust baths and scratch, in addition to allowing for greater social interaction among the animals.

Seara (Hogs)

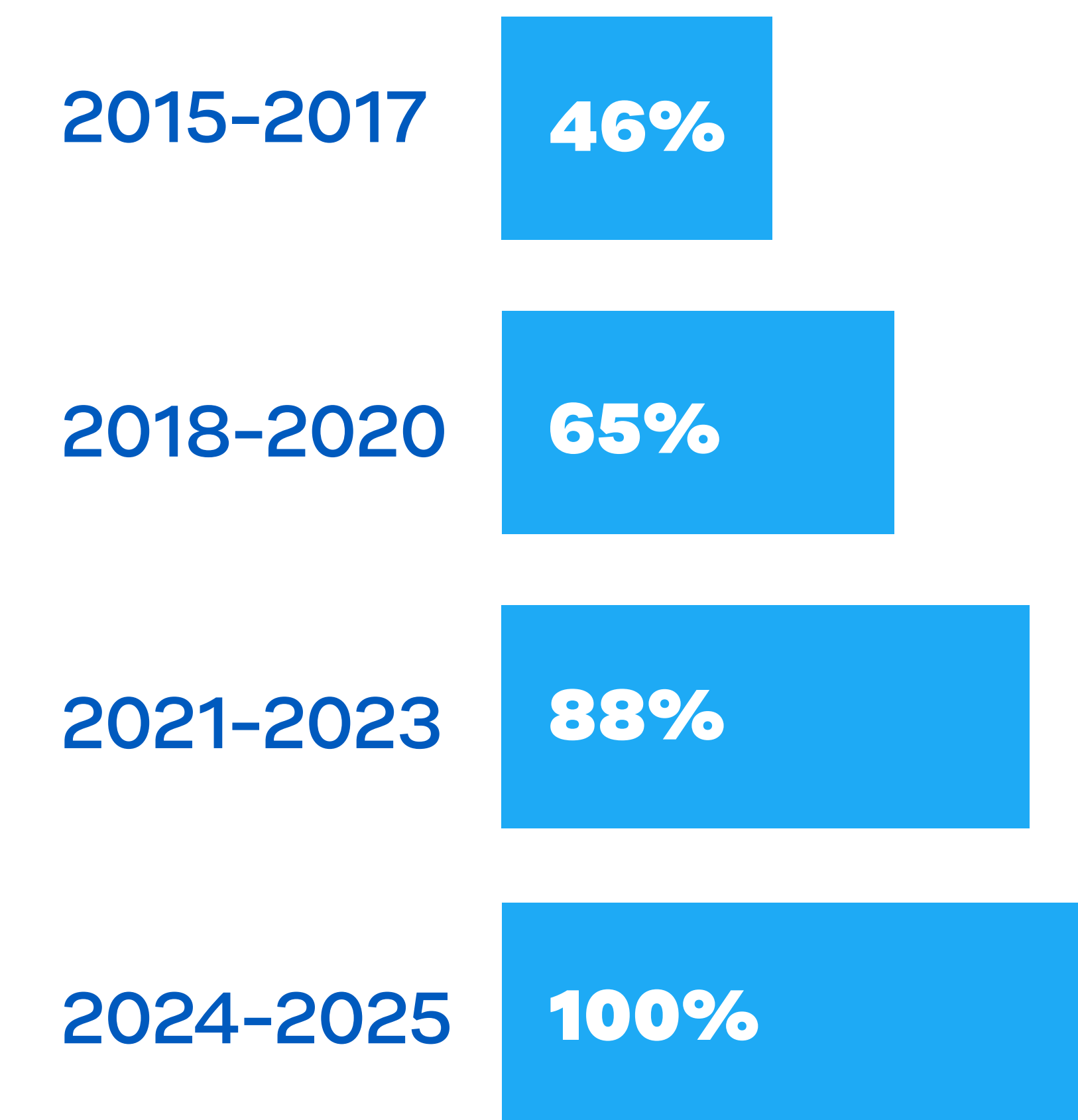
Collective gestation

In 2015, Seara embraced the commitment to make the transition from individual to collective gestation in 100% of hog production by 2025. In 2022, we already achieved 76% of the target

Hogs are animals of gregarious behavior - they live in groups - they have a hierarchy, are naturally curious, and they choose areas for moving around and resting. By committing to the transition from individual to collective lodgings, Seara provides the conditions for the animals to express these behavioral traits.



Evolution for attaining the collective gestation target

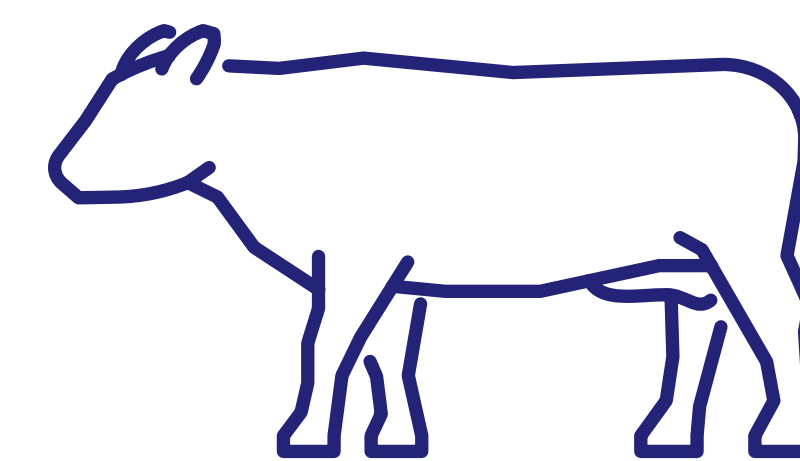


Situation in 2022: 76% of the target



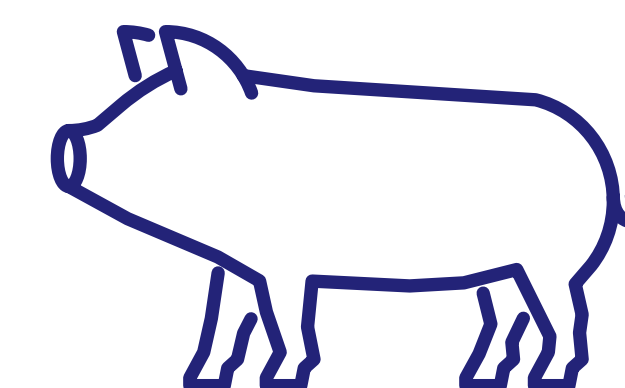
On-going projects

At **JBS**, we have a series of initiatives with prospects and projects for improving **animal welfare**, including:



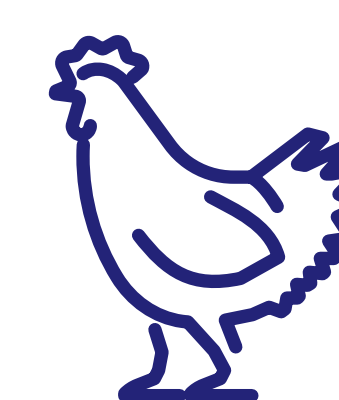
Cattle

- Support for developing the 'Every Calf Counts' joint project with consulting company BE.Animal



Hogs

- Construction of new projects, expansions and adaptations of lodgings according to the standard for collective gestation.
- New projects for piglet production units include:
 - 100% of the maternity pens to be air-conditioned.
 - 100% air-conditioned gestation stalls using cover-and-release stockmanship.
 - 100% of the farms using the minibox model layout to reduce disputes during feeding, while increasing collective coexistence.
- New initiatives also include:
 - 100% of the hog farms to have environmental enrichment objects by 2025.
 - 100% of contusions abolished by 2027. The hog branding process and the definition of new lodgings systems are on-going.
 - Evolution of the weaning age of piglets to a minimum of 24 days.
- Evolução da idade de desmame dos leitões para o mínimo de 24 dias.



Poultry

- Progress in the use of environmental enrichment at broiler chicken units;
- Progress in the use of environmental enrichment in turkey breeding.



2030 Global Animal Welfare Target

Develop a global scorecard
and set targets until 2030

Progress by Seara and Friboi

Seara already has a management and updating tool for monitoring the welfare status of every animal bred for the company. The tool, known as the Animal Welfare Scorecard, whose function is to give a general annual overview of production, was revised and enhanced in 2022. The key changes implemented were the frequency of the evaluations, the inclusion of indicators and redistribution of the scores to enable a better, more in-depth management of animal welfare, including monthly updates.

At **Friboi**, we are in the development phase of indicators to be incorporated into the global scorecard. This will provide us with a comparative indicator data base that will allow us to monitor progress and invest in improvements.





Environmental enrichment

Seara makes use of environmental enrichment objects in the breeding, growing and finishing categories of poultry and hogs. The company has a project that the business units carry out and monitor with the aim of installing environmental enrichment objects at every production facility.

In the case of poultry, we guarantee that 100% of the birds have total freedom of movement, whereby they can spread their wings, stretch, perch, take dust baths and scratch, while also allowing the animals greater social interaction. Where the special production lines are concerned (Nhô Bento and Organic Chickens), the birds have access to external paddocks and are free to scratch.

In the case of our hog abattoirs, in 2022, we had a stall enrichment rate of around 40%. In 2023, the rate jumped to almost 100%. We use branched chains or balls to entertain the animals. Items like shade, clean water, stall cleanliness and non-slip floors are provided to comply with the legislation. In the case of density, our operations also adhere to the legislation.

Friboi promotes environmental enrichment at its cattle suppliers by means of engagement actions.



Schedule of Indicators



Trainings



2022 Main Global Animal Welfare Indicators

- Management
- Health and Nutrition
- Breeding
- Transport and Stockmanship
- Production
- Audits
- Production volumes (tons)



Trainings



13,632



2,814

TOTAL 16,446





2022 Main Global Animal Welfare Indicators


MANAGEMENT

	<i>Friboi</i>	
Investment in animal welfare	R\$ 48,818,996.00	R\$ 30,164,401.20
Team members who underwent training in animal welfare	2,814	13,532

HEALTH AND NUTRITION

	<i>Friboi</i>	
Average density	N/A*	32.84 kg/ m ²

BREEDING

	<i>Friboi</i>	
% of collective gestation (hogs)	N/A	75.64%
Total animals in collective gestation	N/A	2,340,761
% of animals in the cover-and-release system (hogs)	N/A	53.37%
28-days	N/A	N/A
35-days	N/A	N/A
Minimum light time adopted (hours) (poultry)	N/A	16 hours
Minimum darkness time adopted (hours) (poultry)	N/A	6 hours
% beef cattle in the supply chain free of confinement in CAFOs or feedlots	59% ¹	N/A
% beef cattle in the supply chain housed in groups during the entire breeding period	100%	N/A
% beef cattle in the supply chain free from disbudding/dehorning	100%	N/A

* N/A: Not applicable.



¹ The animals are taken to feedlots for the final 100 to 150 days of life.





TRANSPORT AND STOCKMANSHIP

		
Average transportation time for each type of protein	6h40	Poultry : 1h10 Hogs: 1h40
% of animals transported in journeys of up to 8 hours	70.72%	N/A
Average transport distance (km)	238.03 km	N/A
% of third-party transport audits approved	100%	100%
% of third-party transport audits approved at the first attempt	100%	100%

PRODUCTION

		
Stunning/desensitization method applied	Penetrative stun or impact gun without air injection powered by compressed air	For slaughtering poultry: electronarcosis (electrified immersion water tank) Por slaughtering hogs (electrical system: electrocution and gassing system – carbon dioxide).
% of animals stunned/desensitized prior to slaughter ²	94.38%	83% Poultry and 100% Hogs
% degree of stunning/desensitization efficiency	99.60%	98%

AUDITS

		
% approval rate in internal animal welfare audits	100%	100%
% approval rate in third-party internal animal welfare audits	100%	91%
% approval rate in third-party internal animal welfare audits at the first attempt	100%	91%

² Units that carry out religious slaughtering (Kosher and Halal)



PRODUCTION VOLUMES (TONS)



Volumes of food of animal origin
per type produced (beef) 10,350,000

Volumes of food of animal origin
per type produced (pork) 4,350,000

Volumes of food of animal origin
per type produced (poultry) 14,465,000





ANIMAL WELFARE
REPORT
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