



**ANIMAL
WELFARE REPORT
BASE YEAR 2023**



**minerva
foods**



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ANIMAL WELFARE REPORT
BASE YEAR 2023

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INTRODUCTION

A commitment to excellence in animal welfare is a priority and guiding principle for Minerva Foods.

Our ethical stance recognizes animals as sentient beings, and as a Company, we do not tolerate the abuse, neglect, or mistreatment of any animal. This includes all species (e.g., beef cattle, dairy cattle, pigs, broiler chickens, laying hens, sheep, and fish) in both global production and product marketing.

The Company's [Global Animal Welfare Policy](#) aligns with the Sustainable Development Goals (SDGs) and is guided by the principles of the [Five Domains](#). In this way, Minerva Foods consistently strives to promote optimal levels of nutrition, health, and a comfortable and appropriate environment where animals can express natural behaviors and experience positive mental state.

The Company considers animal welfare a fundamental connection in this chain.



OUR PURPOSE

“ *Creating connections*
between *people,*
food and
nature ”



1. NUTRITION

2. ENVIRONMENT

5 DOMAINS OF ANIMAL WELFARE

5. MENTAL STATE

3. HEALTH

4. BEHAVIOR



POOR OR BAD:

RICH OR GOOD:

- | | |
|--|---|
| 1. Restricted or low-quality food and water; | Provision of quality water, sufficient nutrition, balanced and with variability; |
| 2. Uncomfortable environment or unpleasant physical characteristics; | Comfortable and pleasant physical environment; |
| 3. Injurious diseases and / or functional impairment; | Healthy, fit and uninjured animal; |
| 4. Restricted expression of the species' natural behaviors; | Ability to express natural and rewarding behaviors; |
| 5. Hirst, hunger, pain, anger, frustration, anxiety, exhaustion, among others... | Satiety, physical comfort, vigor, pleasure in feeding, drinking water, maintaining gregarious behavior, among others... |



In response to society's growing interest in the best practices for rearing, transporting, and slaughtering animals, this document aims to share with stakeholders Minerva's actions in the pursuit of excellence in animal welfare. Specifically, it highlights the most important milestones and achievements from the base year 2023 (January 1 to December 31). This information is a compilation of Minerva Foods' global data on operational activities and procedures used throughout the supply chain, including both our own operations and those of our partner suppliers.

If you have any questions or comments about this content, please contact us through our [communication channel](#). Your opinion matters to Minerva Foods!



SCOPE

BUSINESS LINES

Minerva Foods is the largest beef exporter in South America, serving millions of consumers who appreciate its products.

The Company is committed to maintaining optimal animal welfare standards in the food it produces. This focus on animal welfare extends throughout the entire supply chain, ensuring traceability, care, and a close relationship with partners who share the Company's values. These values are reflected in respect for people, animals, and the environment, aligned with the concept of "One Welfare".

They are also reflected in the diversification of the Company's activities, which include:



The Company operates eight cattle slaughter facilities in Brazil, two in Argentina, four in Uruguay, four in Paraguay, and two in Colombia, as well as two sheep slaughter facilities in Australia. In 2023, 1,035,603 metric tons of cattle (1,977,214 head) and 78,545 metric tons of sheep (3,415,471 head) were slaughtered.



Minerva Foods Ingredients produces and sells by-products from the slaughter and deboning of cattle. The raw materials are sourced from the slaughtering and deboning processes of Minerva Foods' industrial units in Brazil. These by-products include tallow for biodiesel, pet food ingredients, meat and bone meal and blood meal, and are marketed in more than 100 countries.



With one raw material processing unit in Brazil and two in Argentina, Minerva Foods Industrialized develops and produces products based on fresh (in natura), cooked, roasted, and grilled poultry, pork, and beef, including dairy products and eggs. All suppliers of inputs, ingredients, raw materials, and services are aligned with Minerva Foods' Animal Welfare Management Policy.



Minerva Casing produces and sells natural casings for the production of cured meats. All raw materials are sourced from Minerva Foods' slaughtering and processing plants in Brazil and Paraguay.



BUSINESS LINES

minerva leather

The Minerva Foods Leather division operates in over 35 countries worldwide, selling hides sourced from the Company's slaughtering units in Brazil, Paraguay, Uruguay, Argentina, and Colombia.

minerva foods shop

The Minerva Foods Shop is located in the city of Barretos, SP. It serves the end consumer with a variety of products, including Minerva Foods' own label as well as products from other brands.

minerva energy

Minerva Energy operates within the free energy market and is a significant player in the Brazilian electricity trading sector, ranking among the largest electricity traders in Brazil. It provides its commercial partners with structured and customized products designed to reduce their energy costs, both directly and indirectly.

minerva foods

With a comprehensive network of 14 distribution centers, the Company offers both its own and other brands of packaged and frozen products. This network includes 11 distribution centers in Brazil, 1 in Paraguay, 1 in Argentina, and 1 in Chile.

minerva biodiesel

The Company produces and sells biofuel derived from bovine slaughter by-products, such as tallow. The technology is 100% domestically developed in collaboration with Brazilian universities. In 2023, it obtained the [Social Biofuel Seal](#) and the International [Sustainability and Carbon Certification](#) (ISCC), facilitating access to international markets.

mycarbon

A Minerva Foods subsidiary, MyCarbon, is engaged in the generation and marketing of carbon credits. Its primary objective is to facilitate the transformation of production chains to help reduce the effects of climate change. The core belief of [MyCarbon](#) is that integrating nature, people, and the economy is essential for achieving global sustainability.



Table 1 - Protein production chain performance - 2023.

SOURCE	SLAUGHTER	PRODUCT PROCESSING	INGREDIENT	DISTRIBUTION ON AND RESALE	% TOTAL CHAIN	TON	COUNTRIES
Beef cattle	X	X	X	X	91%**	1,035,603	Argentina, Brazil Colombia, Paraguay, Uruguay
Dairy			X		0.003%	39.2	Argentina, Brazil
Broiles		X		X	1%	9,878	Argentina, Brazil
Eggs			X		0.0002%	2.1	Argentina
Pork		X		X	0.59%	2,938	Argentina, Brazil
Sheep	X			X	6.98%	79,814	Australia, Brazil
Fish*				X	0.60%	6,913	Brazil
Non-animal origin products				X	0.32%	3,740	Brazil, Argentina

Minerva Foods is engaged in the production and marketing of fresh beef and lamb, protein processing (e.g., beef, pork, and poultry), product distribution (e.g., fish, sheep, beef, pork, poultry, and non-animal products), and the processing of slaughter by-products (e.g., leather, casings, meat and bone meal, blood meal, and tallow) (Table 1).

The Company operates in Australia, Argentina, Brazil, Colombia, Paraguay, and Uruguay, with direct access to markets in over 100 countries across five continents. It ensures that responsible animal welfare governance practices are implemented throughout all its operations and business structures.

The term "slaughter" is defined as the process of killing animals to produce fresh (*in natura*) or frozen products intended for human consumption. "Product processing" refers to the purchase of raw materials from suppliers with the intention of manufacturing portioned and cooked products. "Ingredients" encompasses the purchase of ingredients from suppliers for use in product formulation. "Distribution and resale" involve the logistics of stocking finished products from third-party and own brands, including storage, transportation, and shipping to customers.

*The following species are utilized in fish distribution: *Pangasius*, *Merluccius*, *Oreochromis niloticus*, *Gadus morhua*, *Pollachius virens*, *Salmo salar*, *Brachyplatystoma vaillantii*, and *Gadus chalcogrammus Pallas*.

** The Company's beef cattle production is divided into two categories: Live cattle: These are animals sourced from partner cattle ranchers, with operational slaughter control carried out in Minerva Foods' own slaughter facilities. They represent 88% (1,001,435 tons) of the production of this species; and Third-party supplied beef: This refers to raw materials from partner industries acquired for the preparation of industrialized products, including ingredients, as well as the resale of products from other brands. This category represents 2.99% (34,167.8 tons) of production.



It should be noted that calves, rabbits, ducks, geese, and shellfish are not part of the Minerva Foods' supply chain.



CORPORATE ANIMAL WELFARE GOVERNANCE

At Minerva Foods, we are constantly striving to improve our standards and processes to achieve excellence in animal welfare. This issue is a priority on our corporate global agenda, driven by customer, consumer, and societal demands.

Our animal welfare efforts go beyond simply meeting the standards and laws of the countries in which we operate. They are based on internationally recognized codes and protocols. Accordingly, Minerva Foods has adopted the concept of "One Welfare" in its processes, ensuring respect for animals, people, and the nature through regularly audited internal policies and procedures.

"One Welfare" integrates and builds upon the "One World, One Health" concept to achieve comprehensive approaches that support global sustainable development aligned with our corporate strategy.

Animal welfare at Minerva Foods is integrated to the Sustainability Department, as part of one of its three pillars. Which include:

Dedication to the Planet:

A commitment to eco-efficiency in our operations and the fight against climate change and illegal deforestation in the livestock chain.



Prosperity for Our People:

We ensure a safe working environment that promotes skills training and initiatives to improve the quality of life and development of the communities in which we operate. This reduces inequalities, creates opportunities, and promotes human rights.



Product Quality and Respect for Life:

We ensure the highest standards of food quality and safety, as well as animal welfare, in our own operations and throughout the value chain.





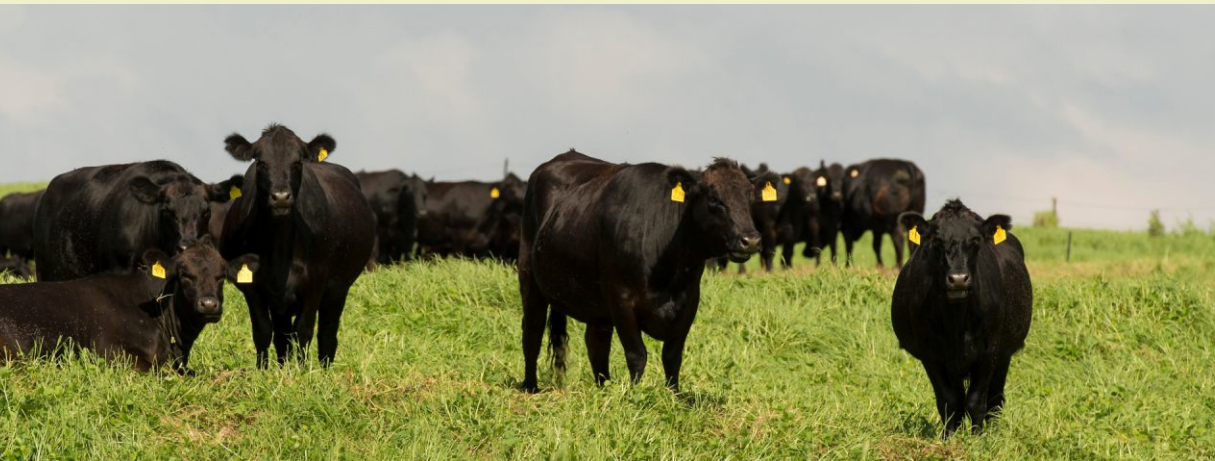

Our corporate [Animal Welfare Policy](#) was revised in 2022 to include all species in our value chain and to recognize animal sentience. In the first half of 2023, Minerva Foods released its [Antibiotic Use Policy](#), which aims to promote the responsible use of antibiotics for human and animal health and reduce the risk of antimicrobial resistance, a growing global concern. Additionally, the Company refined its [Code of Ethics Guide of Conduct](#), providing guidelines on ethics, integrity, sustainability, and the adoption of good animal welfare practices throughout the chain. These actions are reflected in our daily practices and

behaviors, driven by a global purpose: excellence in animal welfare.

Minerva Foods has also become a signatory to the Global Roundtable for Sustainable Beef ([GRSB](#)), a multi-sector initiative involving representatives from across the beef production and consumption chain. The group promotes sustainable beef production through collaborative efforts among members to enhance environmental, land use, and animal welfare practices. The GRSB has adopted commitments that include increasing the number of people trained in animal welfare by 25% by 2030 and

incentivizing improvements in responsible practices, such as encouraging animals to express their natural behaviors and implementing methods to reduce pain and ensure greater animal comfort. It has also set clear targets to reduce cattle mortality by 10% by 2030.

Since 2023, the Company has also actively participated in the [Animal Welfare Working Group](#) of the [Brazilian Sustainable Livestock Table](#), which discusses important trends for the sector and develops content to help spread good animal welfare practices throughout Brazil.



In line with the Company's objectives to promote the use of best practices in animal welfare, as of November 2023, Companhia Sul Americana de Pecuária SA (CSAP) will no longer be part of the financial, corporate, and investment structure of Minerva Foods. This company was previously responsible for the cattle feedlot sector and the live cattle export.

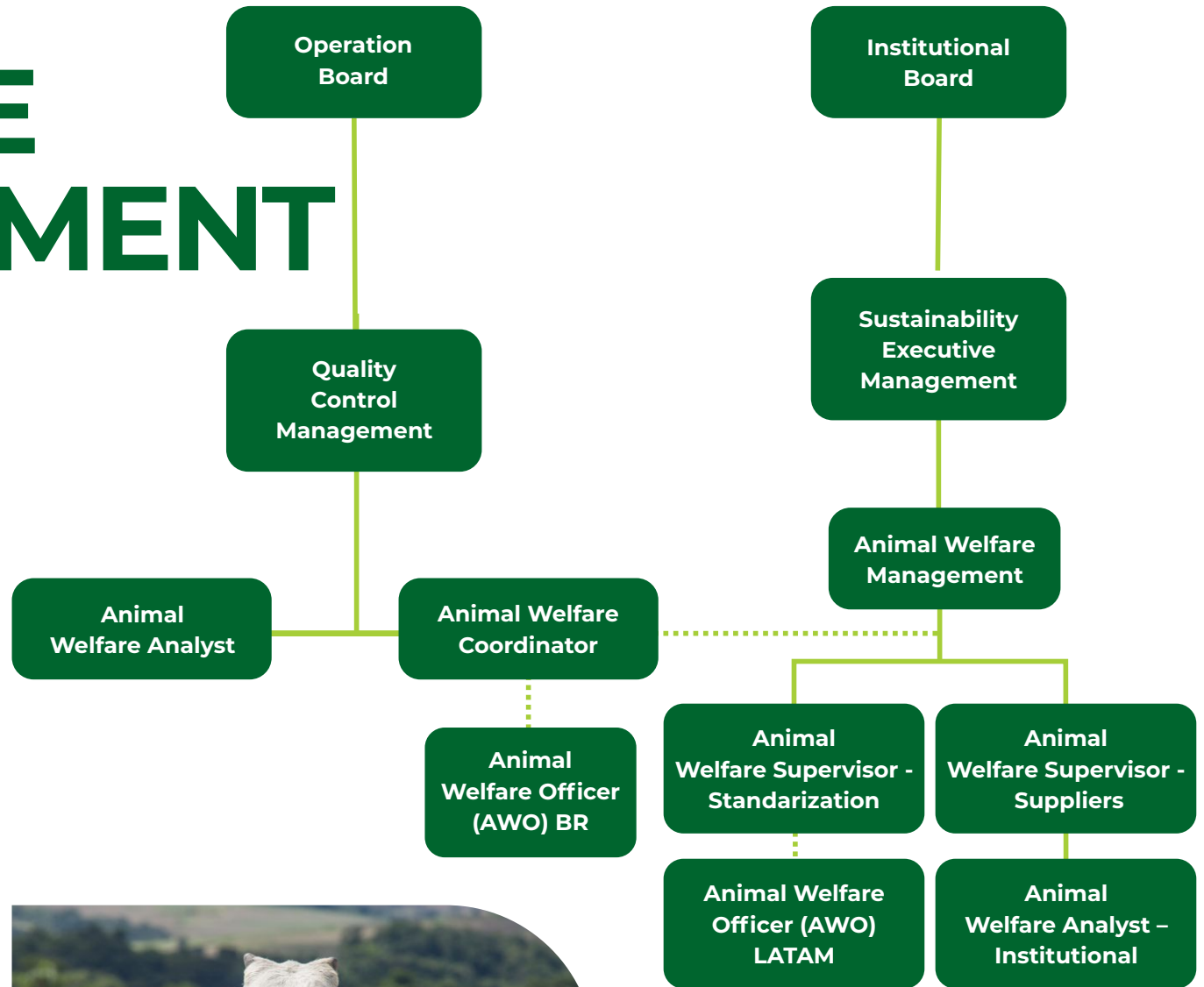


ANIMAL WELFARE MANAGEMENT

ORGANIZATIONAL CHART

Minerva Foods has a global department dedicated exclusively to animal welfare. This team is responsible for monitoring the ongoing development of animal welfare indicators, participating in committee meetings, providing clarification to customers, monitoring audits, increasing certifications and qualifications, training, controlling the supply chain, and standardizing processes, policies, and programs in this area.

Currently, the Animal Welfare (AW) area has two complementary divisions. One division is part of the Institutional Relations Department within Sustainability, while the other is part of the Operations Department responsible for operational issues. Both divisions have decision-making authority within the Company (Figure 2). Under this model, Minerva Foods maintains strict animal welfare policies in its operational units, controls its supply chain, and communicates the practices adopted.





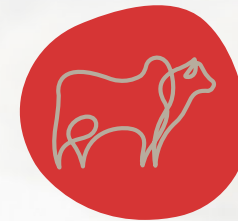
Key animal welfare issues are presented and discussed by the Sustainability Committee, which consists of members of the Executive Committee (e.g., CEO, CFO, CCO, COO of Related Businesses) and the President of the Board of Directors, the Institutional Relations Board, and the heads of the Sustainability, Renove, and MyCarbon subsidiaries. The overall results of the area, as well as the most significant advances, are presented to the Sustainability and Innovation Advisory Board, which is composed of the members of the Sustainability Committee plus two external advisors.

Each of Minerva Foods' operating units has a team of employees with backgrounds in zootechnics, veterinary science, or biology who are responsible for animal welfare. They are uniquely qualified to carry out functions that include developing training courses, implementing improvements in animal handling and facilities, tracking and managing indicators, and implementing strategies to achieve optimal animal welfare standards, including the journey of the animals from the ranch to the industrial units. The [Animal Welfare Program](#) and regulatory and customer criteria are used as the basis for designing and standardizing processes.

The Consequence Policy is designed to enforce the guidelines of the [Animal Welfare Policy](#), which is based on zero tolerance for acts of animal abuse, neglect or mistreatment. The Consequence Policy refers to disciplinary actions taken against individuals who fail to comply with the policies and values adopted by the Company. Animal welfare is one of the mandatory elements of this policy.

To verify compliance with the Animal Welfare Policy and monitor specific infrastructure and management indicators, the Company has management tools in place for livestock ranches. In the event of irregularities, ranchers are directly informed using the "*Informativo ao Pecuarista*" form. If irregularities persist, the Livestock Purchasing team, together with the Animal Welfare Manager of the Minerva Foods unit responsible for the region, will conduct technical visits to the ranch operations. After the visit, a report will be sent to the rancher highlighting the main areas for improvement and a follow-up on the progress of the proposed actions.

Additionally, Minerva Foods continues to carry out the [Laço de Confiança](#) (Bond of Trust) program. This program aims to strengthen Minerva Foods' relationship with ranchers and encourage the adoption of more sustainable practices in animal production, including animal welfare.



**laço de
confiança**





PROGRESS IN ANIMAL WELFARE

Animal welfare standards are constantly evolving. Many food companies are working to incorporate better animal welfare practices into their supply chains, often requiring changes from suppliers and even internal processes.

For Minerva Foods, raising animal welfare standards in its operations and throughout the supply chain is a collective effort. We work closely with our employees and suppliers to establish guidelines and provide the support necessary to achieve positive improvements. This engagement typically begins with educating employees and suppliers on issues fundamental to Minerva Foods through site visits, workshops, audits, handouts, awareness campaigns, and technical questionnaires.

Since 2016, we have been monitoring animal welfare indicators in all our slaughter facilities. In 2020, Minerva Foods' journey towards best practices intensified, mainly due to the restructuring of the Company's animal welfare area. During the same period, we began mapping our global supply chain to identify the practices in place at our suppliers and initiate the standardization of procedures.

In 2021 and 2022, we focused on animal welfare within the supply chain, including third-party cattle², chickens, pigs, sheep, milk, eggs, and fish. This was done using a self-assessment questionnaire to collect species-specific information. Additionally, we have continued to expand the mapping of our own live cattle suppliers¹ over the last few years.

The development of technical questionnaires to assess our suppliers has been carried out by the Corporate Animal Welfare team, based on internationally recognized benchmarks, protocols, and regulations. In 2023, two of the benchmarks that assess Minerva Foods' animal welfare management, [BBFAW](#) (Business Benchmark on Farm Animal Welfare) and [Coller FAIRR](#), underwent significant changes in their methodology.

During this process, Minerva Foods actively participated in meetings with the two main NGOs that maintain BBFAW and also with the technical committee of Coller FAIRR to gain a detailed understanding of the application of this new methodology.

As a result, all questionnaires were reviewed and adjusted to allow for more detailed information collection. Throughout this process, [Welfare Footprint](#) served as a consultant to Minerva Foods, making technical adjustments and revisions. Additionally, a pilot project was conducted in the first half of the same year to assess respondent feedback on the newly added questions. Further improvements were made based on feedback from business partners, allowing the start of data collection for the 2023 financial year.



Minerva Foods has currently mapped 50% of its global chain for animal welfare practices. The mapping is detailed below by species covered:

Table 2.
Supplier mapping percentage by species

Mapping of suppliers

Type	% Mapped 2022	% Mapped 2023
Live Cattle ¹	31.90%	48%
Third-Party Beef ²	83.20%	77%
Broiler chicken	100%	84%
Pork	67.61%	77%
Fish	61.02%	62%
Dairy	21.76%	29%
Eggs	100%	100%
Sheep ³	50%	92%
Total*	32.50%	50%

¹Live cattle: These are animals sourced from partner cattle ranchers, with operational slaughter control carried out in Minerva Foods' own slaughter facilities. ² Third-party supplied beef: This refers to raw materials from partner industries acquired for the preparation of industrialized products, including ingredients, as well as the resale of products from other brands. ³For the purpose of mapping suppliers, only the sheep raw material distributed by Minerva Foods was considered, excluding its own Australian operations.
* Based on the percentage mapped within the total volume of each species.

We have made great progress in mapping our partner ranchers (live cattle) (Table 2), thanks to the joint efforts of the Animal Welfare and Livestock Purchasing departments in reaching out and raising awareness of this niche of suppliers. The mapping of the distribution of sheep raw materials has also progressed, with only a few suppliers remaining to achieve full coverage of the chain.

An expansion of the broiler supplier network has reduced the mapping status from 100% to 84%. The same is true for third party cattle, which decreased from 83.20% in 2022 to 77%. In both cases, the new suppliers have already adopted the Company's guidelines, which will be reflected in future consolidated data.

Despite the complexity of accessing the milk and egg supply chain, which involves buying finished ingredients—milk powder, cream, and egg powder—in 2023, we mapped 29% of the volume of milk used as an ingredient and 100% of the volume of eggs. This represents a significant step forward for animal welfare. The even greater challenge relates to the products we distribute and resell ready-made, which contain milk or egg in their formulation, such as soy Milanese and other breaded products. We anticipate making increasing progress in mapping and promoting good animal welfare practices throughout our value chain.

In 2023, Minerva Foods made further progress by disclosing the indicators collected in its slaughter operations in Australia. These indicators had previously been in the process of being standardized. This was accomplished by utilizing recognized protocols and criteria to identify the primary indicators for measuring animal welfare in sheep and implementing them in the routine monitoring of operational units.

The evolution of Minerva Foods' animal welfare strategy for the supply chain will be detailed and published in the [Public Commitments](#) document. This document will facilitate the tracking of all deadlines and achievements in animal welfare, both cumulatively and by species.





PERFORMANCE IMPACT

CERTIFICATIONS

In 2023, Minerva Foods achieved a significant milestone by certifying 100% of its slaughter processes in animal welfare. This marks the first time in the Company's history that all its processing units have been certified.



CATTLE AND SHEEP - Minerva Foods' company operations

For cattle, the certification is based on the [NAMI](#) (North American Meat Institute) protocol, audited by [PAACO](#) (Professional Animal Auditor Certification Organization) auditors.

The NAMI protocol is an internationally recognized standard used to assess animal raw material production industries, employing objective numerical scores to audit animal welfare. The audits are conducted by auditors accredited and trained by PAACO. The average compliance with audit requirements at all certified units in 2023 was 99.97%. This achievement allowed the Company to meet its public commitment ahead of schedule: "Certify 100% of the Company's cattle processing units for animal welfare."

Both of our Australian slaughter units hold certification under the Australian Livestock Processing Industry Animal Welfare Certification System ([AAWCS](#)) with a perfect 100% approval rating. AAWCS is founded on a stringent protocol that evaluates whether production adheres to essential animal welfare standards, incorporating pertinent laws and regulations. Assessment categories encompass animal handling, stunning, management of animal welfare indicators, and adherence to fundamental legislation governing sheep production, among others.

Several of Minerva Foods' suppliers in Uruguay are certified by [GAP](#) (Global Animal Partnership) - Pasture Raised (Step 4), one of the largest animal welfare programs in North America. To obtain GAP certification, suppliers must undergo a third-party audit that evaluates the animal welfare conditions on-site.





The protocol mandates that animals are raised on pasture for at least 75% of their lives, with confinement being prohibited. Additionally, weaning must take place no earlier than six months of age. In 2023, over 36,000 animals were procured from GAP-certified ranches in Uruguay, representing 7.10% of the total animals purchased in the country.

Seventeen of Minerva Foods' facilities hold specific international certifications for organic meat production: all eight units in Brazil, all four units in Paraguay, four in Uruguay, and one unit in Argentina. These facilities guarantee animals free from antibiotics and growth hormones, while adhering to rigorous animal welfare standards. Certification mandates strict traceability controls, aligning with European Community Regulations 834/2007 and 889/2008, as well as the US National Organic Program (NOP). In 2023, 9.40% of the Company's production was certified under the organic protocol.

The two units in Colombia (e.g., Bucaramanga and Ciénaga De Oro) hold the [Colombian Beef - Grass Fed](#) seal, ensuring that animals are raised in accordance with the highest standards of animal welfare, health, and environmental respect. Products bearing this seal originate from animals that have lived their entire lives on pasture, enabling them to express their natural behavior. In 2023, 100% of Colombia's production was marketed with the Colombian Beef - Grass Fed seal.

Table 3.
Percentage of volume purchased according to various internationally recognized animal welfare certifications

Certification	Country	Animals slaughtered (head)	% Total Volume*
Organic	Brazil	89,401	2.27%
Organic	Paraguay	113,925	2.90%
Organic	Argentina	3,576	0.09%
Organic	Uruguay	162,548	4.13%
Global Animal Partnership (GAP)	Uruguay	36,320	0.92%
North American Meat Institute (NAMI)	Brasil	1,899,188	100%
North American Meat Institute (NAMI)	Uruguay	512,306	100%
North American Meat Institute (NAMI)	Paraguay	800,447	100%
North American Meat Institute (NAMI)	Colombia	277,062	100%
North American Meat Institute (NAMI)	Argentina	437,399	100%
Colombian Beef – Grass Fed	Colombia	277,047	5.85%
Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS)	Australia	3,415,471	100%

*This figure represents the percentage of Minerva Foods' total slaughter in 2023.





ANIMAL WELFARE AND SUSTAINABILITY INITIATIVES

renove

To encourage rural producers to adopt sustainable, profitable and low-carbon agricultural practices, Minerva Foods has established the [Renove](#) program. As an example of such practices, investing in the nutritional performance of animals is a relevant strategy to increase livestock productivity while reducing greenhouse gas emissions per ton of meat produced.

The sustainable livestock practices promoted by Renove are based on improvements in pasture management that result in better quality and quantity of forage. A prime example is the Crop-Livestock-Forest Integration (CLFI) system. This strategy aims to improve production performance while mitigating the negative effects of heat stress on animals and reducing

greenhouse gas (GHG) emissions. Other key practices developed by Renove focus on the use of feed to reduce enteric methane emissions. Renove has played a pivotal role in promoting sustainable agricultural practices that enhance animal welfare and contribute to the adaptation and mitigation of climate change effects on the agricultural sector.



In 2023, supplier ranches in Uruguay and Brazil had their carbon footprint measured and audited by the Renove Program.

ZERO CARBON I M P A C T



These ranches supplied cattle for the [Zero Carbon Impact](#) line of products. [MyCarbon](#) provided export support, enabling the shipment of meat from this line to nine countries: Chile, Hong Kong, Israel, Italy, Saudi Arabia, Oman, Spain, Sweden, and the United Arab Emirates. Products in the Zero Carbon Impact line feature unique labels for each brand, along with a QR code on the back label that allows consumers to access detailed socio-environmental information about the products.



mycarbon



THE APPLICATION OF TECHNOLOGIES TO PROMOTE BETTER ANIMAL WELFARE PRACTICES.

The Trajeto do Boi (Cattle pathway) project was developed in 2022 and implemented in 2023 through a partnership between the corporate areas of Engineering, Maintenance, and Animal Welfare at Minerva Foods.

This project aims to identify and manage critical control points in areas where animals access production units. The objective is to track and correct defects in areas such as unloading ramps, gates, corridors, pens, and stunning boxes, while also performing constant checks on the entire fleet of trucks.

In the event of any non-compliance, the relevant site and/or transport truck will be immediately suspended until the issue is resolved. This approach yields tangible benefits for both animal and human welfare by effectively mitigating the risk of accidents involving animals and employees. The project has been incorporated into internal audit protocols and is conducted monthly by the animal welfare operational manager. Any minor deviations identified outside the audit are promptly mapped and addressed.





COMPLIANCE MATRIX AND INTERNAL AUDITS

The Animal Welfare Compliance Matrix, developed by Minerva Foods, is based on the laws and regulations of each country in which the Company operates, as well as various international protocols. The Matrix applies to the slaughter of cattle and the livestock production of the Company's business partners (ranchers). Indicators are collected daily by the units' Animal Welfare Officers (AWO), and any deviations are analyzed by the corporate Animal Welfare (AW) team.

In 2023, the Company began implementing an intelligent system for monitoring and managing AW indicators at its operating units. Data is collected daily via a tablet, app operated by the unit's AWO. The data is then transmitted to the cloud for processing and presented on an evaluation web platform.

Animal welfare indicators are assessed at various stages: during loading at the ranch (information obtained from the transport form completed by the driver), during transport (monitoring travel times and any inclement weather), upon unloading at the slaughter unit, while animals are housed in pens at the unit, and during handling and stunning. Additionally, maintenance items and management and control indicators (primarily related to the "feeling" domain) are evaluated.

The corporate animal welfare department has control over all accesses and can review the data collected in real time, enabling more efficient animal welfare management. Upon full implementation in 2025 (Figure 4), the tool will provide rapid, real-time access to all routinely collected animal welfare indicators. This marks a significant advancement in Minerva Foods' animal welfare management.

The performance of each unit's indicators is reviewed weekly at Corporate Animal Welfare Area meetings. These meetings entail discussing action plans, setting deadlines, prioritizing investments, and ranking units based on their compliance with KPIs and pre-established targets.

Additionally, the performance results of the Animal Welfare Compliance Matrix are tracked and presented at the Company's monthly senior management meetings. The compliance matrix is integrated into the Company's target ledger and is also linked to collective industry targets, which are tied to bonuses.



Figure 1. Project Roadmap

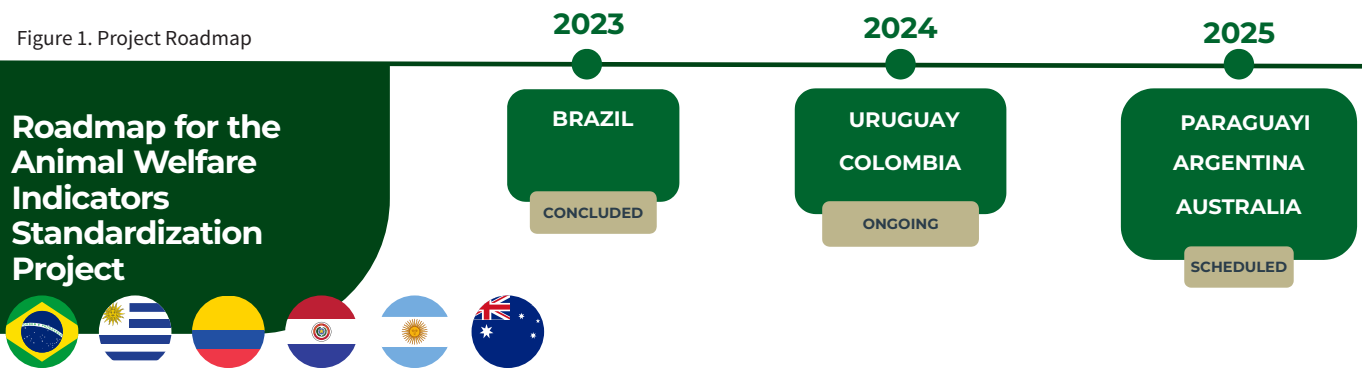


Figure 2. Animal Welfare Officer



INITIATIVES FOR THE PROMOTION AND DISSEMINATION OF GOOD ANIMAL WELFARE PRACTICES



At Minerva Foods, we recognize that animal welfare is a fundamental principle for ethical animal production. We are committed not only to internally controlling related indicators but also to raising awareness of the issue among our employees, suppliers, and consumers. To achieve this goal, we conduct educational and awareness-raising activities. These include introducing QR codes on products to provide customers with information on the origin of raw materials (QR codes for premium brands and niches such as the Zero Carbon Impact line), distributing educational materials to suppliers, and other practices outlined in the [Animal Welfare FAQs](#).

Furthermore, the Company operates a monthly media channel through educational mailings, WhatsApp messaging, and TV broadcasts in each unit to showcase animal welfare initiatives and best practices.

The efforts to raise awareness and engagement on animal welfare extend beyond the Company. This includes sharing [technical articles with livestock ranchers](#) and participating in technical and scientific events. Throughout the year, members of the Company's animal welfare team attended international events such as the [ISAE - 56th Congress of the International Society for Applied Ethology](#) and the [UFAW Online Animal Welfare Conference](#), as well as

national events such as the [Workshop - Bem-estar como valor agregado na cadeia pecuária](#) in which animal welfare is presented as an 'Added Value in the Livestock Chain'. Additionally, the Company has been actively involved in the development of new Brazilian legislation, producing support materials with ABIEC, such as the [Questions and Answers - SDA Ordinance No. 365/2021](#). The Company also contributed to the preparation and launch of the book "Bovinos do Brasil - Inovação, Sustentabilidade e Mercado", actively collaborating on the chapter related to animal welfare in pre-slaughter management, and participated in the drafting of the [International Protocol on Animal Welfare in Argentina](#).



minerva
foods



ANIMAL WELFARE REPORT

MINERVA FOODS' TRANSPARENT ANIMAL WELFARE MANAGEMENT

Audits in the units are conducted by both internal teams (Minerva Foods employees - Second Party Audits¹) and independent auditors (Third Party Audits² / Sponsors³ / Customers⁴). The objective is to facilitate knowledge-sharing, ensure transparency, and foster the commitment of the units to the established indicators and targets, ultimately benefiting the entire process.

In 2023, all industrial units in South America underwent internal audits, achieving a compliance rate of 98.71%. This high performance is directly correlated with our rigorous animal welfare standards. Minerva Foods consistently gathers key information on cattle welfare, health, and behavior, enabling us to monitor and address any irregularities while also identifying and disseminating best practices to all employees involved in the process. Below is a global summary of the indicators collected in 2023.

¹Second-party audits: carried out by Minerva Foods teams - specifically by the unit's Animal Welfare Officer (AWO).
²Third-party audits: carried out by third-party companies (QIMA - WQS, NFS and SGS) and PAACO accredited auditors.
³ Sponsor audit: carried out by the internal team of an intermediary client on the basis of a customized protocol from the end client.
⁴Client audit: carried out by the internal team of the client in question on the basis of a protocol customized by them.



Table 4.
Data from the Global
Animal Welfare
Indicators for the
Company's Own
Operations
by origin - 2023.



*Data containing a dash is not applicable to sheep production.

**The standard for collecting this data is in the process of being parameterized.

***Driver training falls under the responsibility of the transportation company.

****All sheep suppliers located in Australia must have the Property Identification Code (PIC), which verifies their training in animal welfare.

#Systems where animals are raised on pasture receiving supplementation of 1 to 2% of their live weight, with ≤ 1.5% being called semi-confinement grazing and >1.5% being called IPF - Intensive Pasture Finishing. These animals are free from confinement structures with full access to pasture.

¹Only animals destined for the Kosher and Halal market (some countries). They are not stunned prior to bleeding, due to a strictly religious requirement.

²Colombian legislation allows the intermixing of cattle of different types.

³Due to the particularities of sheep production for this indicator, the global average is considering only cattle.

Brazil Argentina Colombia Paraguay Uruguay Australia

Animal Welfare Indicator	Industry						Global*
	Cattle			Sheep			
% of animals stunned ¹	94.11	52.51	97.50	100.00	90.83	100.00	89.16
% Stun effectiveness on first attempt	94.32	98.43	99.94	99.97	99.15	99.97	98.63
% badly stunned animals in the emptying area	0.22	0.00	0.07	0.00	0.00	0.03	0.05
Time between stunning and bleeding (sec)	54.41	60.00	52.50	60.00	44.00	4.87	54.18*
% Slips during unloading and driving through corridors	0.27	0.50	1.00	0.01	1.08	-	0.57
% Falls during unloading handling and corridor driving	0.10	0.18	1.00	0.00	0.05	-	0.27
% Vocalization of the animals during driving through corridors, chute and stunning box	0.77	0.65	3.00	0.51	1.30	-	1.25
% of batches with mixed types ²	0.03	6.85	67.50	0.00	0.00	1.98	12.73
% of animals separated due to aggressive behavior in industry corrals	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% of animals removed due to sodomy behaviors in the industry	0.01	0.00	0.00	0.00	0.00	0.00	0.00
% Use of the electric prod to drive the animals	14.39	1.00	21.00	8.38	8.05	-	10.56
% Use of the electric prod when unloading animals	0.91	0.25	0.00	0.22	0.00	-	0.28
% of animals identified in a poor state of health	0.07	0.00	**	0.00	0.00	0.00	0.01
% of animals without access to water for more than 30 minutes	0.04	0.00	0.00	0.00	0.00	0.00	0.01
% Bruised carcasses ³	18.39	0.70	27.00	12.60	3.23	0.01	12.38
% mortality in industry	0.00	0.00	0.07	0.00	0.00	0.03	0.02
% of emergency slaughter	0.03	0.00	0.09	0.00	0.00	0.01	0.02
% DOA ("Dead on Arrival")	0.00	0.00	0.02	0.00	0.00	0.04	0.01
% compliance in second-party animal welfare audits	96.80	98.90	98.00	98.75	100.00	100.00	98.74
% compliance in third-party animal welfare audits	99.83	100.00	100.00	100.00	100.00	100.00	99.97
% of animals with shading/sprinklers at the unit for temperature control	100.00	89.00	100.00	100.00	75.25	93.33	92.93
% of animals suffering extreme leanness	0.01	0.00	0.00	0.00	0.00	0.01	0.00
No. of employees trained in animal welfare	1270.00	58.00	37.00	70.00	119.00	60.00	1614.00
No. of animal welfare training activities	134.00	12.00	12.00	40.00	25.00	7.00	230.00
Use of online and face-to-face training methods.	162.15	80.00	22.00	61.50	53.50	38.00	471.15
No. of training hoursInvestments in animal welfare (\$)	412,895.15	129,763.00	104.40	172,105.43	81,430.61	10,186.50	806,485.09
Transport							
Average transportation time (in hours)	3.90	4.44	*	5.55	3.48	3.50	4.17
% animals transported on journeys lasting up to 8 hours	87.30	95.44	*	67.95	99.15	97.67	89.50
Average radius of transport distance (km)	246.32	177.76	*	333.80	226.00	300.00	256.78
No. of third-party drivers trained in animal welfare	718.00	40.00	427.00	560.00	154.00	0.00***	1,899.00
No. of animal welfare trainings	39.00	2.00	10.00	12.00	4.00	0.00***	67.00
No. of hours of animal welfare training	74.80	4.00	142.00	48.00	18.75	0.00***	287.55
Ranch							
% of animals in confinement	35.98	24.50	0.00	36.86	9.90	0.00	17.87
% of animals in semi-confinement grazing system [#]	32.10	26.50	0.00	2.77	13.30	0.00	12.45
% of animals under IPF [#] system	7.79	0.00	0.00	0.00	0.00	0.00	1.30
% pasture raised animals	24.14	49.00	100.00	60.38	76.80	100.00	68.39
% of castrated animals	0.57	58.50	9.00	11.59	57.65	32.67	28.33
No. of third-party ranchers trained in animal welfare	477.00	40.00	17.00	420.00	641.00	0.00***	1,595.00
No. of animal welfare trainings	44.00	13.00	4.00	16.00	641.00	0.00***	718.00
No. of training hours	132.00	35.00	20.00	50.00	1,762.75	0.00***	1,999.75



PRECAUTIONS FOR TRANSPORTING ANIMALS

In addition to the indicators listed in the Animal Welfare Compliance Matrix above, selected trucks undergo a daily assessment to ensure the quality of animal transport. This evaluation considers factors such as the type and condition of the vehicle, the driver's training, the density and condition of the animals, their behavior upon arrival, and observations recorded in the transport log.

Furthermore, our contracts with transport companies include a specific animal care clause aligned with the Minerva Foods Animal Welfare Policy. In cases of non-compliance, appropriate measures will be taken, and contracts may be terminated.

In 2023, the most used truck (87%) at Minerva Foods for transportation was the single-decker. The other 13% were double-decker trucks. The structural condition of these vehicles is routinely assessed.

In 2023, aiming to enhance animal welfare practices during the transportation of animals between supplier ranches and Minerva Foods units, the Company's Animal Welfare Technical Team developed the [Livestock Transportation Best Practices and Recommendations Manual](#). Initially implemented in the eight production units in Brazil, the LATAM units are expected to adopt the manual in 2024.

The behavior of the animals in the pens is also closely observed to detect anomalies such as sodomy or fights. In such cases, the mounted animal or the one exhibiting aggressive behavior is promptly separated from the group. Additionally, when more reactive animals are identified (showing greater escape distance), handling procedures are adjusted accordingly. This involves exercising greater care, avoiding sudden movements, and selecting pens with lower noise levels and less human movement to accommodate these animals.

Minerva Foods also maintains contingency plans for emergency disaster situations, outlined in the Company's internal self-controls and prepared by the Crisis Management Team. These plans include guidelines for making quick decisions in special cases and cover adverse situations such as water and electricity shortages, ammonia leaks, floods, fires, typhoons, earthquakes, transportation accidents involving live animals, and unexpected reductions in the number of employees (e.g., during a pandemic).

Furthermore, specific animal welfare indicators are monitored throughout the meat supply chain for product production. This monitoring includes tracking the progress of [Public Commitments](#) and [Global Animal Welfare Indicators](#).





TRAINING ON ANIMAL WELFARE



Minerva Foods regularly conducts technical training on Animal Welfare for its internal staff and suppliers, aiming to increase awareness of the main guidelines for effectively implementing its Animal Welfare Program. Training sessions are held every six months or as per the specific needs of each unit, with a focus on bringing innovation and dynamism to processes and promoting awareness of the issue.

The training is led by both the animal welfare personnel at the units and external consultants, who provide specialized training for all professionals directly involved in handling live cattle in the industry (Figure 4), cattle truck drivers (Figure 5), and farm managers (Figure 6). Additionally, specific training sessions are tailored for cattle ranchers who may require additional support in adhering to animal welfare indicators. Furthermore, Minerva Foods hosts annual meetings, workshops, events, and lectures such as "[Falando de Pecuária](#)" in Brazil and "[Pecuaria y Negócio](#)s" in LATAM countries, where the topic of animal welfare is discussed and addressed.





Figure 3. Animal welfare training for industry employees at the Araguaína - TO, Rolim de Moura - Rondônia, Palmeiras de Goiás - GO and Barretos - SP units.

Animal welfare is integrated into the induction training for new employees in the industry, aiming to raise awareness and reinforce the Company's commitment to ethics. Additionally, the Company's Quality, Livestock Purchasing, and Sustainability teams undergo frequent training on animal welfare through presentations, workshops, and national conferences. For instance, the [Sustainability Workshop](#) - Minerva Foods featured two presentations focused on animal welfare.



Figure 4. Animal welfare training for cattle transport drivers at the Rolim de Moura – RO, Paranatinga – MT and Belén – Paraguai units.



In total, 1,614 of our employees and 3,494 third-party individuals (including drivers, ranch hands, and ranchers) have received training on animal welfare across all countries where we operate. This represents a significant improvement compared to 2022, with the number of trained employees doubling and the number of trained third parties tripling.

The Company acknowledges that animal welfare is a fundamental principle of ethical animal production and is committed to raising awareness of this issue throughout its entire supply chain.

In preparation for all animal welfare training sessions, Minerva Foods provides a comprehensive [Animal Welfare Kit](#). This kit includes the Minerva Booklet, outlining best practices for animal handling, a calendar featuring major pharmaceuticals and their respective grace periods, legislation on the [National Policy for the Control of Chemical Residues](#), and a Letter of Guarantee. To ensure wide dissemination among cattle ranchers, this material is also distributed via email or through cattle truck drivers.

Additionally, the Company actively participates in presentations and academic activities related to the business, such as academic weeks and university events. These initiatives are highlighted in the section titled **ACTIONS TO COMMUNICATE AND SPREAD GOOD ANIMAL WELFARE PRACTICES**.



Figura 5. Animal welfare training for managers and ranchers from supplier operations in Janaúba - MG (Fazenda Boa Esperança).

2023

2022



Trained employees: 1,614
Number of trainings: 230
Hours of training: 417.15

847
Trained employees



Trained farm staff and ranchers: 1,595
Number of trainings : 718
Hours of training : 1,999.75

1,123
Trained third-party employees**



Trained drivers: 1,899
Number of trainings : 67
Hours of training : 287.55

Figure 6. Total number of training events in 2023.
 *In 2022, the number of training sessions and training hours were not reported.
 **Third parties trained were reported collectively (drivers and ranchers) through 2022, rather than by category.



INVESTMENTS

In 2023, Minerva Foods invested over US\$ 806,485 in initiatives and actions aimed at animal welfare. These investments encompassed various aspects, including infrastructure improvements such as non-slip floors and shading pens, the installation of cameras to monitor animal welfare indicators, and extensive training programs for both employees and third parties.

Moreover, the Company is leveraging modern management tools, including applications and software to harness 'big data' for enhancing animal welfare practices. Additionally, specific projects are underway in the area, including standardizing indicators, disseminating the topic to different stakeholders, and conducting risk analysis of suppliers. These endeavors involve a range of methods, including self-assessment and technical visits, among others.





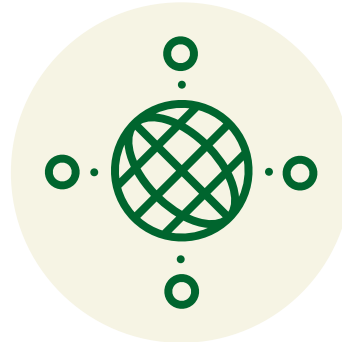
PROSPECTS

Minerva Foods is dedicated to continually enhancing its animal welfare practices throughout its operations and those of its suppliers, irrespective of location. The Company's management approach is underpinned by a clearly defined governance structure, which employs short-, medium-, and long-term work plans to drive improved performance.

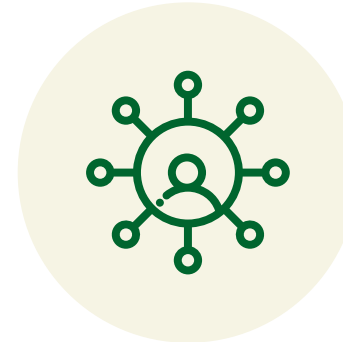


Projects mapped for 2024:

We will continue to seek solutions, technologies, and processes that enable us to further amplify the positive impact of our operations. Clear goals have been established for Minerva Foods' stakeholders, encapsulated in commitments related to animal welfare practices, and our efforts will be focused on meeting the deadlines outlined in these goals.



Advances at mapping the supplier chain - Self-assessment and on-site audits



Expansion of the corporate area



Ranch Certification



Breakdown of public commitment deadlines by country, e.g.: Brazil and Argentina pork



Standardization of indicators for the Company's global operations - Systematization of collections



Risk analysis for suppliers



minerva
foods

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