ANIMAL WELFARE REPORT

BASE YEAR 2024

minerva foods

minerva
foods

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CONTENTS

OUR PURPOSE

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

AT MINERVA FOODS, WE SEE ANIMAL WELFARE AS AN ESSENTIAL PART OF THIS CONNECTION.

OUR VALUES

Minerva Foods is guided by five core values that shape our decisions and actions:

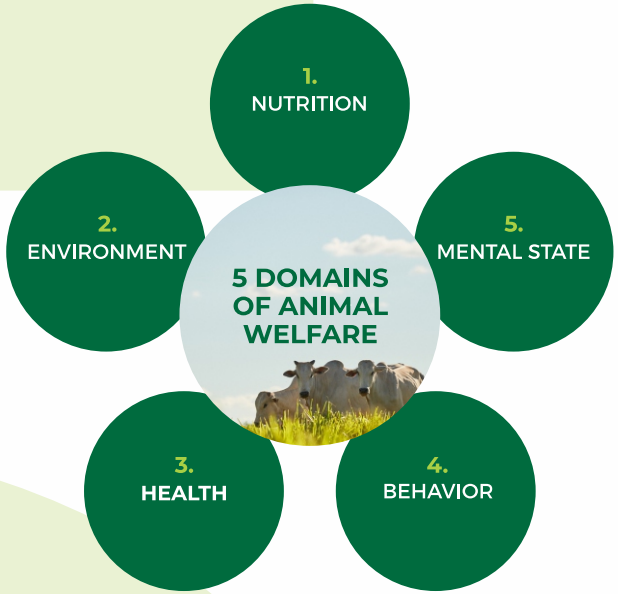
We are committed to sustainability, balancing economic, social, and environmental priorities in all our actions. We organize our sustainability efforts around three pillars: Dedication to the Planet, Prosperity of Our People, and Product Quality and Animal Welfare. Within this third pillar, we embed our commitments and initiatives to promote transparency and excellence in animal welfare.

INTRODUCTION

In response to the growing societal interest in animal husbandry, transportation, and processing practices, this report details Minerva Foods' actions, milestones, and accomplishments for the 2024 reporting period (January 1–December 31) The report consolidates global data from our operations, cattle supplier network, and third-party suppliers of animal-based raw materials.

For questions or feedback, please contact us via the contact page on our website. We value your input in enhancing our animal welfare initiatives.

ANIMAL WELFARE AT MINERVA FOODS



At Minerva Foods, we are committed to excellence and transparency in animal welfare (AW). We recognize animals as sentient beings and maintain a zero-tolerance policy for abuse, neglect, or mistreatment. Our Global Animal Welfare Policy program encompasses all species in our supply chain, including cattle, sheep, pigs, broilers, fish, laying hens, and dairy cattle. This program is guided by international standards, such as the Five Domain framework.

We promote best practices in animal husbandry to enhance welfare and reduce antimicrobial use, as outlined in our Global Antibiotic Use Policy. Furthermore, the Minerva Foods Code of Conduct for Business Partners establishes rigorous standards for ethics, integrity, and sustainability, with zero tolerance for animal mistreatment.

Our AW agenda is grounded in internationally recognized codes and protocols. We also embrace the "One Welfare" concept, ensuring that our processes respect animals, people, and the environment.

	POOR OR BAD:	POOR 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.	Thirst, hunger, pain, anger, frustration, anxiety, exhaustion, among others...	Satiety, physical comfort, vigor, pleasure in feeding, drinking water, maintaining gregarious behavior, among others...

ANIMAL WELFARE AGENDA

Minerva Foods' commitment to animal welfare is comprehensive and extends across every level of our supply chain. Our operations include producing and marketing fresh beef and lamb, processing proteins (such as beef, pork, and poultry), distributing products (including fish, sheep, cattle, pigs, poultry, and plant-based items), using ingredients in certain product lines (such as eggs and milk), and processing by-products (including leather, casings, meat and bone meal, tallow, and blood). (see Table 1).

WE DO NOT PROCESS OR MARKET SEAFOOD, CALVES, GEESE, DUCKS, OR RABBITS. WE ALSO DO NOT USE CLONED ANIMALS OR ANIMALS SUBJECTED TO GENETIC ENGINEERING. ADDITIONALLY, MINERVA FOODS DOES NOT EXPORT LIVE CATTLE.

Table 1. Protein production chain performance - 2024.

SPECIES	SLAUGHTER	PRODUCT PROCESSING	INGREDIENTS	DISTRIBUTION AND RESALE	% TOTAL CHAIN	TONS	COUNTRY
Beef cattle	X	X		X	92%**	1,169,356	
Sheep	X			X	5.91%	74,816	
Broiler chicken		X		X	0.82%	10,353	
Pigs		X		X	0.48%	6,094	
Fish*				X	0.38%	4,752	
Eggs**			X		0.00009%	1,2	
Milk**			X		0.0012%	15	
Non-animal products				X	0.41%	5,164	
Total animal protein	-	-	-	-	**99.59%**	**1,265,382**	-
Total global Chain	-	-	-	-	**100%**	**1,270,545**	-

Slaughter: The process of humanely killing animals to produce *in natura* (fresh) or frozen products for human consumption. ***Product processing:*** The purchase of raw meat materials from suppliers to produce portioned and cooked products. ***Ingredients:*** The purchase of ingredients from suppliers for use in product formulation. ***Distribution and resale:*** Includes the logistics of stocking finished products from both third-party brands and our own brands, as well as storage, transportation, and delivery to customers.

*The fish distribution segment includes the following commercially significant species: *Gadus morhua, Merluccius, Pangasius, Prionace glauca, Salmonidae, Oreochromis niloticus, Gadus chalcogrammus, Pollachius virens,* and *Gadus macrocephalus.*

**Details of the ingredients used in our operations include powdered eggs, powdered milk, and cream.

***This report does not include any data relating to our sheep operations in Chile, which only commenced in 2025. In Brazil, we do not operate sheep slaughter or deboning facilities; we only distribute third-party raw materials.

The Company's beef cattle production is divided into the following categories: Company-sourced cattle: Animals purchased from partner cattle ranchers and processed at Minerva Foods' own slaughter facilities. This category represents 90.27% of the Company's beef cattle production (1,142,187 metric tons). Third-party cattle: Beef raw materials acquired from partner industries for use in the production of processed products, by-products, and resale of products from other brands. This category accounts for 1.73% of the Company's beef cattle production (27,169 tons).

BUSINESS DIVERSIFICATION IS A DEFINING FEATURE OF MINERVA FOODS.

minerva foods

minerva ingredients

minerva casings

minerva biodiesel

minerva leather

minerva energy

mycarbon

minerva foods shop

Click on the brand of your choice for more information!

COMMITMENT TO GOOD ANIMAL WELFARE PRACTICES

In 2023, Minerva Foods made 54 public commitments to improve AW throughout its supply chain. These commitments addressed issues such as antibiotic use, concentrated animal feeding operations (CAFOs), environmental enrichment, mutilation practices, long-distance transport, inhumane treatment, pre-slaughter stunning, AW certifications, and dependency on animal-based ingredients.

These commitments have targets set for 2024–2045, with 29 already fulfilled (see Figure 1). Section 8 of this report provides a detailed description of each commitment and its current status.

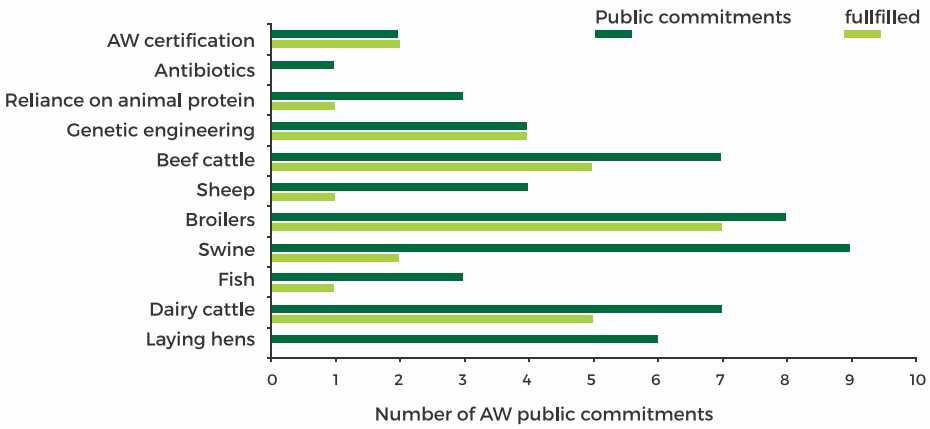


Figure 1: List of the 54 public animal welfare commitments, grouped by macro theme.

These commitments guide our strategies and actions within the AW Agenda, defining the steps necessary to improve AW indicators. Regularly mapping these indicators is essential to achieving these goals. We have made significant progress, increasing the proportion of the volume mapped globally from 32.5% in 2022 to 66.5% in 2024 (see Table 2). We've got 100% mapping for certain indicators in our cattle and sheep supply chains because this data is tracked directly within our operations (e.g., number of animals stunned, transport journey duration to slaughter, rearing systems [pasture or confinement], and castration practices). However, for other species in our supply chain, including chickens, pigs, fish, sheep, third-party cattle, dairy products, and egg products, AW indicator data is based on supplier self-questionnaire survey.

Supplier Mapping

Type	Mapping 2022	Mapping 2023	Mapping 2024
Cattle[1]	31.90%	48%	62%
Sheep[2]	50%	92%	15%[2]
Pigs	67.61%	77%	89.7%
Broiler	100%	84%	98%
Chickens	61.02%	62%	96.12%
FishEggs	100%	100%	100%
Milk	21.76%	99.5%	100%
Total*	32.50%	50%	66.5%

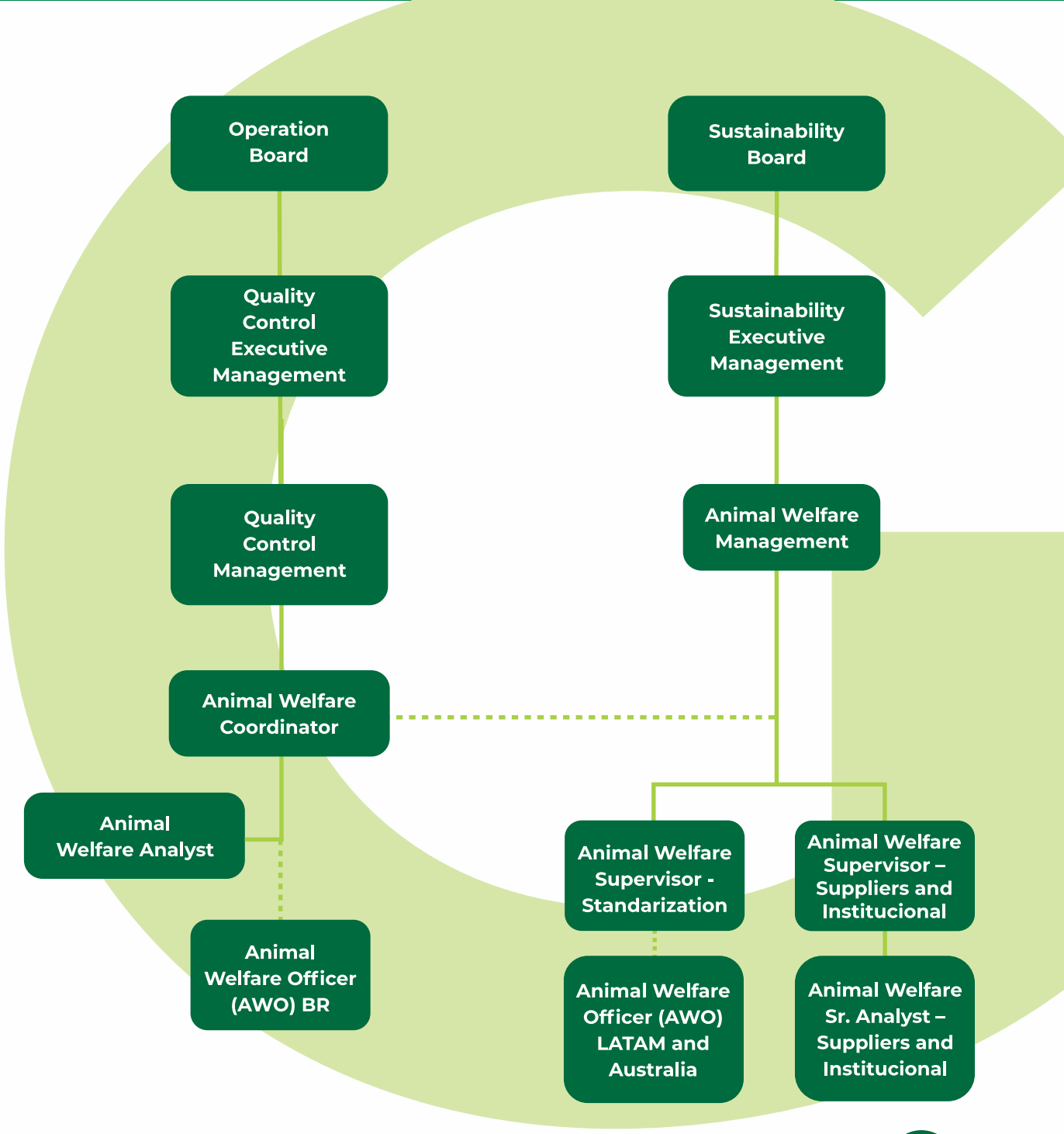
[1]Data from both company-sourced cattle and third-party cattle.
[2]For supplier mapping, only the distribution of sheep raw materials by Minerva Foods was considered, excluding our own operations in Australia and Chile.
**Based on the percentage mapped within the total volume of each species.*

ANIMAL WELFARE GOVERNANCE

Animal welfare governance is one of Minerva Foods' core strengths and has been central to our progress to date. The company has established a robust, integrated governance structure that ensures senior management actively participates in strategic decisions related to animal welfare. Other significant accomplishments include creating and strengthening engagement programs with our animal and raw material supply chains and participating in pre-competitive coalitions dedicated to advancing and sharing best AW practices.

ORGANIZATIONAL STRUCTURE

At Minerva Foods, the AW sector is divided into two complementary segments: one under the **Operations Division** and one under the **Sustainability Division**. This structure allows for the integrated coordination of the company's strategic and operational areas. It ensures that decisions regarding animal welfare are supported by technical expertise and are aligned with corporate objectives. Through this model, Minerva Foods enforces its animal welfare policy strictly across its operating units and throughout the animal raw material supply chain by monitoring and promoting best practices.



Within the board of **Operations**, AW is structured as a dedicated office.

AW STANDARDIZATION – BRAZIL:

In Brazil, actions and processes related to animal welfare fall under the Company's Division of Operations. The department's guidelines are based on Minerva Foods' Animal Welfare Policy and Program, Brazilian legislation, and the specific requirements of clients and niche markets. These elements support the development, implementation, and standardization of AW processes and indicators in slaughter operations.
Each Minerva Foods operational unit in Brazil employs professionals specialized in fields such as Animal Science, Veterinary Medicine, or Biology, who are fully dedicated to AW. These team members develop, organize, and deliver training to internal teams and transport providers; implement improvements in animal welfare practices and infrastructure; monitor day-to-day operations; manage performance indicators; apply corrective actions; and prepare action plans to continuously enhance AW indicators.

Within the Sustainability Division, AW is structured into two offices:

INSTITUTIONAL OFFICE AND SUPPLY CHAIN MANAGEMENT OFFICE:

At the institutional level, the office manages international indexes and ratings, coordinates the Animal Welfare Report, and responds to client requests for questionnaires and technical statements. The office also engages with stakeholders, AW coalitions, and third-sector organizations. Additionally, it leads innovation initiatives and the development of strategic animal welfare projects.
Regarding supply chain management, the office collects and analyzes AW indicators, conducts technical visits to suppliers, provides training on good AW practices, develops technical materials, plans and conducts audits of third-party suppliers, and implements the Minerva AW+. This program is designed to recognize and promote good AW practices across the supply chain and to support supplier risk management.

STANDARDIZATION OF LATAM AND AUSTRALIA OPERATIONS:

This department oversees the technical and operational standardization of AW processes and practices at the company's cattle and sheep slaughter facilities in Latin America (LATAM) and Australia. Responsibilities include defining, monitoring, and standardizing AW performance indicators across Argentina, Colombia, Paraguay, Uruguay, and Australia; consolidating tools for monitoring and data reporting; and more.
The office coordinates internal and external training for employees, transport providers, ranchers, and other partners. It also interprets and applies relevant legislation and leads auditing processes, technical inspections, and qualification efforts. Additionally, the office manages new certifications for ranches and slaughterhouses, including audit planning and ensuring operational compliance.

AW AND THE ENFORCEMENT POLICY AT MINERVA FOODS

The Enforcement Policy outlines disciplinary measures applied to employees and business partners in cases of noncompliance with the company's adopted guidelines and values. Animal welfare is one of the mandatory components addressed by this policy.

SENIOR MANAGEMENT INVOLVEMENT, AW DECISIONS, AND STRATEGIES

The Sustainability Committee discusses strategic topics related to AW. This committee is composed of senior management members — including the CEO, CFO, CCO, COO of Related Businesses, and the Chairman of the Board of Directors — as well as members of the Institutional Relations Board and Executive Managers from the Sustainability Division, the Renove Program, and the MyCarbon subsidiary. The Sustainability and Innovation Advisory Board then receives the overall results and key progress in the AW area. This board includes members of the Sustainability Committee, as well as two external directors.

Figure 2. Strategic Pillars of the Minerva AW+ Program

SUPPLY CHAIN ENGAGEMENT PROGRAM: AW+ MINERVA

In 2024, we launched and established the AW+ Minerva program. This strategic initiative focuses on engaging the global supply chain to develop, strengthen, and promote animal welfare practices, as well as manage associated risks. The program encompasses suppliers of live animals, raw materials, and animal-derived ingredients intended for distribution by the company. The actions and initiatives of the AW+ Minerva program are structured around a set of strategic pillars (see Figure 2). This report details the activities carried out under each of these pillars.

PRE-COMPETITIVE, MULTISECTORAL COOPERATION

As part of its strategy to strengthen AW governance, Minerva Foods made significant strides in multisectoral cooperation in 2024. Notable achievements include the company's participation in major national and international coalitions, such as the Brazilian Collaboration for Animal Welfare (COAWA) and the Global Coalition for Animal Welfare (GCAW).

WE ARE PART OF AN UNPRECEDENTED BRAZILIAN ANIMAL WELFARE COALITION

The Brazilian Collaboration for Animal Welfare (COBEA) is a pre-competitive collaborative initiative launched in 2024 to promote advancements in animal welfare in Brazil. It encourages and facilitates cooperation among diverse stakeholders in the animal protein value chain, including producers, consumers, civil society organizations, investors, and academics. Alongside Minerva Foods, COBEA currently brings together seven other leading companies in the sector.

In its first year, COBEA focused on drafting bylaws, standardizing its approach to animal welfare, and identifying priority themes for 2025. These priorities include standardization of AW indicators, raising awareness of animal welfare across the value chain, and promoting the responsible use of antibiotics.

In December 2024, COBEA hosted its first webinar, “Animal Welfare in a New ESG Era,” featuring prominent figures from Brazil's animal protein industry. The event also included a virtual panel with internationally recognized animal welfare experts: Prof. Donald Broom (University of Cambridge), Prof. Matheus Paranhos da Costa (Universidade Estadual Paulista), and Prof. Maria Camila Ceballos (University of Calgary).

Discussions during the webinar focused on integrating AW into the Environmental, Social, and Governance (ESG) agenda, the importance of reliable and objective AW indicators, and the role of multi-sector coalitions in advancing animal welfare practices.

WE ARE PART OF THE LARGEST GLOBAL COALITION FOR ANIMAL WELFARE

The Global Coalition for Animal Welfare (GCAW) is a multi-sector platform that promotes and implements the best practices in animal husbandry to continuously improve the welfare of farm animals. The initiative unites major food companies and animal welfare experts, enabling them to collectively overcome systemic barriers, accelerate the development of standards, advance key priorities, and fill existing gaps in this field.

In 2024, Minerva Foods was invited to join the coalition and actively participated in its discussions. Over the past year, the coalition has focused on the pig, broiler, and egg production chains. Key discussion topics included the benefits and barriers to implementing AW practices in the European Union (EU) and globally; defining and standardizing public commitments related to “crate-free” systems for pigs; reviewing and updating global AW legislation and protocols for broilers; identifying effective environmental enrichment strategies in intensive farming systems; and mapping and monitoring the global cage-free egg supply chain.

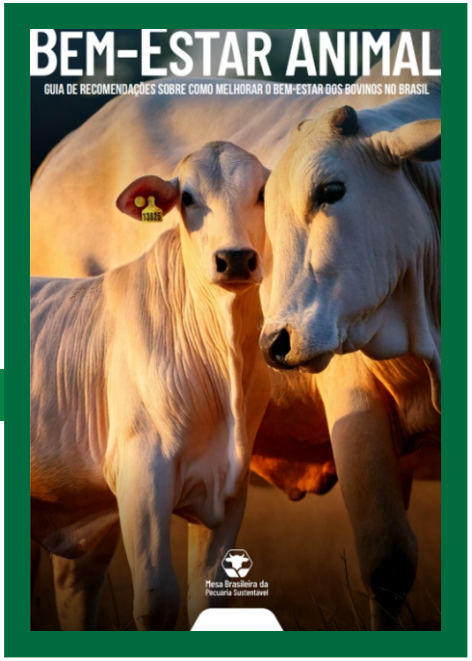
1st extraordinary meeting of COBEA, at São Paulo, Brazil.

THE BRAZILIAN ROUNDTABLE ON SUSTAINABLE LIVESTOCK JOINT EFFORTS HAVE RESULTED IN THE RELEASE OF AN UNPARALLELED GUIDE TO GOOD ANIMAL WELFARE PRACTICES IN THE BEEF INDUSTRY

Minerva Foods has been a member of the Brazilian Roundtable on Sustainable Livestock since 2011. In 2023, the company was among the first companies to join the Table's Animal Welfare Working Group (WG). The WG was initially created to develop a practical guide promoting good cattle breeding and handling practices in Brazil.
After a year of collaborative work among the participating companies, the "Recommendation Guide on How to Improve Cattle Welfare in Brazil" was published in February 2025. The guide provides Brazilian livestock ranchers with clear, accessible information, offering suggestions and strategies for simple, effective practices to monitor AW indicators on ranches. Topics include care for newborn calves, weaning processes, identification methods, pen management, reproductive management, vaccine and medication administration, and animal transport guidelines.

Download the free Guide here for more details!

Minerva Foods actively contributed to the development of this guide and participated in the launch webinar. During the event, the company reaffirmed its commitment to advancing animal welfare throughout the production chain. A recording of the webinar is available on the Bureau's YouTube this link.



THIRD SECTOR ENGAGEMENT

Since 2022, Minerva Foods has received technical support from Compassion in World Farming (CIWF), an international organization dedicated to promoting animal welfare. This partnership has played a vital role in strengthening the company's AW governance by providing expert technical guidance, access to best practices and success stories, and opportunities for joint participation in global forums and events. Through close collaboration with CIWF, Minerva Foods has developed and refined its public animal welfare commitments, enhanced engagement across the supply chain, and aligned its actions with the expectations of increasingly demanding markets. In addition to CIWF, Minerva Foods engages in institutional dialogue with other third-sector organizations, including Four Paws, Sinergia Animal, Alianima, and Fórum Animal. These interactions focus on enhancing the company's transparency in sharing results, shaping public commitments, and monitoring progress, and are both technical and strategic.
Minerva Foods' commitment to ongoing engagement with the third sector has contributed to meaningful improvements in its AW practices and policies. These advancements directly respond to society's growing demand for greater awareness and responsibility regarding the well-being of farm animals.

PROGRESS IN ANIMAL WELFARE

Over the past five years, Minerva Foods has achieved significant progress on its AW agenda. This progress has been fueled by governance initiatives, standardized AW indicators, and transparent practices throughout the company's global animal-origin supply chain. The company's strategy and achievements have earned recognition from major global benchmarks, including the Business Benchmark on Farm Animal Welfare BBFAW and Coller FAIRR.

BBFAW
Business Benchmark on Farm Animal Welfare

MINERVA FOODS IS THE HIGHEST-RANKED LATIN AMERICAN COMPANY IN THE BBFAW RANKING

BBFAW is the world's leading initiative for evaluating and ranking food companies based on their animal welfare practices and performance indicators. Since our initial assessment in 2018, when we were classified in Tier 6, Minerva Foods has made significant progress. In 2019, we advanced to Tier 5. After publicly disclosing our strategies and implementing more robust action plans in 2020 and 2021, we moved up to Tier 3. During this period, we undertook several key initiatives, including establishing a dedicated corporate animal welfare sector and launching efforts to ensure that all Minerva Foods slaughter units obtained animal welfare certifications from the North American Meat Institute (NAMI)—a goal we successfully reached in 2023.

In 2022, BBFAW assessments were paused while the organization revised its methodology. When assessments resumed in 2023, the updated methodology included new questions and scoring criteria related to "decreasing dependence on animal protein." In this new context, the company moved down one level to Tier 4E. Nevertheless, among the 150 companies assessed in 2023, we ranked within the top 27. In 2024, Minerva Foods traveled to the London Stock Exchange to attend the official announcement of the BBFAW results for the 2023 base year. There, we reaffirmed our commitment to advancing our journey toward excellence in animal welfare.

Standards	
Tier	**Range**
1	>80%
2	62 - 80%
3	44 - 61%
4	27 - 43%
5	11 - 26%
6	<11%

In 2024, we are proud to be the highest-ranked Latin American company in BBFAW, now in Tier 3D, among the top twelve globally.

FAIRR
A COLLER INITIATIVE

WE ARE A "BEST PRACTICES" COMPANY IN ANIMAL WELFARE AND ARE CONSIDERED LOW-RISK IN ANTIBIOTIC USE.

The Coller FAIRR Index is widely recognized as a leading global benchmark for evaluating major companies' sustainability performance. In recent years, Minerva Foods has made significant progress in three key areas assessed by FAIRR: animal welfare, antibiotic use in the global supply chain, and alternative proteins.
Starting in 2020, Minerva Foods transitioned from a high-risk classification to being recognized as a "best practices" company in animal welfare by 2024. Similarly, progress in antibiotic use has been notable. In 2022, the company was classified as high risk, but by 2024, it had improved to low risk. Regarding alternative proteins, Minerva Foods maintained a medium-risk classification for two consecutive years until achieving low-risk status in 2024.
Further details on our progress in other sustainability criteria can be found in the SR–2025 report. These results underscore Minerva Foods' commitment to aligning its practices with the highest global standards, reinforcing our dedication to mitigating risk, and strengthening our reputation as a sustainable leader in the global animal protein industry.

Standards	
Range	**Category**
+90%	Best practice
60 - 89.9%	Low risk
30 - 59.9%	Medium risk
0 - 29.9%	High risk

WE HAVE ALSO BEEN FEATURED IN OTHER RANKINGS AND RATINGS THAT EVALUATE ANIMAL WELFARE.

In 2024, Minerva Foods was recognized for its performance on animal welfare indicators in several other prominent ESG rankings and ratings:
In the Corporate Sustainability Index (ISE B3), we achieved a 100% score based on our animal welfare policy, engagement and communication with the global supply chain, and efforts to promote training and conduct third-party audits.
The World Benchmarking Alliance (WBA) Food and Agriculture Benchmark recognized our public commitments to animal welfare as "leading practices." These commitments apply to all species and geographic regions.
The Carbon Disclosure Project (CDP) recognized us for our management strategies designed to address climate-related risks, such as frosts, droughts, and climate variability, which reinforce the role of these strategies in ensuring operational resilience.
Ecovadis, awarded us points for various animal welfare initiatives, including training programs, environmental enrichment practices, and humane slaughter processes. These efforts contributed to our perfect score of 100/100 in the "Environmental Management" evaluation dimension.

ISE B3

World Benchmarking Alliance

CDP

ecovadis

AW GLOBAL MANAGEMENT

1) MINERVA FOODS OPERATIONS

Minerva Foods' global operations are driven by robust management practices that emphasize operational efficiency, social responsibility, environmental responsibility, and excellence across the supply chain. Recent expansions, including new cattle slaughter plants in Brazil and Argentina and a sheep processing unit in Chile, have broadened our geographic reach and strengthened our AW practices across species. To support these efforts, we have developed a Governance Manual for Integration Projects. This manual provides clear guidelines to ensure process standardization, foster team engagement and appreciation, promote the dissemination of our organizational culture, and maintain transparent communication throughout the transition. Our solid management approach in AW has been essential to efficiently integrating these new units and swiftly standardizing AW processes. It has also enabled us to share our core values of caring for people, animals, and the environment with new team members.
Learn more about the new Minerva Foods following the integration of these new units:

Production Units

Strategic Distribution of Minerva Foods' Facilities Following the Integration of New Units in 2024.

The plants remain subject to the conclusion of the agreement.

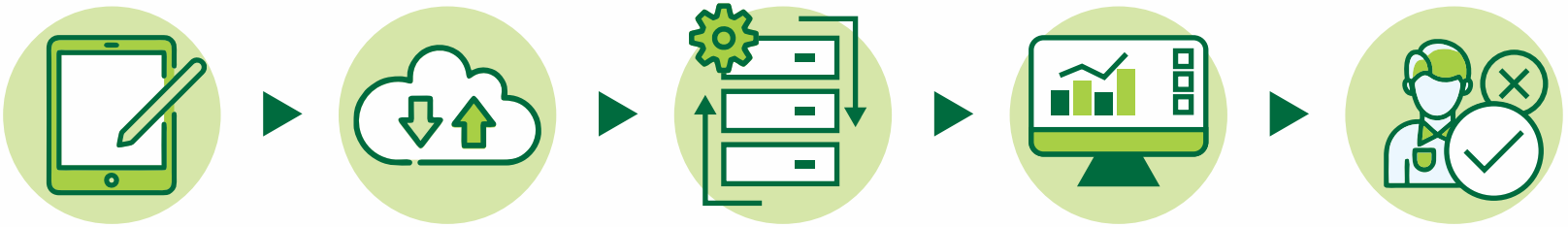
Minerva Foods has implemented a structured, integrated, and preventive model for AW management across its operations, as outlined in the Animal Welfare Program. This section highlights the core drivers that strengthen our AW agenda and demonstrate our commitment to the continuous improvement of AW indicators. Our approach includes: a) Routine monitoring to ensure daily compliance with internal standards; b) Process standardization to maintain consistent practices across operations; c) Crisis management strategies to provide agility and resilience in responding to unforeseen events; d) Ongoing investment in innovation and technology to promote sustainable development and strengthen our competitiveness.

A) ROUTINE MONITORING

Monitoring AW indicators is essential to ensure that processes and guidelines are applied correctly. The process begins with the Compliance Matrix, which is developed based on the legislation and standards in place in the countries where we operate, as well as internationally recognized protocols such as those from the North American Meat Institute (NAMI). AW Managers at each operational unit track these indicators daily, implement immediate corrective actions when necessary, and analyze results and deviations to promote continuous improvement. As part of this routine, we have adopted the CargoSnap application to monitor and manage AW indicators. By 2024, the tool has been fully implemented in Brazil, Uruguay, and Colombia. It is in the final stages of implementation in Argentina and Paraguay, and initial planning is underway for its rollout in sheep slaughter operations in Australia and Chile. In summary, data is collected via tablets during operational routines, stored securely in the cloud, and processed on a web platform. Real-time visualization and monitoring are available through dashboards developed in Power BI.

The following production stages monitor AW indicators:

- During loading animals and transportation from the ranch to the unit. The driver completes a transportation log for each transfer and unloading, which records this information. In Brazil, drivers use a digital application called APP GADO for this purpose. This technology has already produced positive results, and we are working to expand its use to other Minerva Foods operations.
- Monitoring indicators during the unloading of animals at the unit.
- Monitoring indicators related to the quality of animal housing in the facility's holding pens.
- Monitoring indicators related to the quality of human–animal interaction.
- Monitoring indicators related to the effectiveness of stunning and bleeding.



The Compliance Matrix is integrated into shared goals and performance recognition systems in the Minerva Foods target playbook. In Brazil, the Integrated Operations Center (IOC) enhances monitoring by using a network of surveillance cameras strategically positioned to cover critical areas, including the unloading area, holding pens, chutes, raceways, corridors, and the stunning box. This system enables continuous supervision and the rapid identification of irregularities, allowing for prompt corrective action. The goal is to expand the IOC's coverage to 100% of the company's operations.

To complement this active management approach, the company developed an initiative called "Trajeto do Boi" in partnership with the Engineering, Maintenance, and AW corporate teams. This project focuses on assessing and managing critical control points in all areas accessible to animals within the facilities. These include yards, landing ramps, gates, corridors, pens, sprinklers, shade structures, watering systems, feeders, and floors. Access to any area with identified irregularities is restricted until the issue is resolved. This approach improves animal and human welfare by reducing operational risks and preventing accidents involving employees and animals.

Minerva Foods relies on its Corporate Cattle Logistics department to oversee the transportation of all animals. This department plans and coordinates every stage of transportation efficiently. Transportation vehicles undergo daily random sampling and inspections by AW managers at each operational unit. If any noncompliance is identified, the vehicle is detained immediately and is only released after a new assessment by the local technical manager.

The corporate AW technical team uses the Manual of Good Practices and Recommendations for Animal Welfare in Cattle Transport as part of operational guidelines. This manual guides routine monitoring and helps standardize AW practices during transport from supplying ranches to the company's facilities.

The corporate team analyzes the collected indicators weekly during technical meetings and/or monthly during internal AW audits. During these meetings and following internal audits, action plans, timelines for implementation, resource allocation, and unit performance rankings based on established KPIs are discussed. Consolidated results are reported monthly to the company's senior management.

AW managers are carrying out routine monitoring at units in Brazil and Colombia.

B) STANDARDIZATION OF PROCESSES

Standardizing AW indicators is essential for promoting technical consistency across operations, enhancing data reliability, and supporting coordinated preventive action that aligns with the highest global standards. Minerva Foods began the project to standardize AW indicators in 2022. The project involved reviewing key legislation in each operating country and integrating it with the North American Meat Institute (NAMI) protocol guidelines to establish the data collection framework.
In 2023, the operational units in Brazil served as a reference point for implementing and systematizing indicator collection. A technical assessment was conducted at the Latin American units (Argentina, Uruguay, Colombia, and Paraguay) that same year, allowing the model to be consolidated and implemented at these locations in LATAM in 2024. Similar technical evaluations are planned for the sheep slaughter plants in Australia and Chile in 2025 and 2026, respectively, to fully standardize AW indicators across all operations.

Roadmap for the Animal Welfare Indicators Standardization Project

2023	2024	2025	2026
BRAZIL – CONCLUDED	URUGUAY, COLOMBIA, ARGENTINA – CONCLUDED	PARAGUAY – CONCLUDED; NEW ACQUISITIONS – ONGOING	CHILE, AUSTRALIA – SCHEDULED

In 2024, the AW corporate team visited the operating units as part of a technical alignment, routine monitoring, and training program. To strengthen the standardization process and support the integration of new units, the team developed guided training with an illustrative video for Minerva Foods' cattle operations. This training offered clear, practical information in Portuguese and Spanish and covered topics such as entering AW indicators into the CargoSnap system, evaluating each indicator, identifying deviations, and developing an action plan. An e-book covering the same topics was created to reinforce learning.

MINERVA FOODS PARTICIPATES IN THE ANIMAL WELFARE TRAINING PROGRAM LED BY DR. TEMPLE GRANDIN

In June 2024, representatives from the AW and Quality teams at Minerva Foods in Brazil, Argentina, and Uruguay took part in an Animal Welfare Training Workshop led by Dr. Temple Grandin, the world's foremost authority in the field. Held on June 11–12 in Buenos Aires, Argentina, the event brought together professionals from across the Latin American animal protein supply chain.

The program featured theoretical and practical modules focusing on critical control points outlined in international animal welfare audit protocols, including those of the North American Meat Institute (NAMI) and McDonald's supplier standards. Participants examined best practices for animal welfare applicable to the beef and broiler chicken production chains, covering both farm-level and processing plant stages.

Minerva Foods' participation in this workshop demonstrates our dedication to ongoing technical development, process standardization, and cultivating an internal culture committed to excellence in animal welfare.

1ST PAACO (PROFESSIONAL ANIMAL AUDITOR CERTIFICATION SYSTEM) ANIMAL WELFARE WORKSHOP FOR MINERVA FOODS AW MANAGERS FOODS

The 1st PAACO Animal Welfare Workshop was held from November 27 to 29, 2024, with the goal of enhancing the standardization of AW indicator monitoring processes and promoting technical integration among Minerva Foods' teams across its South American operations. Organized by Minerva Foods' corporate AW team in partnership with PAACO, the event took place in Barretos, São Paulo, Brazil, and focused on training related to AW audits for meatpacking plants and beef cattle feedlots.

The training was led by two PAACO experts: Dakota Thomas, Director of Training Operations, and Jennifer Woods, Animal Welfare Management and Audit Specialist. The workshop featured a combination of theoretical sessions and practical activities, all designed to standardize the collection and evaluation of AW indicators in line with the North American Meat Institute (NAMI) protocol. The practical segment was conducted at Minerva Foods' industrial unit in Barretos (SP) and at a partner cattle ranch located in Altinópolis (SP).

At the conclusion of the program, all participants completed a theoretical assessment to verify their understanding of the workshop content. Notably, this marked the first occasion where all AW managers from Minerva Foods' South American operations gathered in the same space - including those who had recently joined through the integration of new units. The workshop brought together 45 employees representing Argentina, Brazil, Colombia, Paraguay, and Uruguay. Beyond its practical objectives, the event was a milestone for the company because it fostered the development of a consistent AW approach across regions and reinforced Minerva Foods' commitment to technically driven, integrated, and high-standard management practices in all its operations.

For more information, please refer to the workshop's video presentation.

WATCH!

C) CRISIS MANAGEMENT

Crisis management is essential to safeguarding Minerva Foods' high standards of excellence in AW across all operations. Unforeseen events, such as disease outbreaks, power or water supply interruptions, fires, extreme weather conditions, or pandemics, are addressed using pre-established operational protocols designed to protect animals and maintain continuity. A key component of this preparedness is our Disaster Procedure, which is a formalized protocol that provides team members with clear, actionable steps to follow during critical situations. This ensures a prompt, coordinated, and secure response. Through advance planning and defining detailed response procedures, Minerva Foods mitigates risks and upholds animal welfare, even in challenging circumstances.

D) CONTINUOUS INVESTMENT IN INNOVATION AND TECHNOLOGY

Slaughter Operations

In 2024, Minerva Foods invested more than US$ 795,511.70 in initiatives aimed at strengthening and improving AW. These efforts focused on modernizing processes, implementing technological innovations, improving team training, and upgrading infrastructure continuously to meet the highest standards. A detailed breakdown of the total investment by operational region is provided below:

Investments in Animal Welfare							
Currency	Brazil	Argentina	Colombia	Paraguay	Uruguay	Australia	Global
Dólar/US$	556,830.20	2,843.18	33,264.30	30,372.25	125,064.27	47,137.50	795,511.70

These efforts included structural improvements to our facilities, such as installing non-slip flooring and shade cloths in holding pens and upgrading surveillance cameras. Technical training was provided to employees and third-party partners. Significant progress has also been achieved in developing and implementing digital tools that support the intelligent management of AW indicators. These tools leverage applications and software designed for large-scale data processing and analysis (Big Data).
Additionally, several projects have moved forward with a particular focus on innovation and standardization. Notable initiatives include expanding the camera monitoring system for real-time oversight of AW operational indicators, guided training modules, and targeted training sessions for the corporate team, plant employees, drivers, and ranchers.

Corporate

To further strengthen the technical and strategic management of AW across the supply chain, Minerva Foods invested US$ 200,378.47 in 2024 through initiatives led by the corporate AW team. These funds supported events and training sessions, innovative project development, ranch AW certifications, data platform maintenance, supply chain mapping, awareness campaigns, and engagement initiatives targeting various audiences.

*Table 3. Consolidated Animal Welfare Indicators by Origin**
Minerva Foods Cattle and Sheep Operations — 2024

Animal Welfare Indicators	Brazil	Argentina	Colombia	Paraguay	Uruguay	Global	Australia Sheep
Industry							
	Cattle						
% of animals stunned[1]	97.24	85.26	96.84	77.71	84.72	90.57	100
% Effectiveness of first-shot stunning	97.77	98.04	98.03	97.46	99.73	97.83	99.99
% of poorly stunned animals in the discharge area	0.11	0	0	0	0	0.06	0.01
Time between stunning and bleeding (seconds)	53.99	60	17.47**	47.81	46.73	50.34	5
% of slips during unloading and corridor handling	0.25	1.66	1.31	1.33	0.76	0.74	-
% of falls during unloading and corridor handling	0.16	0.33	0.57	0	0	0.16	-
% of animal vocalizations during corridor, chute, and stunning box handling	0.74	1.84	2.15	0.04	1.16	0.86	-
% of lots with mixed categories[2]	0.021	49.31	0	0	0	5.56	0
% of animals separated due to agonistic behavior in pens	0.001	0	0	0	0	0.001	0
% of animals separated due to mounting behavior in pens	0	0	0	0	0	0	
% use of electric prod for animal handling	13.19	5.39	15.17	12.79	6.5	11.56	-
% use of electric prod during unloading	0.4	0	0	2	0	0.59	-
% of animals identified in poor health condition	0.05	0	0.08	0	0	0.03	0.1
% of animals without access to water for more than 30 minutes	0.006	0	0	0	0	0	0
% of carcasses with bruises***	6.4	2.32	60.14	18.02	3.12	11.03	0.01
% plant mortality	0.003	0.001	0.001	0	0	0.002	0.09
% emergency slaughter	0.026	0	0.12	0	0	0.021	0.02
% DOA ("Dead on Arrival")	0.007	0	0	0	0	0.004	0.07
% compliance in second-party AW audits	99.68	99.999	98.34	100	99.99	99.58	100
% compliance in third-party AW audits	99.997	99.999	99.998	100	99.999	99.84	100
% of animals with shade/sprinklers at the plant	99.997	99.999	100	100	75.09	96.95	15
% of animals exhibiting extreme thinness	0.006	0	0.06	0	0	0.01	0.03
Transportation							
Average transport time (hours)	3.98	5.54	9.27	4.21	4.12	4.53	4.85
% of animals transported on trips lasting up to 8 hours	89.83	75.88	40.56	76.47	93.48	83.01	78
Average transport distance radius (km)	236.14	388.81	297.38	253.64	249.15	261.49	38.75
Ranch							
% of animals in confinement	32.14	21.19	0	40.25	20.52	29.1	0
% of animals on pasture under semi-confinement system#	30.9	36.96	0	6.68	0	21.57	0
% of animals on pasture under TIP system#	12.06	0	0	0	0	6.3	0
% of animals on pasture under extensive system	24.9	41.85	100	53.07	79.48	43.03	100
% of castrated animals	15.88	43.29	6.96	10.75	45.61	20.87	0

**Change in the Methodology for Calculating Animal Welfare Indicators: Until 2023, AW indicators were calculated based on a simple arithmetic average of slaughter units and origins. However, we identified that this approach did not accurately reflect actual practices, especially given the significant differences in slaughter volumes and the number of units in each country. Therefore, starting in 2024, we adopted a weighted average methodology, using the volume of animals slaughtered at each unit as a weighting factor. This change enables the results to better capture the real impact of each operation, giving greater representation to units with higher production volumes. To ensure consistency in historical data and enable reliable comparisons over time, we retroactively applied the new methodology to data from 2022 and 2023. As a result, all future results will follow the same calculation criteria, ensuring greater reliability and accuracy in evaluating animal welfare practices across our production chain. You can view the adjusted 2022 and 2023 indicators in our Indicators Center.*
***Colombia's shorter time interval between stunning and bleeding is due to immediate bleeding performed after stunning, in accordance with the religious precepts required by a specific client.*
****The indicator considers the following parameters: severity (mild, moderate, and severe) and location (based on the cuts). All types of bruises are considered, allowing us to identify variations in their causes.*
- Please note data marked with a dash are not applicable to sheep production.
#Raising methods refer to production practices where animals are raised on pasture with supplemental feeding provided at a rate of 1–2% of their live weight. Animals receiving ≤1.5% of their live weight in supplementation are classified as semi-confinement on pasture, while those receiving >1.5% are classified as TIP (Tropical Intensive Pasture). These animals remain free from confinement structures and have full access to pasture.
[1]In accordance with religious requirements, stunning is not performed before bleeding on animals intended for the Kosher market and certain countries requiring Halal slaughter.
[2]Under Argentine Resolution 581-2014, mixing animals from different categories is permitted, provided that it does not compromise animal welfare.

AW MANAGEMENT ON PARTNER RANCHES

At Minerva Foods, we comprehensively monitor the animal supply chain. We employ a variety of tools and approaches to evaluate compliance with our animal welfare and sustainability guidelines. The Code of Conduct for Minerva Foods' Business Partners sets forth the ethical, social, and environmental principles that guide supplier actions. These principles include prohibiting cruel practices toward animals and ensuring compliance with labor and environmental laws. Suppliers must sign this agreement to establish and maintain a commercial partnership with the company, reinforcing their commitment to ethical and responsible practices.

Minerva Foods also uses a self-assessment questionnaire for supplier ranches. This questionnaire features open-ended and objective questions about animal husbandry and care practices, routine mutilations, sources of environmental enrichment, health management, and socio-environmental management. In 2024, we launched a new interactive platform for distributing and collecting these questionnaires. Once responses are received, they are reviewed internally, and if any questions arise, we follow up directly with the rancher for clarification.

The company's efforts to engage with the supply chain include the AW+ Minerva Program, a joint initiative developed with Laço de Confiança. This program aims to strengthen relationships with ranchers and encourage more sustainable practices in animal production. As part of these initiatives, Minerva Foods conducts on-site technical visits, delivers customized training sessions, distributes educational materials, shares digital content, and organizes events. These activities promote technical dialogue and knowledge exchange with suppliers. Through the program, technical visits are specifically made to ranches that have repeatedly shown substandard AW indicators.

During these visits, practical guidance and tailored training are provided based on the nature of the identified non-conformities. After each visit, a detailed technical report is prepared, outlining the main areas for improvement and recommended actions. The progress of these corrective actions is then continuously monitored to ensure lasting improvements.

The same applies to our sheep suppliers in Australia, with whom we maintain close relationships. This ongoing partnership enables us to continuously monitor their breeding, livestock management, and animal handling practices, ensuring alignment with the company's animal welfare principles.

Here's the story of one of our dedicated Australian ranchers — a partner who shares our commitment to care, excellence, and sustainable production practices.

WATCH!

AW TRAINING

Employees, Transportation, and Ranches

At Minerva Foods, we understand that knowledge is essential for promoting good AW practices. This involves raising awareness and providing technical training to everyone involved at every stage of the production process. The Minerva AW+ Program provides training to slaughter unit employees, vehicle operators who transport live animals, in addition to ranchers and stockpeople. In 2024, we trained 7,852 individuals — a 54% increase from the 5,108 trained in 2023. Of these, 3,915 were meatpacking industry employees, 2,211 were drivers, and 1,726 were ranchers and stockpeople. Training topics are adapted to the audience and include the fundamentals of animal behavior, humane handling techniques, animal welfare during transport, audit indicators, and legal and commercial requirements. Sessions are delivered by specialized professionals and aligned with our internal protocols, with a strong focus on continuous improvement and process standardization. We also partner with specialized technical consultancies.

In 2024, we trained 7,852 individuals

Table 4: Global Animal Welfare Training by Origin — Cattle and Sheep Operations — 2024

Animal welfare training	Brazil	Argentina	Colombia	Paraguay	Uruguay	Australia	Global
INDUSTRY							
Number of employees trained in AW	1,165	370	103	178	2,041	58	**3,915**
Number of AW training sessions *(Using both online and in-person methods)*	261	28	12	21	69	4	**395**
Number of training hours	253.63	135.00	19.50	14.00	42.50	60.00	**524.63**
TRANSPORTATION							
Number of third-party drivers trained in AW	1,260	0	727	6	118	100	**2,211**
Number of AW training sessions	69	0	273	6	3	2	**353**
Number of AW training hours	112.35	0.00	444.00	12.00	12.00	50.00	**630.35**
RANCH							
Number of third-party ranchers trained in AW	401	0	150	6	1,069	100	**1,726**
Number of AW training sessions	42	0	3	12	724	2	**793**
Number of training hours	114.30	0.00	10.00	24.00	1,839.00	50.00	**2,037.3**

AW training for industry employees in Brazil, Argentina, Uruguay, and Paraguay.

AW training for drivers in Paraguay, Brazil, and Colombia.

AW training for ranchers and ranch hands in Colombia, Brazil, Uruguay, and Paraguay.

In November 2024, we organized pioneering training on good AW practices in Colombia. The training brought together 290 participants, including employees, drivers, and ranchers. The training covered both practical and theoretical aspects of humane animal treatment. Adriano Páscoa, veterinarian and technical manager at AW Consultoria (a Minerva Foods training partner), commented:

"Knowledge of humane cattle handling and welfare is essential to ensure that animals are treated respectfully and that their basic needs are met. Stressed cattle gain less weight, convert feed less efficiently, and are more susceptible to disease, which directly impacts profitability and meat quality. Training programs on ranches, the foundation of the production chain, are an intelligent strategy that combines ethics, efficiency, and competitiveness."

Beyond reinforcing the company's ethical commitment to treating animals with dignity, continuous employee training provides tangible sustainability benefits. For instance, promoting humane handling can reduce injuries, bruising, and carcass losses, thereby avoiding waste and improving the use of natural resources such as water, feed, and energy. Less stressful environments improve animal performance and reduce the risk of disease, which lowers the risk of antimicrobial resistance. Training enhances workplace safety, reduces accidents, and fosters a responsible, people-centered culture. Economically, training leads to operational gains, reduced losses, and stronger competitiveness in markets that prioritize sustainable and ethical animal production. Together, these advances support the principle that true progress occurs when the well-being of animals, humans, and the environment are in balance — the concept of One Welfare.

GLOBAL SUSTAINABILITY CHALLENGE: BOOSTING AW IN URUGUAY AND ARGENTINA

In 2024, we launched an innovative initiative to raise sustainability awareness among operational teams. The project involved 24 units spanning Argentina, Australia, Brazil, Colombia, Paraguay, and Uruguay. The Sustainability team led the project, which was developed in partnership with an organizing committee made up of representatives from various technical areas. Their knowledge of operational processes helped shape the content of the challenges. Focusing on product quality and the AW pillar, the campaign promoted awareness of animal welfare and quality assurance over the course of a month at units in Argentina and Uruguay. The goal was to engage teams, reinforce the importance of sustainability practices, and recognize top performers based on predefined indicators. As a result, 3,594 employees received training, including 1,517 in Argentina and 2,077 in Uruguay. Employees from various departments within the participating units took part, including operational, administrative, and corporate teams, not just those directly involved in animal handling and welfare.

Desafio NOSSO J3ITO DE CUIDAR

Global Sustainability Challenge: Focused on AW for industry and corporate teams in Uruguay and Argentina.

See below the video created by the Uruguayan team as part of the challenge. The video was produced and shared to raise awareness about AW and strengthen sustainability practices across operations.

WATCH!

MEASURING AFFECTIVE STATES IN THE MINERVA FOODS BEEF SUPPLY CHAIN

In 2024, Minerva Foods partnered with the Center for Welfare Metrics to apply the Welfare Footprint Framework (WFF) to its beef supply chain. The goal was to quantify the impact of management and breeding practices on animal welfare across operations. The WFF is a groundbreaking, scientifically validated method that measures animal welfare by tracking the time animals spend in various affective states, both negative (such as pain, fear, or frustration) and positive (such as satisfaction, joy, or euphoria).

Extensive multidisciplinary reviews of scientific evidence, including neurophysiological, behavioral, and pharmacological data, are used to assess pain and pleasure. The findings are documented using the Pain-Track and Pleasure-Track tools (Alonso & Schuck-Paim, 2021). These tools describe how the intensity of affective states evolves over time.

Negative experiences are classified into four pain levels (from "uncomfortable" to "excruciating"), and positive experiences are categorized into four levels of pleasure (from "satisfaction" to "ecstasy"), based on behavioral engagement and functional impact. The WFF produces cumulative pain and pleasure metrics by summing the time animals spend at each intensity level. These metrics allow for consistent evaluation of the impact of different management practices, production systems, and animal welfare policies.

RESEARCH BASED ON

WELFAREFOOTPRINT FRAMEWORK

AS DR. CYNTHIA SCHUCK-PAIM EXPLAINS,

"The Welfare Footprint Framework helps companies quantify animal welfare objectively using evidence and identify which practices and conditions have the greatest positive impact." This data-driven approach avoids costly changes with limited effects and prioritizes interventions that deliver the greatest benefit at the lowest cost. By pinpointing the moments and factors most critical to welfare throughout the production cycle, the framework helps companies strategically allocate resources and align welfare policies with market expectations."

IMPACT OF SHADING ON ANIMAL WELFARE IN MINERVA FOODS' GLOBAL BEEF SUPPLY CHAIN

Minerva Foods used the Welfare Footprint Framework to analyze the impact of shading on cattle welfare across its global beef supply chain.

Assessing the heat stress experienced by cattle on Minerva Foods' partner ranches.

From 2019 to 2023, weather conditions were sampled from 636 partner ranch locations in Brazil, Argentina, Uruguay, Paraguay, and Colombia. This interval was used to mitigate the impact of specific annual climate anomalies and obtain a more representative average thermal profile for each location studied. We obtained daily averages of meteorological variables by location from the NASA POWER (Prediction of Worldwide Energy Resources) public database. These variables included partial vapor pressure (kPa), relative humidity (% RH), air temperature (°C), solar radiation (W/m²), and wind speed (m/s). To characterize the thermal load experienced by animals in different locations, we calculated the Comprehensive Climate Index (CCI), which considers the combined effects of air temperature, humidity, wind speed, and solar radiation. To predict the degree of chronic heat stress experienced by cattle, we quantified the "Annual Heat Load" for each location. This is represented by the sum of daily surpluses in relation to the "moderate stress" range of the CCI index. Next, we summed the 365 daily values of exceeded heat load for each studied location. Finally, we calculated the mean of the five-year period (2019–2023) to determine the "Annual Heat Load" for each location (Figure 5).

a) Magnitude of thermal stress as a function of annual thermal load

Magnitude of thermal stress	Average annual heat load
Low	Lower to 100 °C
Moderate	100 - 500 °C
High	500 - 1.200 °C
Very High	1.200 - 2.000 °C
Extrem2	> 2.000 °C

b) Magnitude of heat stress and number of days per year by CCI range

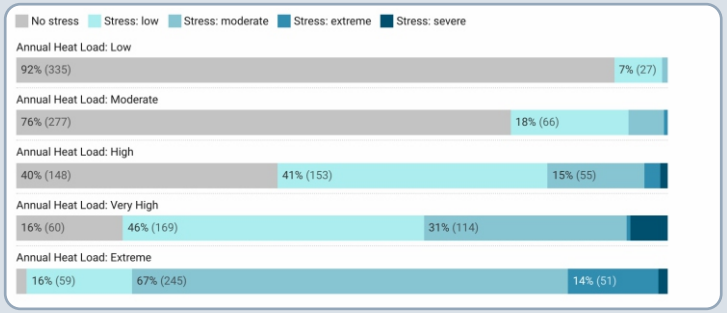
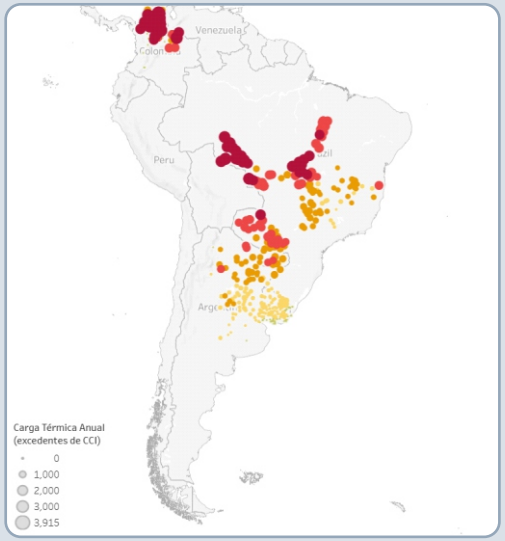


Figure 5. Relationship between heat stress magnitude (annual heat load) and the number of days cattle experience conditions in each CCI band.

c) Magnitude of heat stress by locality



**The color of the dots represents the thermal risk category, while the size of the circles is proportional to the accumulated thermal load.*

EXPERIENCED HEAT LOAD, AFFECTIVE STATES, SHADING AS A MITIGATION STRATEGY

Quantifying the impact of heat stress on animal welfare revealed that, in regions experiencing "Extreme Annual Heat Stress" and lacking heat mitigation strategies (e.g., shading), cattle can experience up to 952 hours of intense (Disabling) discomfort and an additional 1,527 hours of moderate (Hurtful) discomfort per year. However, the analysis shows that management strategies that provide shade can significantly mitigate this situation and positively impact animal welfare. Shading, whether natural or artificial, is an effective form of environmental enrichment that alleviates the effects of high radiant heat loads on animals. Implementing shading was estimated to reduce the annual time spent in "Disabling" discomfort from 952 hours to approximately 148 hours per animal in regions with "Extreme Annual Load."

Impact of Shadow Provision on Beef Cattle Welfare

Hours per year, per animal, in thermal discomfort of different intensities in environments with and without effective shading in regions with different annual thermal loads

	Annoying	Hurtful	Disabling
Annual Heat Load: moderate			
Without shadow	56	25	1
With shadow	2	1	0
Annual Heat Load: high			
Without shadow	163	211	69
With shadow	19	6	15
Annual Heat Load: very high			
Without shadow	433	629	204
With shadow	53	75	22
Annual Heat Load: extreme			
Without shadow	760	1527	952
With shadow	129	247	148

Source: Welfare Footprint Institute • Created with Datawrapper

Prediction of accumulated annual time (by hours/year, per animal) in different intensities of thermal discomfort (Annoying, Hurtful, Disabling) for Bos indicus cattle, in environmental settings with and without the availability of effective shading, as a function of annual heat load categories (Moderate, High, Very High, Extreme). The values reflect the sum of the annual exposure time to each ICC level, assuming that shading reduces daily thermal exposure by one ICC level.

Shading sources reduce the time cattle spend in intense thermal discomfort (“disabling”) by approximately 117, 200, or 267 hours per animal over a 120-day period in regions with high, very high, or extreme annual heat loads, respectively. This represents an investment with a triple return: significant improvements in animal well-being, lower mortality rates, and higher profitability for producers.

SHADING FOR CATTLE IS A STRATEGY THAT MAKES ECONOMIC SENSE

Shading is one of the most effective investments in animal welfare. In addition to improving well-being and reducing mortality, shading can generate considerable net profit. Considering the initial cost of R$400 to R$500 per 3 m² "projected shade" (smart shading concept; Maia et al., 2023) and conservatively estimating the structure's lifespan at 10 years with three annual 110–120 day finishing cycles, the cost of shading per animal over 10 years is R$13–R$17. This cost is offset by the increased feed efficiency resulting in higher weight gain. For instance, *Bos indicus* gain approximately 5 kg more in carcass weight (330 kg versus 325 kg) when shading is effective. With the average arroba price of beef at R$250–300 (R$16–20/kg), this weight increase represents an additional income of R$67–87 per animal. This figure already subtracts the cost of the structure. Thus, there is a gain of R$67,000–R$87,000 for every thousand animals processed during the finishing stage.

THIRD-PARTY SUPPLY CHAIN MANAGEMENT

Our third-party supply chain includes suppliers of raw materials, including cattle, pigs, poultry, fish, milk, and eggs. We actively manage our structured, transparent supply chain guided by open communication and a shared commitment to continuous improvement with our suppliers. In short, our strategy focuses on three key areas:

1. Mapping AW practices.
2. Sharing our AW guidelines and best practices.
3. Promoting transparency and managing AW-related risks.

1. Mapping AW Practices

In 2022, the mapping of animal handling and breeding practices began through self-assessment questionnaires. These questionnaires have been essential for developing engagement strategies and improving animal welfare indicators continuously. The questionnaires are divided into three sections: Animal Welfare Indicators in Breeding, Animal Welfare Indicators in Slaughter Units, and Supplier Socio-Environmental Management. A third-party organization, Instituto Biosistêmico (IBS), reviews the responses along with the AW team at Minerva Foods. We contact suppliers when needed to clarify any questions regarding the information provided. We regularly update the questionnaires to improve clarity and objectivity, making them easier to complete and ensuring consistent data collection.

PERFORMANCE OF AW INDICATORS – THIRD-PARTY SUPPLY CHAIN

Minerva Foods uses key performance indicators (KPIs) to guide strategic actions aimed at improving animal welfare continuously throughout its third-party supply chain (see Table 5). These KPIs help Minerva Foods identify priority suppliers and issues, enabling the company to deliver customized training focused on critical areas.

Table 5: Key Performance Indicators in Minerva Foods' Third-Party Supply Chain.

KPI's (Ranches)	Cattle (beef))	Cattle (milk)	Broiler chickens	Pigs	Laying hens
Sick animals on the farm, %	-	10	-	6.1	-
*Mortality rate on the farm, %	-	-	4.87	2.5	4.5
**Signs or indications of conflict with other animals	-		0.03	0.44	-
***Locomotion problems, %	0.32	2	0.57	0.60	-
Emaciated animals, %	0.15	-	0.22	0.30	-
KPIs (Slaughter Operations)					
Accidents during transportation, %	0.4	-	-	0.40	0.005
Dead on arrival at the slaughterhouse (DOA), %	0.44	-	0.30	0.21	0.25
Emergency slaughter, %	0.96	-	0.03	0.07	-
Mortality rate after housing at the unit, %	0.16	-	-	0.01	-
Animals with bruises or bone fractures, %	5.3	-	0.42	7.5	-

*Note: KPIs by species in our non-extractive fish chain are reported in Section 8. † Average pig mortality rate includes nursery, gestation/maternity, and finishing phases; *Main causes of mortality in the third-party chain: Pigs (Nursery: Low birth weight, insufficient breast milk intake, and bacterial gastrointestinal infections; Gestation: Locomotor disorders and pneumonia; Finishing: Bacterial infections – Broilers Viral and bacterial infections, locomotor problems, heat stress, and sudden death – Laying hens Viral/bacterial infections and locomotor problems. **Locomotor problems: Lameness is considered for pigs, beef cattle, and dairy cattle. For broilers, animals with gait abnormalities are considered. ***Signs/indicators of conflict with other animals: Pigs: Bites to the shoulder, vulva, navel, and/or ears; Broilers: Presence of abscesses.*
– information not mapped or reported.

2. Promoting animal welfare guidelines and best practices

The AW team visiting the pork supply chain.

In 2024, we conducted technical visits and held in-person and virtual workshops throughout our supply chain. A key highlight was our engagement with the pork supply chain in Argentina. This engagement provided a valuable opportunity to strengthen supplier relationships, communicate our public commitments, and develop collaborative strategies to advance AW practices at both production sites and sourcing operations.

1ST ANIMAL WELFARE AND QUALITY MANAGEMENT WORKSHOP FOR SUPPLIERS

inerva Foods hosted its first Animal Welfare and Quality Management Workshop for Suppliers in São Paulo, Brazil. The event was designed to strengthen the supply chain for animal-based raw materials — specifically beef, pork, and broiler chickens — by promoting alignment with the company's animal welfare policies and quality standards. The primary objective was to reinforce our corporate guidelines on best practices in animal welfare while ensuring that all stakeholders clearly understood the expectations for ethical and sustainable sourcing. The workshop brought together 45 participants, both in person and virtually, representing 15 companies from Minerva Foods' global supply chain. The event also welcomed several leading organizations in the field, including the Brazilian Animal Welfare Collaboration (COBEA), Compassion in World Farming (CIWF), and McDonald's — a key global strategic partner in the food industry. The workshop served as a platform for sharing experiences, deepening technical knowledge, and strengthening our ongoing engagement with suppliers. These efforts support the advancement of responsible animal production and help ensure alignment with both domestic and international market standards.

1ST ANIMAL WELFARE WEBINAR FOR THE GLOBAL FISH SUPPLY CHAIN

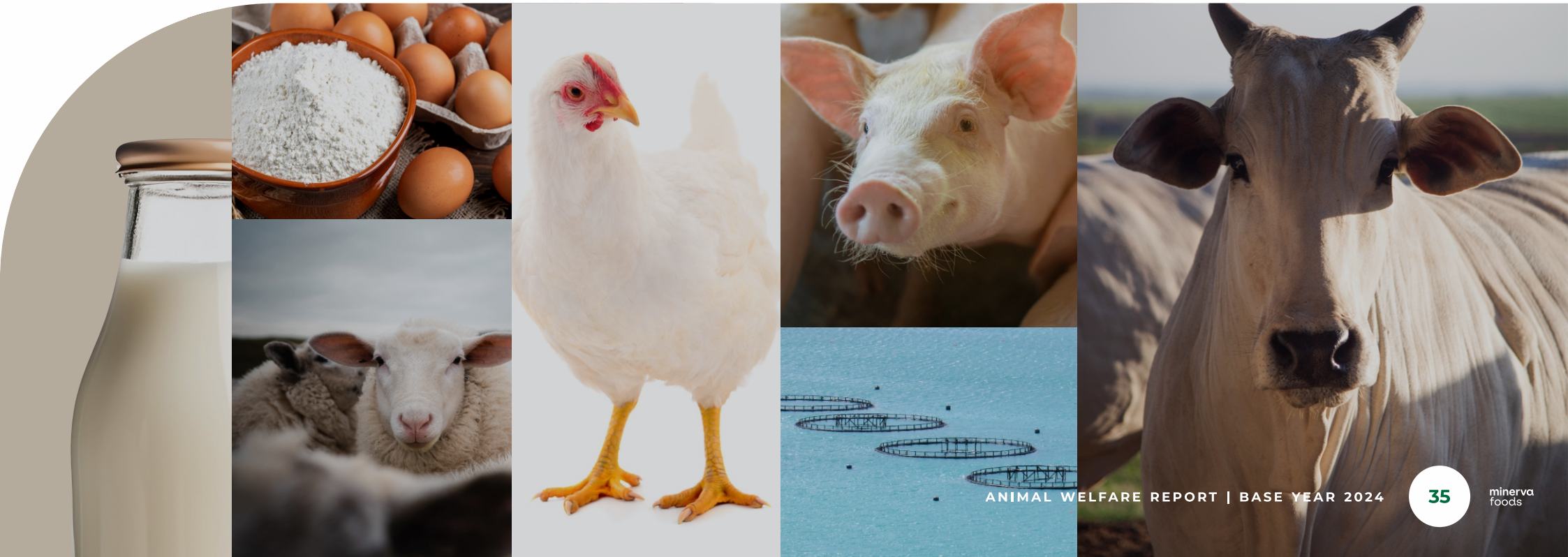
Minerva Foods hosted its first-ever Animal Welfare Webinar dedicated to the global fish supply chain. The event brought together 40 participants from 30 supplier companies to discuss responsible practices and the company's public commitments related to fish welfare. The webinar aimed to raise awareness and encourage partners to adopt good management practices aligned with international standards and Minerva Foods' animal welfare guidelines. The session featured a keynote presentation by Dr. Santiago Rucinque, a leading expert in aquaculture welfare and founder of FishWelfare. Dr. Rucinque focused on the practical aspects of responsible fish management and highlighted opportunities to improve welfare across production systems. According to Dr. Rucinque

"Initiatives like this place animal protein companies such as Minerva Foods at the forefront of industry progress, particularly given that fish welfare remains an emerging concern in non-European countries. This webinar represents a milestone for the sector and serves as a crucial starting point for identifying critical challenges and improving living conditions for fish within the supply chain. The company's leadership in this space is essential to driving adoption of best practices across the industry. This initiative underscores Minerva Foods' commitment to fostering more ethical and sustainable practices across all links in its supply chain, including aquaculture."

3. Transparency and Risk Management in Animal Welfare

In 2025, Minerva Foods advanced the development of management tools designed to strengthen governance of AW across its third-party supply chain. One key initiative is creating a proprietary auditing protocol based on leading international standards and guidelines. Starting in 2026, the protocol will facilitate a structured, recurring audit cycle in the supply chain of animal-based raw materials, including cattle, pigs, and broiler chickens. This initiative aims to improve the transparency and traceability of sourcing practices while standardizing the evaluation of welfare-related procedures across suppliers.

Additionally, significant progress has been made in developing an AW risk matrix. This strategic tool is designed to strengthen the management of third-party suppliers of animal raw materials by focusing on those that meet our animal welfare standards, demonstrate a commitment to improving welfare indicators within their own supply chains, implement corrective actions, and proactively mitigate risks to the company. The matrix provides an objective framework for assessing and classifying suppliers based on their AW practices and commitment to improvement. This data will be essential for enabling Minerva Foods' raw material purchasing teams to make more informed, responsible, and strategic decisions when selecting suppliers.



THIRD-PARTY AUDITS AND CERTIFICATIONS: OPERATIONS, FARMS, AND THIRD-PARTY SUPPLIERS

AW CERTIFICATION AT OPERATIONAL AND SUPPLIER LEVELS

In 2024, Minerva Foods achieved a significant milestone by becoming the first beef company in Latin America to receive Welfair® certification, further solidifying its position as a leader in animal welfare practices. This internationally recognized certification is grounded in the Welfare Quality® and AWIN® (Animal Welfare Indicators) protocols, which are founded on four fundamental principles of animal welfare: proper nutrition, adequate housing, good health, and the ability to exhibit natural behaviors. Welfair® certification is distinguished by its comprehensive, integrated approach, which evaluates animal welfare across the entire production chain—from supplier operations to processing facilities. Audits are conducted in person by independent, accredited entities and follow rigorous, standardized methodologies. As of 2024, six of Minerva Foods' partner ranches and one slaughter unit in Brazil have received Welfair® certification.

In Uruguay, several of Minerva Foods' suppliers are certified under the Global Animal Partnership (GAP) – Pasture Raised program (Step 4). Suppliers must meet rigorous criteria to obtain this certification, including raising animals on pasture for at least 75% of their lives and applying management practices that support natural behaviors, such as weaning at six months of age. In 2024, Minerva Foods sourced 43,493 animals from GAP-certified ranches, accounting for 8.5% of all cattle acquired in the country.

Organic production continues to serve as a competitive advantage for the company. Minerva Foods holds organic certifications in accordance with European regulations (EC Regulations No. 834/2007 and No. 889/2008) as well as the U.S. National Organic Program (NOP). These standards ensure full traceability of origin, prohibit the use of antibiotics and hormones, and maintain high animal welfare standards. In 2024, certified organic production represented 12.6% of the company's total output.

In Colombia, the Bucaramanga and Ciénaga de Oro units continued to meet the standards of the Colombian Beef – Grass Fed certification. This certification recognizes sustainable practices with a focus on animal welfare, extensive grazing systems, and animal health. It ensures that animals are raised exclusively on pasture, allowing them to exhibit natural behaviors such as grazing and social interaction. In 2024, all of Minerva Foods' beef production in Colombia came from Grass Fed certified ranches.

AW STANDARDS OF EXCELLENCE IN SLAUGHTER OPERATIONS

In 2024, Minerva Foods maintained full certification of its slaughter processes, aligning them with internationally recognized animal welfare standards. All cattle slaughter facilities in South America were audited by professionals accredited by the Professional Animal Auditor Certification Organization (PAACO), using the North American Meat Institute (NAMI) protocol. The NAMI protocol provides a rigorous, systematic assessment of animal welfare indicators at slaughter facilities using an objective scoring methodology. As a result of these audits, Minerva Foods achieved a remarkable 99.84% across its audited units. In Australia, both of our slaughter units are certified under the Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS), and achieved 100% compliance. The AAWCS protocol is based on national regulations and guidelines, ensuring the humane treatment of sheep during transportation, handling, stunning, and slaughter.

Table 6. Percentage of volume sourced under internationally recognized animal welfare certifications

Certification	Country	Animals slaughtered (heads)	% Total Volume
Organic	Brazil	159,242	6.9%
Organic	Paraguay	184,285	22.31%
Organic	Argentina	14,373.56	2.90%
Organic	Uruguay	169,201	32.93%
Welfair®*	Brazil	-	-
Zero Carbon Impact	Uruguay	95,742	18.63%
Global Animal Partnership (GAP)	Uruguay	43,493	8.47%
North American Meat Institute (NAMI)	Brazil	2,307,863	100%
North American Meat Institute (NAMI)	Uruguay	513,712	100%
North American Meat Institute (NAMI)	Paraguay	825,903	100%
North American Meat Institute (NAMI)	Colombia	270,722	100%
North American Meat Institute (NAMI)	Argentina	499,289	100%
Colombian Beef - Grass Feed	Colombia	270,722	100%
Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS)	Australia	3,670,310	100%

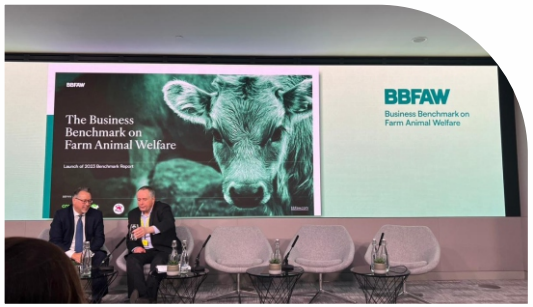
**Ranches and slaughter units certified with Welfair® in 2024, while the slaughter, processing, and marketing of products are planned for 2025.*

THIRD-PARTY RAW MATERIAL SUPPLY CHAIN WITH ANIMAL WELFARE CERTIFICATION

Among third-party beef suppliers, 44.1% reported having animal welfare certifications, including NAMI, Grass Fed, and AW Approved. In the chicken supply chain, 36% of suppliers reported holding certifications such as GAP and NAMI. For the non-extractive fish supply chain, the figure was 52.8%, with certifications like ASC and BAP. In the pork supply chain, 8.2% of suppliers reported certifications such as Welfcert and NAMI. To increase the percentage of certified suppliers in our third-party raw material supply chain, Minerva Foods plans to launch a cycle of animal welfare audits of suppliers' slaughter operations beginning in 2026. These audits will be carried out using our proprietary protocol, developed in accordance with NAMI standards, and conducted by Minerva Foods' Animal Welfare team members certified by PAACO.

COMMUNICATION, AWARENESS, AND DISSEMINATION OF ANIMAL WELFARE

At Minerva Foods, we believe that strengthening AW depends on adopting operational best practices and consistently investing in training, technical updates, and engaging in open dialogue with diverse audiences. In 2024, we expanded our efforts by focusing on communication, awareness, and disseminating AW-related information internally and externally. We engaged in a variety of learning experiences, including courses, training sessions, forums, fairs, and technical-scientific events, to support the continuous development of our team and advance our global AW agenda. We are also committed to raising awareness about animal welfare among our own operations, suppliers, and other stakeholders.



COMMUNICATION AND UPDATES ON AW

BBFAW — Disclosure of 2023 Results

Minerva Foods representatives participated in the official release of the 2024 Business Benchmark on Farm Animal Welfare (BBFAW) results. The BBFAW is a global initiative that publicly evaluates and compares companies' performance in animal welfare. The BBFAW event provided an opportunity to network with global AW leaders. We strengthened our engagement with the third sector by visiting two leading European NGOs, Compassion in World Farming (CIWF) and Four Paws, to share experiences and discuss effective animal welfare practices in Latin America, which differ from those used in Europe.

EuroTier and SIAL

These are the leading global trade fairs for animal production and innovation. Participating in these two events allowed the AW team to explore cutting-edge technologies applicable to animal protein production chains. The visit was instrumental in identifying innovative animal welfare solutions and gaining updated insights into sector challenges and emerging trends.

Visiting Norsk Kylling

The team also visited the Norsk Kylling poultry processing facility, which is recognized globally as a benchmark for animal welfare in poultry farming. The company fully complies with the European Chicken Commitment (ECC) criteria and is a model of ethical production. The visit provided an invaluable opportunity to observe best practices that can be implemented in our production chain.

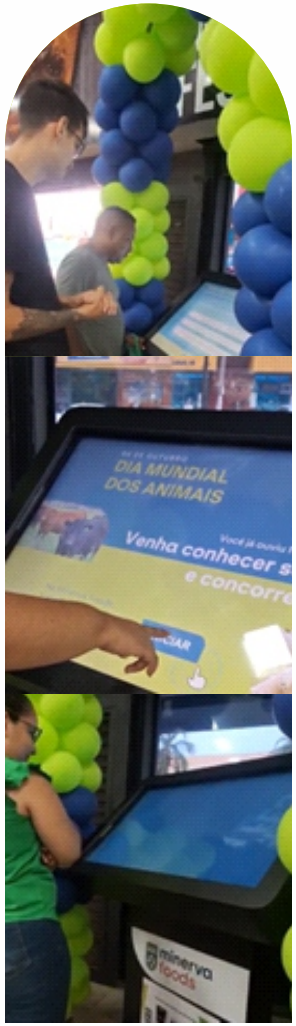
ISAE – International Society for Applied Ethology

We participated in the annual congress of the world's leading scientific society dedicated to the study of farm animal behavior and welfare. This event promotes technical and scientific knowledge, fostering discussions around evidence-based practices and reinforcing the foundation of our internal animal welfare efforts.

AWARENESS CAMPAIGNS IN AW

WORLD ANIMAL DAY CAMPAIGN

In celebration of World Animal Day on October 4, 2024, Minerva Foods organized a direct consumer awareness campaign at the point of sale. The event took place at Minerva Food Shop, the company's retail location, and aimed to raise public awareness about the importance of animal welfare and encourage respect and care for farm animals. Visitors were invited to participate in an educational activity in which they answered two questions related to animal welfare. Topics included nutrition, health, the environment, and the importance of positive human-animal interactions.



As part of the company's commitment to transparency and consumer awareness, the labels of the Estância 92 and Minerva Angus product lines include a QR code that links to detailed information about the products' sustainable origin, animal welfare practices, and quality standards applied throughout the production chain. The labels also highlight environmental efficiency certifications, such as Eu Reciclo (I Recycle) and Energia Renovável (Renewable Energy).

PROMOTING AW

As part of its institutional positioning and strategy for sharing technical knowledge, the Animal Welfare team at Minerva Foods has been actively participating in technical and scientific events. The team communicates best practices, reinforces the company's commitment to high animal welfare standards, and contributes to the technical education of students, professionals, and researchers in the sector. Below is a list of speaking engagements held by Minerva Foods' Animal Welfare team members in 2024:

TALK AT SECITAP (UNESP AGRICULTURAL SCIENCE AND TECHNOLOGY WEEK – JABOTICABAL)

Minerva Foods presented a lecture titled "Animal Welfare in Pre-Slaughter Management of Cattle," which highlighted critical control points in pre-slaughter handling and their impact on animal welfare and meat quality.

TALK FOR THE RUMINARE STUDY GROUP – UNESP/JABOTICABAL

The company provided institutional support to the group and gave a lecture titled “Influence of Animal Welfare on Meat Quality,” encouraging knowledge exchange between the production sector and academia.

POSTER PRESENTATION OF PRELIMINARY RESULTS OF THE WELFARE FOOTPRINT FRAMEWORK

Minerva Foods participated in the 9th International Conference on the Welfare Assessment of Animals at Farm Level and the 76th EAAP (European Federation of Animal Science). On this occasion, the company presented the study ***"Evaluating Animal Welfare at Farm Level: Innovations and Applications in the Minerva Foods Welfare Assessment Program"***.

TALK AT THE 58TH MEETING OF THE BRAZILIAN SOCIETY OF ANIMAL SCIENCE (SBZ)

Minerva Foods participated in the 58th Congress of the SBZ, the largest technical and scientific event in Brazil focused on animal production. The audience included over 1,500 producers, researchers, professors, technicians, and students. We presented a lecture titled "Thermal Comfort and Sustainability in Animal Production Systems in the Tropics," offering practical strategies to enhance the resilience of production systems to climate change and minimize their environmental impact.

TALK AT THE 21ST SYMPOSIUM ON COMMERCIAL EGG-LAYING POULTRY FARMING UPDATES

In September 2024, Minerva Foods attended the 21st Symposium on Commercial Egg-laying Poultry Farming Updates in Jaboticabal, São Paulo. The event gathered approximately 500 attendees, including producers, students, technicians, and faculty, to discuss sustainable egg production. During the event, we presented a lecture titled "Sustainable Management of the Thermal Environment on the Farm," sharing strategies to mitigate heat stress. We also presented recent findings from agrovoltaic animal studies, highlighting this technology's potential to improve animal welfare and increase productivity in tropical egg-laying poultry farming.

GLOBAL STATUS OF ANIMAL WELFARE PRACTICES AND PUBLIC COMMITMENTS OF MINERVA FOODS

This section provides an overview of the good animal welfare practices implemented throughout Minerva Foods' animal protein supply chain (see Figure 6), as well as updated public commitments at the global and species-specific levels.

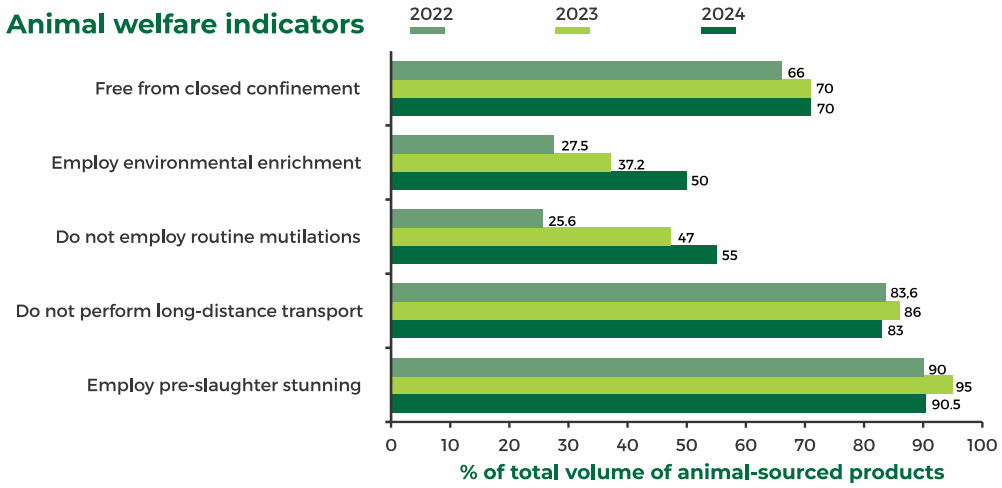


*Figure 6: Key themes reported based on the total volume of Minerva Foods' animal protein production chain (2022 = 1,041,403 metric tons; 2023 = 1,138,917.3 metric tons; 2024 = 1,265,387.2 metric tons). *For all indicators collected—whether from our own operations or third-party suppliers - a weighted average is used as the basis for calculation.*

1) Closed confinement:
When purchasing animals, raw materials, and animal-based ingredients, we prioritize those sourced from production systems that keep animals free from closed confinement. In 2024, 70% of the animals in the Minerva Foods supply chain were raised free from closed confinement.

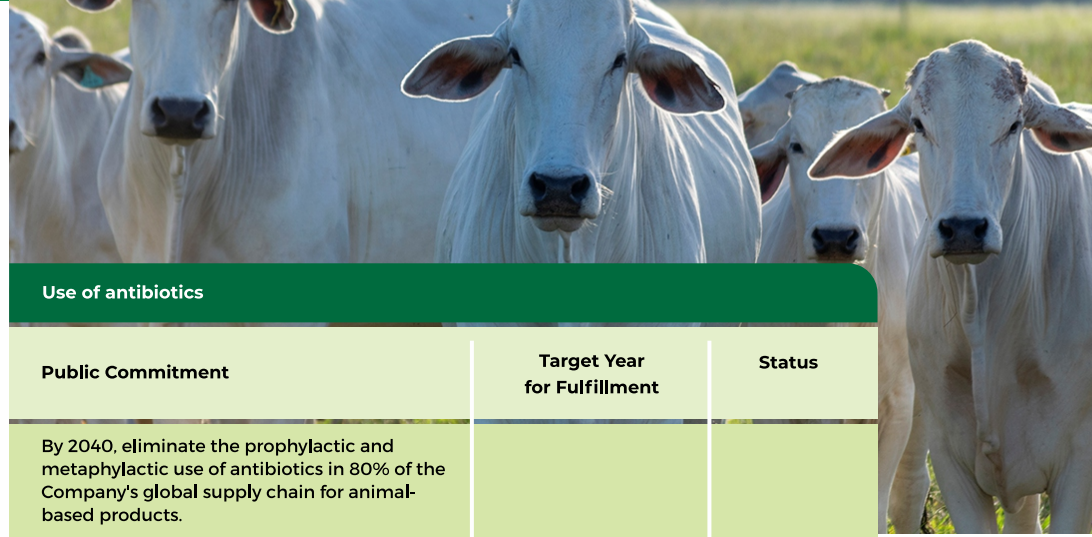
2)Environmental Enrichment:
We actively promote environmental enrichment to encourage natural behavior in animals throughout our supply chain. In 2024, 50% of our suppliers of animals, raw materials, and animal-based ingredients adopted some sources of environmental enrichment.

3) Routine Mutilations:
We encourage our suppliers to avoid routine mutilations and, when necessary, to adopt alternative methods that do not cause pain. In 2024, 55% of our suppliers reported not performing any type of routine mutilation on the animals.

4) Long-Distance Live Transport:
We ensure that animals are transported safely and limit journey times to eight hours for cattle, sheep, pigs, and fish and four hours for poultry. In 2024, 83% of the animals in our supply chain did not undergo long-distance live transport.

5) Pre-Slaughter Stunning:
We ensure that all animals in our supply chain are stunned prior to slaughter, except in specific cases where religious slaughter is required. In such cases, some animals may be slaughtered without pre-stunning. In 2024, 90.5% of the animals in our supply chain underwent pre-slaughter stunning.

GLOBAL COMMITMENTS



Acts of abuse, neglect, and mistreatment against animals

Public Commitment	Target Year for Fulfillment	Status
We do not tolerate abuse, neglect, or mistreatment of animals in the Company's global supply chain.	Recurring	Addressed (100%)

Genetic engineering practices and use of hormones as growth promoters

Public Commitment	Target Year for Fulfillment	Status
Do not use cloned animals in the Company's global supply chain.	Recurring	Addressed (100%)
Do not use genetically modified animals in the Company's global supply chain.	Recurring	Addressed (100%)
Do not use growth hormones in the Company's global supply chain.	Recurring	Addressed (100%)
Do not use cattle breeds with characteristics that increase the risk of anatomical disorders	Recurring	Addressed (100%)

Use of antibiotics

Public Commitment	Target Year for Fulfillment	Status
By 2040, eliminate the prophylactic and metaphylactic use of antibiotics in 80% of the Company's global supply chain for animal-based products. Interim goal: • 2022–2025: Complete mapping of the beef, sheep, and chicken supply chains regarding this topic. • 2024-2028: Complete mapping of the pork, layer hen, dairy cow, and fish supply chains. • 2029-2030: Report classification of antibiotics (critically important, highly important, important), and how they are used. • 2031-2039: Gradual compliance process and replacement of suppliers in cases of non-compliance. • 2040: Eliminate prophylactic and metaphylactic antibiotic use in 80% of the supply chain.	2040	In progress (42%)

In line with World Health Organization (WHO) recommendations, Minerva Foods is committed to addressing antimicrobial resistance. As part of this commitment, the Company encourages its suppliers to avoid using antibiotics and/or antimicrobials for prophylaxis (preventive use), metaphylaxis (treating groups with some sick animals), or growth promotion (enhancing growth rates). We recommend the rational use of antibiotics—prescribed by a veterinarian - only for treating clinical cases, as a strategy to alleviate animal suffering. We also promote alternative strategies to the use of critically important antibiotics, including probiotics, prebiotics, organic acids, rotational grazing, environmental enrichment, and reduced stocking density.

In 2024, 37% of Minerva Foods' suppliers reported not using antibiotics for prophylaxis, metaphylaxis, or growth promotion (see Figure 2). Of the remaining suppliers, 5.8% reported using antibiotics prophylactically, 2% metaphylactically, and 0.2% for growth promotion. Additionally, 16.5% of suppliers reported not conducting any screening, and 5% stated that they do not use antibiotics.

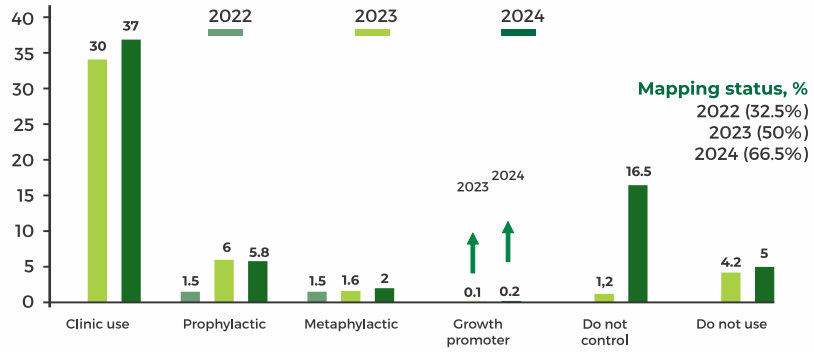


Figure 7: Use of antibiotics in Minerva Foods' global animal supply chain. Data is presented as a proportion of the total volume of animal products sold by Minerva Foods (2022 = 1,041,403 metric tons; 2023 = 1,138,917.3 metric tons; 2024 = 1,265,387.2 metric tons).

In the beef and dairy cattle supply chain, when antibiotic therapy is used, it is primarily for clinical treatment - mainly to treat respiratory diseases and ruminal acidosis. Prophylactic, metaphylactic, and/or growth-promoting antibiotic use is more frequently reported in the broiler, swine, and aquaculture supply chains. In the broiler supply chain, antibiotic treatments were most often reported for respiratory illnesses. In the swine supply chain, they were used to treat and/or prevent digestive system infections (see Figure 8).

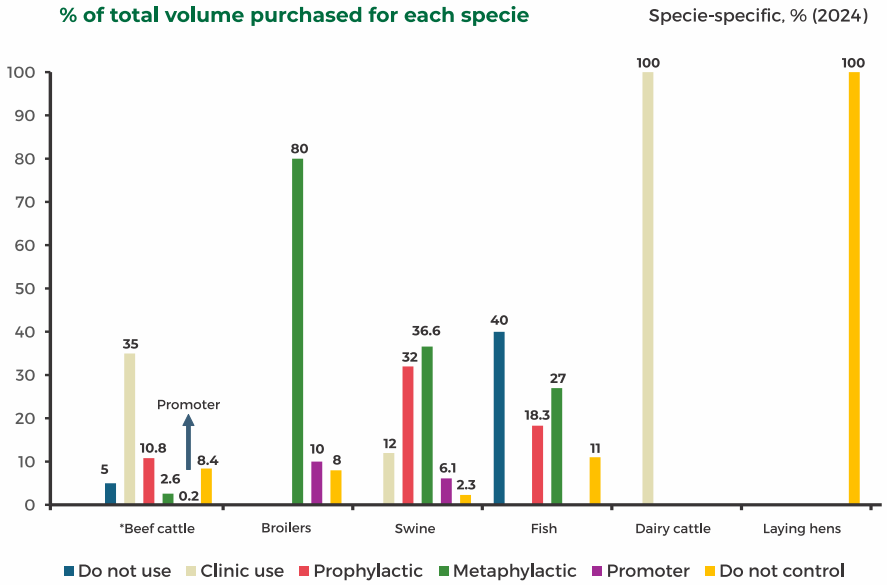


Figure 8: Types of antibiotic use by species in Minerva Foods' supply chain in 2024.
**Global beef cattle supply chain (including both company-sourced and third-party cattle).*

Table 7: Antibiotic categories and average reported volumes in Minerva Foods' beef, pork, and poultry supply chains.

Medically important antibiotics	*Beef cattle , mg kg^{-1}	Swine, mg kg^{-1}	Broilers, mg kg^{-1}
Critically important			
Quinolons	15	10.6	10
Cephalosporin (1st - 2nd generation)	20.3	-	-
Cephalosporin (3rd - 4th generation)	4.3	29.6	-
Macrolides	11.2	10.3	50
Glycopeptides	49	-	-
Polimixins	56	-	-
Penicilins	29	18.2	26.6
Highly important			
Aminoglycosides	16.6	3	1
Tetracyclines	30	17.3	26
Sulfonamides	9	22	26.3

The company has been implementing individualized action plans to support its supply chain in adopting protocols and technologies for collecting information on antibiotic use. These efforts focus primarily on suppliers who have not yet begun tracking this data. At the same time, the company is working to provide recommendations for effective therapies and management strategies to help reduce the use of antibiotics for prophylactic and metaphylactic purposes. These initiatives are carried out through annual workshops, training sessions, technical visits, awareness campaigns, and informational booklets.

Animal welfare certifications

Public Commitment	Target Year for Fulfillment	Status
By 2024, obtain Animal Welfare certification for all of the company's beef processing facilities. Interim goal: • 2023-2024: 2023–2024: Certification of all beef slaughter units under the NAMI (North American Meat Institute) protocol.	Recurring	Addressed (100%)
By 2024, obtain Animal Welfare certification for all of the company's sheep processing facilities. Interim goal: • 2022-2024: Certification of all sheep slaughter units under the Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS) protocol.	Recurring	Addressed (100%)

**The new sheep slaughter facility in Chile was not operational in 2024.*
A report on the facility's animal welfare certification will be published in 2025.

Reducing reliance on animal sourced-food

Public Commitment	Target Year for Fulfillment	Status
Act globally to reduce reliance on animal-sourced foods by decreasing waste, making better use of raw materials, shifting business focus, diversifying protein sources, and developing new products through reformulation.	Recurring	Addressed (100%)
By 2026, ensure that 15% of total burger production comes from formulations with a higher proportion of non-animal protein.	2026	In progress (12%)
By 2023, replace egg as an ingredient in 100% of the traditional pâté product line with plant-based alternatives (e.g., potato flour).	Recurring	Addressed (100%)

Minerva Foods has established clear business strategies to reduce its reliance on animal-sourced products. These strategies include waste reduction initiatives like Minerva Biodiesel and maximizing the use of raw materials through business units such as Minerva Casings, Minerva Ingredients, and Minerva Leather. The company is also shifting its business focus through a Corporate Venture Capital initiative that invests in startups developing solutions beyond the animal protein value chain. Additionally, Minerva Foods supports this transformation through its subsidiary, MyCarbon. For details on key initiatives and targets in each area, see Appendix I of this report.

Minerva Foods has also invested in the development and commercialization of alternative protein products. Its portfolio includes soy-based patties and medallions—burgers made with 60% plant-based ingredients. In 2024, the company sold 62.5 metric tons of soy patties, and 12% of its hamburger production was dedicated to medallions. Overall, sales of plant-based products grew by 20% in 2024 compared to 2023 (5,164 metric tons vs. 4,000 metric tons). The plant-based line also includes products such as wine, potatoes, and chocolate, among others. The company has invested in replacing animal-based proteins with plant-based alternatives in ingredient products such as milk and eggs. For example, powdered eggs, previously used in the traditional pâté product line-were replaced with plant-based ingredients like wheat and potato flour. After testing throughout 2022 and 2023, powdered eggs were fully removed from the formulation of the company's entire traditional pâté line. As a result, between 2022 and 2024, the company reduced its purchase of powdered eggs by 70%, totaling a reduction of 2.8 metric tons. In 2024, we also reduced our purchases of powdered milk and cream-based ingredients by 60% compared to 2023 (15 metric tons versus 39 metric tons).

The reduction of reliance on animal-based foods is overseen by our Global Animal Welfare Manager, Tâmara Borges, who coordinates activities in this area. Implementation is led by our R&D team. The topic is also addressed in meetings with C-level executives, administrative councils, and advisory boards, including the company's CEO. Daily oversight of KPIs related to farm animal welfare and efforts to reduce our dependence on animal-based products is carried out by the entire technical staff of the Corporate Animal Welfare department.

PUBLIC COMMITMENTS: SPECIES-SPECIFIC

GLOBAL BEEF CATTLE CHAIN

CAFOs

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
Ensure that at least 40% of animals and raw beef materials are sourced from production systems where cattle are not confined in CAFOs (Concentrated Animal Feeding Operations).	Recurring	99.70%	Addressed (71%)

Beef cattle represent 92% of Minerva Foods' supply chain. In 2024, the company purchased 1,169,556 metric tons of raw beef material—89.97% of which came from Minerva's own cattle supply chain, while 2.13% originated from third parties. The company has made the following public commitment regarding the global beef cattle supply chain.
Minerva Foods prioritizes the purchase of animals and raw materials from production systems that raise cattle free from CAFOs. In 2024, 71% of raw material acquired in the company's global beef cattle chain came from systems that raise animals free from CAFOs (see Figure 9).

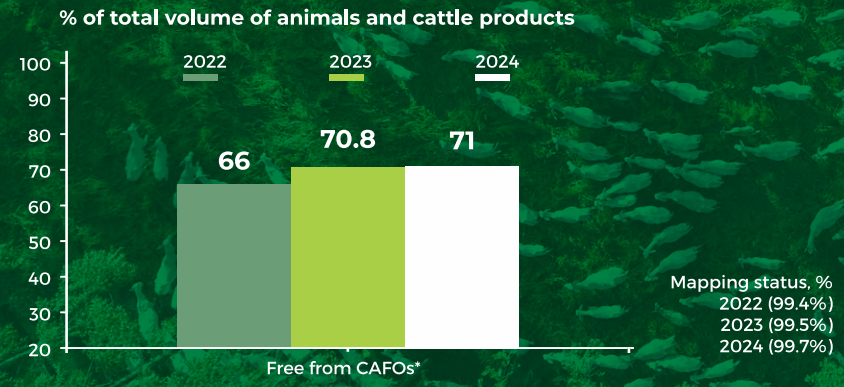


*Figure 9: Proportion of the global cattle supply chain (company-sourced and third-party) raised free of CAFOs. Total volume of animals and raw materials purchased by the company's global cattle supply chain (2022: 1,017,488 metric tons; 2023: 1,035,603 metric tons; 2024: 1,169,356 metric tons). See our glossary for the definition of CAFOs. *Data for 2022 and 2023 have been corrected based on a weighted average calculation.*

Environmental enrichment

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2035, 35% of the cattle and raw material purchased shall come from production systems that implement environmental enrichment practices. Interim goal: • 2022-2025: Mapping of the cattle finishing supply chain with regard to environmental enrichment. • 2030-2034: Planning and support for partner ranchers to implement environmental enrichment practices on their properties.	Recurring	62%	Addressed (50%)

In 2024, 50% of the cattle acquired at the ranch level were purchased from suppliers that implemented environmental enrichment practices, particularly the use of artificial or natural shade (see Figure 10). Other reported practices included water sprinklers, hiding places, and sources of sensory enrichment, such as stationary brushes that allow animals to scratch themselves.

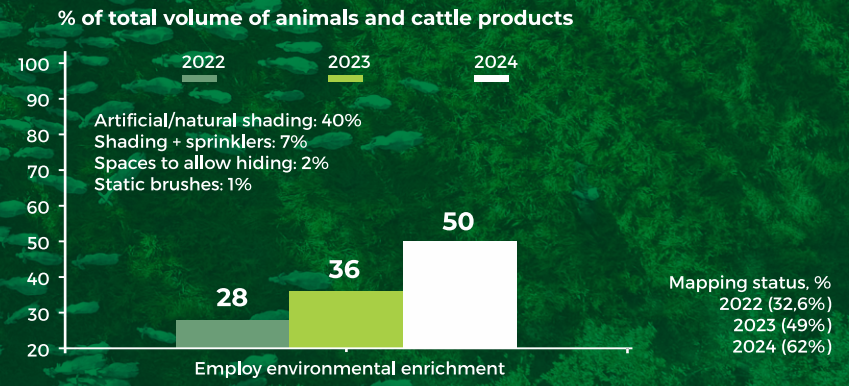


Figure 10: Proportion of the global cattle chain (company-sourced and third-party) that uses environmental enrichment practices. Total volume of animals and raw materials purchased from the company's global cattle chain: 2022 = 1,017,488 metric tons; 2023 = 1,035,603 metric tons; 2024 = 1,169,356 metric tons. Note: The total percentage of reported enrichment practices does not equal 50%, as multiple practices may be present on the same property.

Routine mutilations

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2025, 45% of cattle and raw materials will be sourced from production systems that do not perform disbudding or dehorning procedures. Interim goal: • 2022-2023: Mapping the occurrence of disbudding/dehorning in our operations • 2023–2024: Encouraging ranchers and suppliers to eliminate the practice of disbudding/dehorning	Recurring	62%	Addressed (56.5%)

The Company considers dehorning of adult animals, castration, and branding to be mutilation practices within its global beef cattle supply chain. We encourage our partner ranchers to adopt genetic selection for polled animals, which helps eliminate the need for dehorning over time. We also promote management strategies that avoid mixing animals of different categories or unknown origin, as this reduces the likelihood of fighting—and consequently, the need for dehorning. In 2024, 56.5% of animals in the Company's global cattle chain were sourced from suppliers who reported not performing dehorning (see Figure 11).

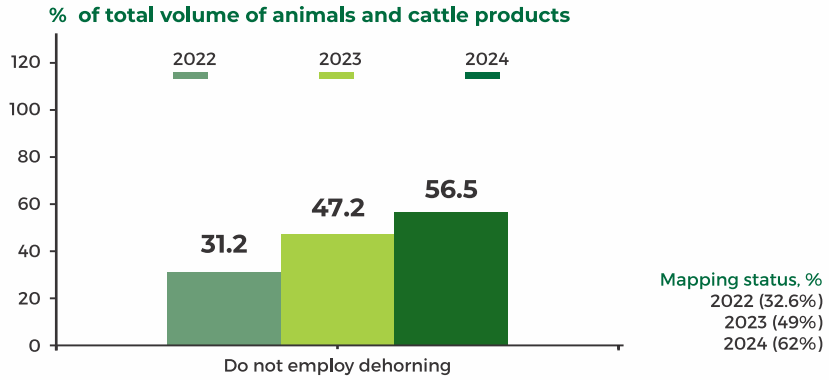


Figure 11: Proportion of the global cattle chain (company-sourced and third-party) that does not perform dehorning practices. Total volume of animals and raw materials purchased by Minerva Foods' global cattle chain: 2022: 1,017,488 metric tons; 2023: 1,035,603 metric tons; 2024: 1,169,356 metric tons.

We also encourage our rancher partners to adopt alternative identification methods in place of branding. In 2024, 8.6% of suppliers reported using ear tags and/or tattoos for animal identification. Surgical castration is not encouraged, as our practice of early slaughter limits the need for this procedure. Based on our mapping of 99.7% of the global cattle supply chain, 78.8% of animals were not subjected to surgical castration.

Long-distance live transport

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2025, ensure 85% of animals in Minerva Foods' global beef cattle supply chain undergo pre-slaughter transport journeys of eight hours or less. Interim goal: • 2022-2024: Map the cattle transport chain for slaughter across all company processing facilities. • 2023-2025: Gradually adjust the purchasing radius for company-sourced cattle to ensure transport times of eight hours or less. • 2024: Source beef raw materials from cattle suppliers guaranteeing transport times under eight hours. • 2025: Achieve 85% of total cattle volume with pre-slaughter transport times of eight hours or less. • 2023-2025: Gradually adjust the purchasing radius for third-party cattle suppliers to ensure transport times of eight hours or less.	2025	99.7	In progress (83%)

In 2024, 83% of animals in Minerva Foods' global beef cattle supply chain were transported for eight hours or less (see Figure 12).

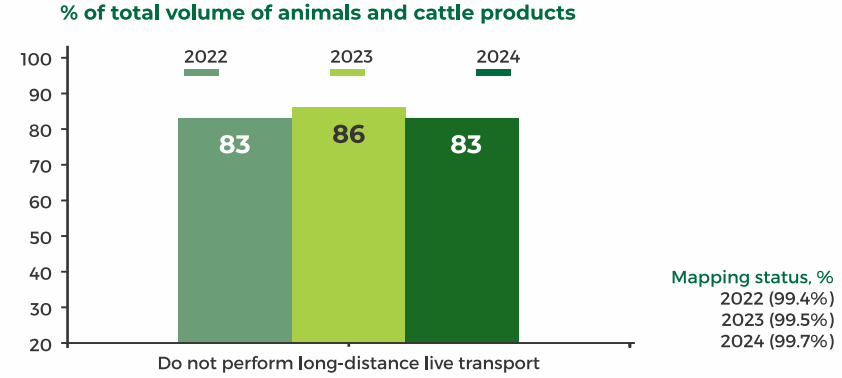


*Figure 12: Proportion of the global beef cattle supply chain (company-sourced and third-party) with pre-slaughter transport times of eight hours or less. Total volume of animals and raw materials sourced for the Company's global beef cattle supply chain: 2022 = 1,017,488 metric tons; 2023 = 1,035,603 metric tons; 2024 = 1,169,356 metric tons. *Note: 2022 and 2023 data reflect corrections for weighted average calculations*

Pre-slaughter stunning

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2026, ensure 93% or more of beef cattle in Minerva Foods' global supply chain are stunned before slaughter in company and third-party slaughter operations. Interim goal: • 2022-2023: Map pre-slaughter stunning practices across all global company operations. • 2023-2025: Gradually improve stunning methods for beef cattle. • 2026: Achieve 93% or higher stunning rate for beef cattle in company and third-party slaughter operations.	2026	99.7	In progress (90.5%)

In 2024, 90.5% of animals in Minerva Foods' global beef cattle supply chain underwent pre-slaughter stunning, primarily using captive-bolt stunning (89.84%) and non-penetrating bolt stunning (0.66%) (see Figure 13).

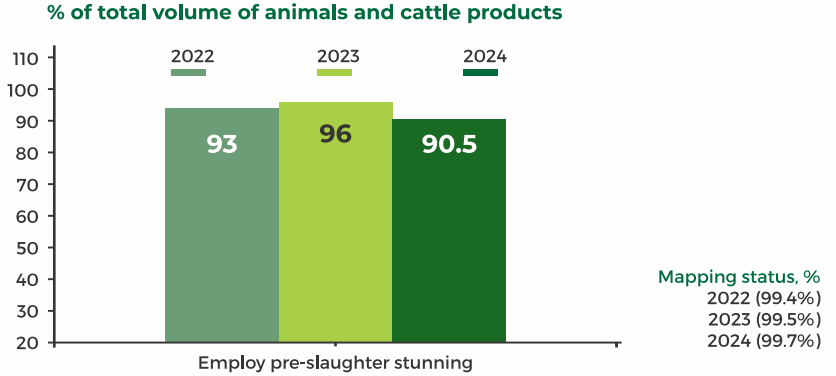


*Figure 13: Proportion of the global beef cattle supply chain undergoing pre-slaughter stunning. Total volume of animals and raw materials sourced: 2022 = 1,017,488 metric tons; 2023 = 1,035,603 metric tons; 2024 = 1,169,356 metric tons. *Note: 2022 and 2023 data reflect corrections for weighted average calculations.*

Inhumane practices in the production chain

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2026, ensure 100% of company-sourced and third-party cattle in Minerva Foods' global beef cattle supply chain are not raised on fully slatted floors. Interim goal: • 2022-2023: Map the entire cattle supplier chain to identify fully slatted floor usage. • 2024-2025: Gradually phase out suppliers using fully slatted floors, prioritizing alternative flooring systems. • 2026: Achieve 100% of company-sourced and third-party cattle free from fully slatted floors.	Recurring	100	Addressed (100%)
Ensure 100% of company-sourced and third-party cattle in Minerva Foods' global beef cattle supply chain are raised free from tethers and individual pens, allowing gregarious behavior. Interim goal: • Mapped the entire cattle supplier chain, confirming all suppliers (100%) raise cattle without tethers or individual pens, enabling gregarious behavior. Contractual requirements implemented to enforce this standard.	Recurring	100	Addressed (100%)

Minerva Foods monitors three inhumane practices in its global beef cattle supply chain: fully slatted floors, tethering, and mother-calf separation. Fully slatted floors are not used in Latin American beef production. In Confined Animal Feeding Operations (CAFOs), dirt floors predominate, with concrete floors used to a lesser extent. In 2024, we mapped 100% of our global beef cattle supply chain, ensuring all cattle were sourced from suppliers not using fully slatted floors.

Minerva Foods ensures 100% of its beef raw materials come from production systems free of tethering and individual pens, practices that are uncommon in Latin American beef production. Our global beef cattle supply chain is 100% mapped to confirm all cattle are raised in group settings, promoting natural behavior.

We monitor mother-calf separation practices across the global beef cattle supply chain,

Ensuring 100% of calves are raised in groups from birth to adult stage.

Minerva Foods promotes humane weaning methods, such as two-stage weaning, to reduce stress for calves and mothers. In 2024, 13.5% of suppliers used traditional (abrupt) weaning, while 11.5% adopted humane methods, including side-by-side and controlled weaning (see glossary for definitions) (see Figure 14).

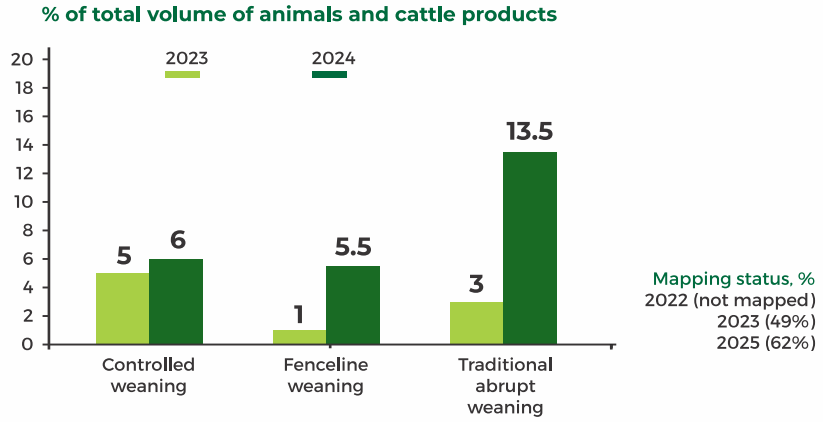


*Figure 14: Proportion of company-sourced and third-party cattle in the global beef cattle supply chain using various weaning practices. Total volume of animals and raw materials sourced: 2022 = 1,017,488 metric tons; 2023 = 1,035,603 metric tons; 2024 = 1,169,356 metric tons. *Note: 2023 data were corrected to reflect the percentage of total volume mapped, as initial reporting included only full-cycle cattle ranchers.*

GLOBAL SHEEP SUPPLY CHAIN

Minerva Foods' global supply chain includes sheep, representing 5.9% of its meat production. In 2024, the company sourced 74,816 metric tons of sheep meat, with 5.85% from company-sourced sheep and 0.05% from third-party sheep suppliers. This section outlines public commitments to enhance animal welfare in the global sheep supply chain.

Environmental enrichment

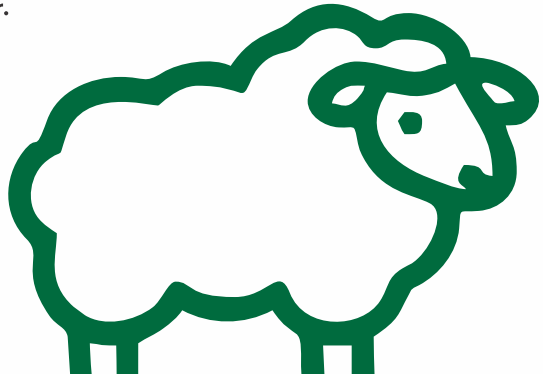
Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2040, ensure 15% of company-sourced sheep in Minerva Foods' global sheep supply chain benefit from environmental enrichment practices in slaughter operations. Interim goal: • 2022-2030: Map the global sheep supply chain to assess environmental enrichment practices. • 2031-2034: Encourage third-party sheep suppliers to implement environmental enrichment on their properties. • 2040: Achieve environmental enrichment for 15% of the total sheep volume in company slaughter operations.	2040	0%	In progress (0%)

In 2025, we began mapping environmental enrichment practices among third-party sheep suppliers in our global sheep supply chain. Progress on this indicator will be reported in the 2026 Animal Welfare Report, using 2025 as the baseline year.

Long-distance live transport

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2026, ensure 80% of sheep meat in Minerva Foods' global sheep supply chain is sourced from sheep suppliers with transport times of eight hours or less. Interim goal: • 2022-2023: Map the global sheep supply chain to assess pre-slaughter transport practices among sheep suppliers. • 2023: Ensure 90% of mapped sheep suppliers achieve pre-slaughter transport times of eight hours or less.	2026	99.05%	In progress (78%)

In 2024, 78% of animals in the global sheep supply chain were transported for periods of eight hours or less.



Pre-slaughter stunning

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2026, ensure 100% of sheep in Minerva Foods' global sheep supply chain are stunned before slaughter in company slaughter operations. Interim goal: • 2022-2023: Map the global sheep supply chain, including third-party sheep suppliers and Australian operations, to assess pre-slaughter stunning practices. • 2026: Ensure 100% of sheep in company slaughter operations are stunned before slaughter.	2026	99.05%	In progress (98.90%)

In 2024, 98.90% of sheep in the global supply chain were stunned prior to slaughter, with electronarcosis being the preferred method. Meanwhile, 0.15% of raw sheep material was purchased from suppliers who claimed not to have information on this indicator.

Inhumane practices in the production chain

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
Minerva Foods ensures 100% of sheep and sheep meat in its global sheep supply chain are sourced from production systems free of tethers and individual pens.	Recurring	100	Addressed (100%)

In 2024, 100% of the raw sheep material was sourced from pasture-raised animals that were allowed to roam freely and express their gregarious behavior. They were not kept in individual pens.

BROILER CHICKEN SUPPLY CHAIN

This section outlines Minerva Foods' public commitments for the broiler chicken supply chain, including the target years for fulfillment and the current status of each commitment.

Closed confinement

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
Minerva Foods ensures 100% of broiler chicken meat in its broiler chicken supply chain is sourced from cage-free production systems. Interim goal: • In 2022 mapped the global broiler chicken supply chain to assess production systems, implementing cage-free requirements through supplier contracts. • Ensured 100% third-party broiler chicken suppliers maintain cage-free production systems.	Recurring	100	Addressed (100%)
By 2023, ensure 35% of broiler chicken meat in Minerva Foods' broiler chicken supply chain is sourced from production systems with low densities (30 kg/m² or less). Interim goal: • 2022: Map the global broiler chicken supply chain to assess production systems of third-party broiler chicken suppliers. • 2023 – 2025: Project the scale-up of suppliers meeting low-density requirements of 30 kg/m² or less. • 2026 – 2029: Plan and implement the replacement of select suppliers to meet low-density standards.	Recurring	98	Addressed (42.7%)

In 2024, 98% of animals in the broiler chicken supply chain were raised in intensive farming systems, with 42.7% housed at low stocking densities (i.e., 30 kg/m² or less) (see Figure 15). Most of the reported breeds were fast-growing (e.g., Cobb, Ross, and Arbor Acres). However, 3.8% of the raw material used for broiler chickens in 2024 was purchased from systems using the slow-growing Hubbard breed (see Figure 16).

Table 8 shows the production systems reported in Minerva Foods' broiler chicken supply chain.

*Production system (Broilers)	2022	2023	2024
	Total volume (8,237 metric ton; n = 8)	Total volume (9,878 metric ton; n = 13)	Total volume (10,353 metric ton; n = 13)
Mapping status, %	100	87.30	98
Intensive systems, %	99.99	86.40	98
Free from closed confinement, %	0.001	0.95	0
Extensive systems, %	0.001	0.30	0
Semi-intensive systems, %	0	0.65	0

**See glossary of terms for definitions of reported rearing systems. *n represents total number of suppliers in the chain.*

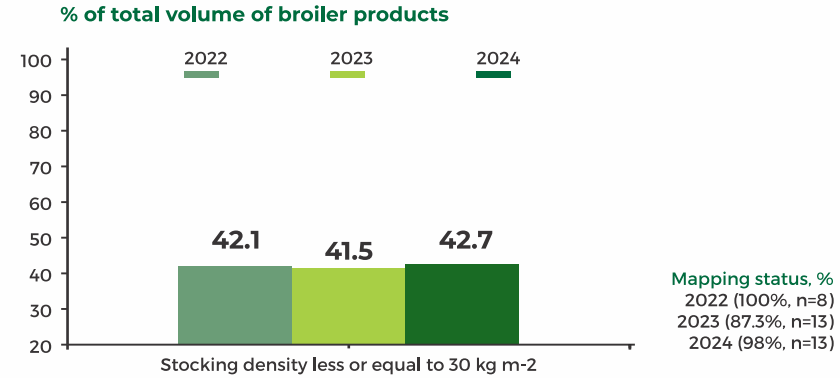


*Figure 15: Stocking density reported in Minerva Foods' broiler chicken supply chain. Total volume of broiler chicken meat: 2022 (8,237 metric tons); 2023 (9,878 metric tons); 2024 (10,353 metric tons). *n represents the number of third-party broiler chicken suppliers.*

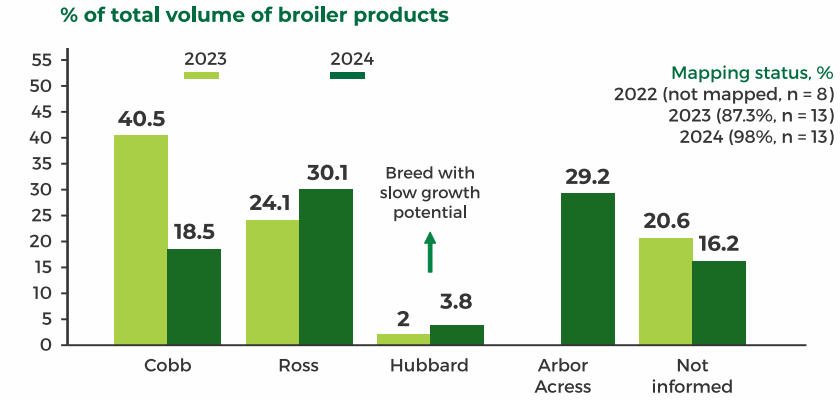
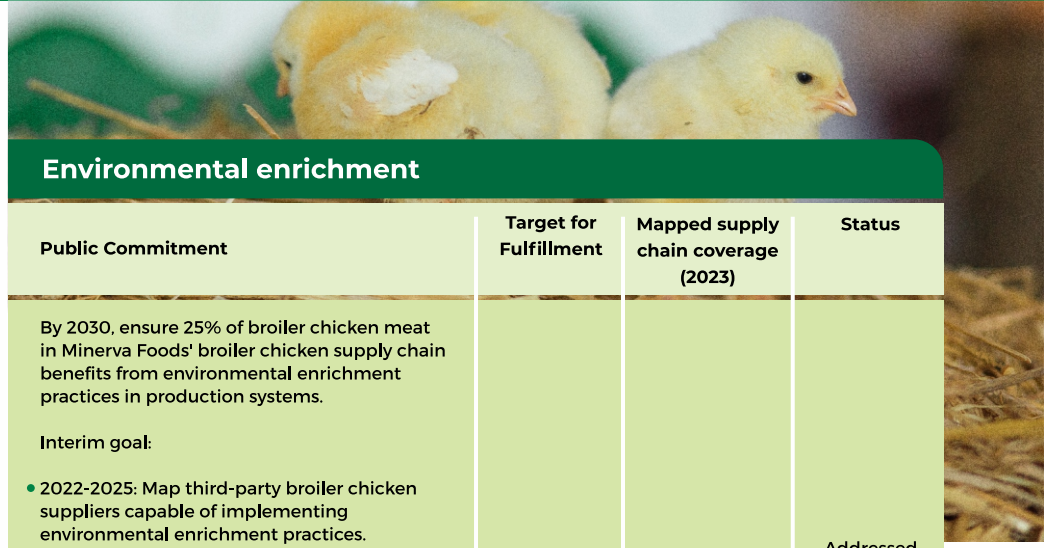


*Figure 16: Broiler breeds and strains reported in Minerva Foods' broiler chicken supply chain. Total volume of broiler chicken meat: 2022 (8,237 metric tons); 2023 (9,878 metric tons); 2024 (10,353 metric tons). *n represents the number of third-party broiler chicken suppliers.*



Environmental enrichment

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2030, ensure 25% of broiler chicken meat in Minerva Foods' broiler chicken supply chain benefits from environmental enrichment practices in production systems. Interim goal: • 2022-2025: Map third-party broiler chicken suppliers capable of implementing environmental enrichment practices. • 2026-2028: Assess partnerships with suppliers to adopt environmental enrichment practices. • 2029: Gradually adjust sourcing, projecting and replacing select suppliers based on their ability to provide environmental enrichment as a business strategy. • 2030: Achieve environmental enrichment for 25% of broiler chicken meat sourced from the global supply chain.	Recurring	98	Addressed (54.2%)

In 2024, 54.2% of broiler chicken meat in Minerva Foods' broiler chicken supply chain was sourced from suppliers that implemented sources of environmental enrichment. The primary practices reported included perches or platforms and materials for exploration and foraging, such as straw (see Figure 17).

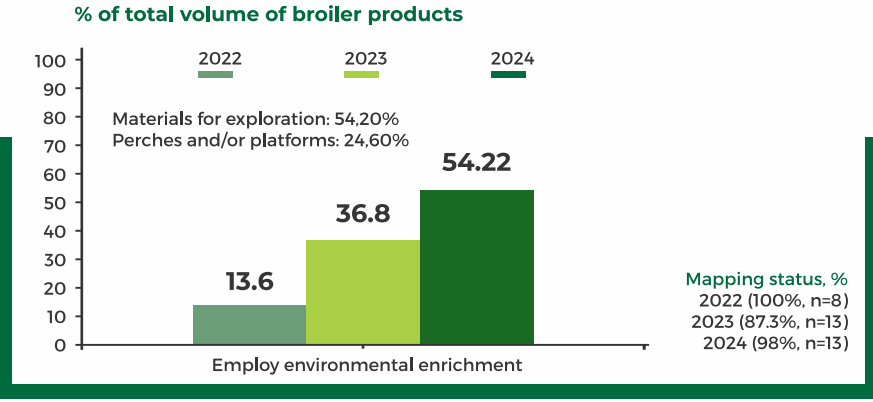


*Figure 17: Environmental enrichment practices reported in Minerva Foods' broiler chicken supply chain. Total volume of broiler chicken meat: 2022 (8,237 metric tons); 2023 (9,878 metric tons); 2024 (10,353 metric tons). *n represents the number of third-party broiler chicken suppliers. Note: The sum of percentages for individual practices may exceed 54.2%, as multiple practices may be implemented on the same farm.*

Routine mutilations

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
Minerva Foods ensures no broiler chicken meat in its broiler chicken supply chain is sourced from production systems practicing wing clipping. Interim goal: • 2022: Map the broiler chicken supply chain to identify production systems practicing wing clipping. • 2023: Ensure no broiler chicken meat is sourced from suppliers using wing clipping in production systems.	Recurring	100	Addressed (100%)
Minerva Foods ensures no broiler chicken meat in its broiler chicken supply chain is sourced from production systems practicing toe clipping (phalanges). Interim goal: • 2022: Map the broiler chicken supply chain to identify production systems practicing toe clipping (phalanges). • 2023: Ensure no broiler chicken meat is sourced from suppliers using toe clipping in production systems.	Recurring	100	Addressed (100%)

In 2024, 100% of our broiler chicken supply chain was mapped, and attested that 100% raw materials were purchased from suppliers who do not practice wing and toe/phalange clipping on their chickens.

Long-distance live transport

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2030, ensure 60% of broiler chicken meat in Minerva Foods' broiler chicken supply chain is sourced from animals transported for four hours or less. Interim goal: • 2022-2025: Map the entire broiler chicken supply chain to assess transport times of third-party broiler chicken suppliers. • 2026-2029: Gradually adjust sourcing, projecting and replacing a significant portion of suppliers based on transport time as a business strategy. • 2030: Ensure 85% of mapped third-party broiler chicken suppliers source animals transported for four hours or less.	Recurring	98	Addressed (78%)

In 2024, 78% of the broiler chicken raw material was purchased from suppliers that reported transport times of less than or equal to 4 hours (see Figure 18).

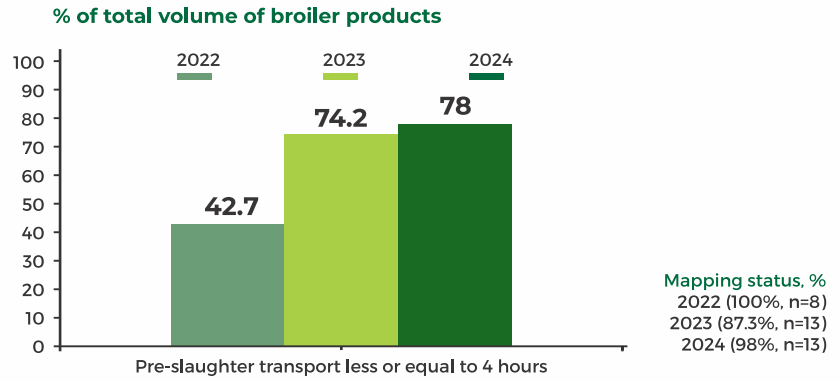


*Figure 18: Pre-slaughter transport times reported in Minerva Foods' broiler chicken supply chain. Total volume of broiler chicken meat: 2022 (8,237 metric tons); 2023 (9,878 metric tons); 2024 (10,353 metric tons). *n represents the number of third-party broiler chicken suppliers.*

Pre-slaughter stunning

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2026, ensure 100% of broiler chicken meat in Minerva Foods' broiler chicken supply chain undergoes pre-slaughter stunning in slaughter operations. Interim goal: • 2022: Map the broiler chicken supply chain to assess pre-slaughter stunning practices. • 2023-2025: Gradually adjust sourcing, projecting and replacing suppliers based on pre-slaughter stunning as a business strategy. • 2026: Ensure all (100%) broiler chicken suppliers implement pre-slaughter stunning for animals.	2023	98	In progress (82%)
By 2040, ensure 2% of broiler chicken meat in Minerva Foods' broiler chicken supply chain for private label products is sourced from animals stunned using controlled atmosphere stunning with inert gas or multiphase systems, or electrical stunning without inversion. Interim goal: • 2025-2030: Assess partnerships with third-party broiler chicken suppliers employing controlled atmosphere or electrical stunning without inversion. • 2031-2039: Gradually adjust sourcing, projecting and replacing select suppliers based on stunning method as a business strategy. • 2040: Achieve 2% of broiler chicken meat sourced from suppliers using controlled atmosphere stunning (inert gas or multiphase systems) or electrical stunning without inversion.	2040	98	In progress (0%)

In 2024, 82% of broiler chicken meat in Minerva Foods' broiler chicken supply chain was sourced from suppliers implementing pre-slaughter stunning in company and third-party slaughter operations, all using immersion tank electrical stunning. Minerva Foods recognizes controlled atmosphere stunning with inert gas or multiphase systems, or electrical stunning without inversion, as the most effective method and is mapping and establishing partnerships with suppliers to adopt these practices.

PORK SUPPLY CHAIN

This section outlines Minerva Foods' public commitments for the pork supply chain, including the target years for fulfillment and the status of compliance.

Closed confinement

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2035, ensure 100% of pork meat for processed products in Minerva Foods' pork supply chain is sourced from sows kept in group-housed systems, free from individual stalls. Interim goal: • 2022-2025: Map the entire pork supply chain to assess group-housed gestation systems within the third-party pork suppliers. • 2026-2034: Gradually adjust sourcing, projecting and replacing suppliers based on group-housed gestation systems as a business strategy. • 2035: Ensure all third-party pork suppliers for processed products transition to group-housed gestation systems, free from individual stalls.	2035	89.7%	In progress (68.1%)

In 2024, 68.1% of pork meat in Minerva Foods' swine supply chain was sourced from suppliers implementing group-housed gestation systems for sows. Of this, 12.8% utilized the "Cobre e Solta" (mating-and-release) system, which limits individual stall use to four hours for handling purposes (see Table 9).

Table 9: Housing systems for sows during farrowing and gestation phase in Minerva Foods' pork supply chain.

*Sow housing	2022	2023	2024
	Total volume (5,961 metric ton; n = 13)	Total volume (6,668 metric ton; n = 14)	Total volume (6,094 metric ton; n = 23)
Mapping status,%	67.6	80.3	89.7
Free from farrowing crates, %	0	9.2	12.8
Group-housed sows**, %	50	50.3	55.3
"cobre e solta" mating-and-release system***, %	0	9.2	12.8

**See glossary for characterization of the housing systems.*
***Individual housing permitted up to 28–35 days.*
****Maximum individual housing does not exceed 4 hours.*

In 2024, 89.22% of animals in Minerva Foods' pork supply chain were raised in closed confinement systems (SISCON), while 0.41% of pork suppliers reported semi-extensive production systems (see Table 10).

Table 10: Production systems reported in Minerva Foods' pork supply chain.

*Production systems (Swine)	2022	2023	2024
	Volume total (5,961 metric ton; n = 13)	Volume total (6,668 metric ton; n = 14)	Volume total (6,094 metric ton; n = 23)
Mapping status, %	67.60	80.30	89.7
**Siscon, %	64.5	70	89.22
Free from closed confinement, %	3.20	10.25	0.41
Extensive systems, %	3.20	6.8	0
Semi-extensive systems, %	0	3.45	0.41
***Siscal, %	0	0	0

**See glossary for characterization of the production systems.*
***Intensive system of pigs raised in confinement.*
****Intensive system of pigs raised outdoors. *n represents the number of pork suppliers.*

Environmental enrichment

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2035, ensure 25% of pork meat in Minerva Foods' pork supply chain is sourced from systems implementing environmental enrichment practices. Interim goal: • 2023-2025: Map the entire pork supply chain to assess environmental enrichment practices. • 2023-2027: Identify third-party pork suppliers willing to adopt environmental enrichment techniques. • 2028-2032: Evaluate partnerships with suppliers to implement environmental enrichment practices. • 2033-2034: Gradually adjust sourcing, projecting and replacing 25% of suppliers based on environmental enrichment as a business strategy. • 2035: Achieve 25% of pork meat sourced from systems with environmental enrichment practices.	Recurring	89.7	Addressed (60.5%)

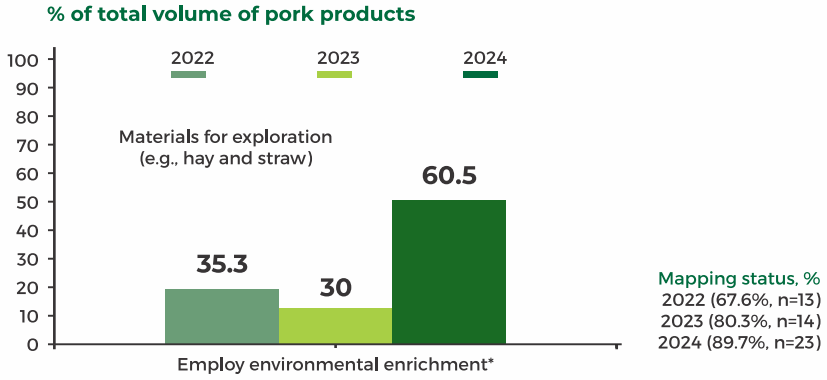


*Figure 19: Environmental enrichment practices in Minerva Foods' pork supply chain. Total volume: 2022 (5,961 metric tons); 2023 (6,668 metric tons); 2024 (6,094 metric tons). *n represents the number of pork suppliers.*

In 2024, 60.5% of pork meat in Minerva Foods' pork supply chain was sourced from suppliers that implemented environmental enrichment practices, such as materials for exploration and foraging, including hay and straw (see Figure 19).

Routine mutilations

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2030, ensure 80% of pork meat in Minerva Foods' pork supply chain is sourced from animals not subjected to tooth clipping or grinding. Interim goal: • 2023-2025: Map the entire pork supply chain to assess tooth clipping and grinding practices. • 2026-2029: Gradually adjust sourcing, projecting and replacing suppliers based on non-use of tooth clipping or grinding as a business strategy. • 2030: Ensure 80% of pork suppliers do not practice tooth clipping or grinding.	Recurring	89.7	Addressed (80%)
By 2030, ensure 100% of pork meat in Minerva Foods' pork supply chain is sourced from male pigs not subjected to surgical castration. Interim goal: • 2022-2025: Map the entire pork supply chain to assess surgical castration practices. • 2026-2029: Gradually adjust sourcing, projecting and replacing suppliers based on non-use of surgical castration as a business strategy. • 2030: Ensure all pork suppliers avoid surgical castration without anesthesia, prioritizing immunocastration.	2030	89.7	In progress (73%)

Public Commitment	Target for Fulfillment	Mapped supply chain coverage (2023)	Status
By 2035, ensure 25% of pork meat in Minerva Foods' pork supply chain is sourced from animals not subjected to tail docking. Interim goal: • 2023-2025: Map the entire pork supply chain to assess tail docking practices. • 2026-2034: Gradually adjust sourcing, projecting and replacing suppliers based on non-use of tail docking as a business strategy. • 2035: Ensure 25% of third-party pork suppliers do not practice tail docking.	2035	89,7	In progress (17%)
By 2040, ensure 35% of pork meat in Minerva Foods' pork supply chain is sourced from animals not identified through ear notching. Interim goal: • 2023-2025: Map the entire pork supply chain to assess identification notching practices. • 2025-2035: Gradually adjust sourcing, projecting and replacing suppliers based on non-use of notching for identification as a business strategy. • 2040: Ensure 35% of third-party pork suppliers do not use notching for animal identification.	2040	89,7	In progress (24,5%)

In 2024, Minerva Foods mapped mutilation practices in its pork supply chain, including tooth clipping/grinding, surgical castration of males, tail docking, and identification by ear notching. Of the pork meat sourced, 80% was from suppliers not practicing tooth clipping or grinding, 73% was from suppliers using immunocastration instead of surgical castration, 17% was from suppliers not practicing tail docking, and 24.5% was from suppliers not using ear notching for identification (see Figure 20).

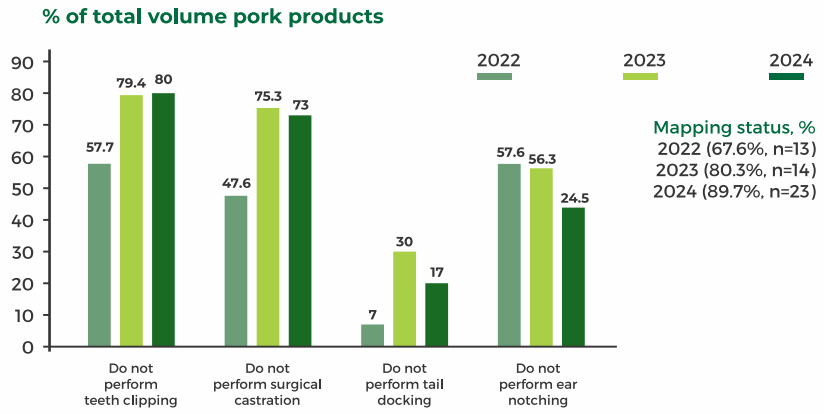


*Figure 20: Routine mutilations reported in Minerva Foods' pork supply chain. Total volume: 2022 (5,961 metric tons); 2023 (6,668 metric tons); 2024 (6,094 metric tons). *n represents the number of pork suppliers.*

Long-distance live transport

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2030, ensure 90% of pork meat in Minerva Foods' pork supply chain is sourced from animals not transported for more than eight hours. Interim goal: • 2022-2025: Map the entire pork supply chain to assess transport times. • 2030-2034: Gradually adjust sourcing, projecting and replacing suppliers based on transport time as a business strategy. • 2030: Ensure 90% of pork suppliers source animals transported for eight hours or less.	2030	89.7	In progress (77.15%)

In 2024, 77.15% of pork meat in Minerva Foods' pork supply chain was sourced from suppliers ensuring animal transport times of eight hours or less (see Table 11).

Table 11: Animal transport times reported in Minerva Foods' pork supply chain.

Pre-slaughter transport (Swine)	2022	2023	2024
	Total volume (5,961 metric ton, n = 13)	Total volume (6,668 metric ton, n = 14)	Total volume (6,094 metric ton, n = 23)
Mapping status, %	67.6	80.3	89.7
Transport duration up to 8 hours, %	50	61	77.1
Transport duration exceeding 8 hours, %	-	2.59	1.6
Transport journey time not monitored, %	-	16.10	11

**n represents the number of pork suppliers.*

Pre-slaughter stunning

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2026, Minerva Foods commits to sourcing pig raw materials with 100% subjected to pre-slaughter stunning. Interim goal: • 2022-2023: Mapping of the pork supply chain to assess pre-slaughter stunning practices; • 2026: Sourcing pig raw materials with 100% subjected to pre-slaughter stunning.	2026	89.7	In progress (84%)

In 2024, 84% of pork meat in Minerva Foods' pork supply chain was sourced from suppliers implementing pre-slaughter stunning, with 20.35% using electronarcosis, 63.69% using electrocution, and 1.82% using high-concentration CO2 chambers. Additionally, 5.7% of suppliers reported a lack of data on this indicator.

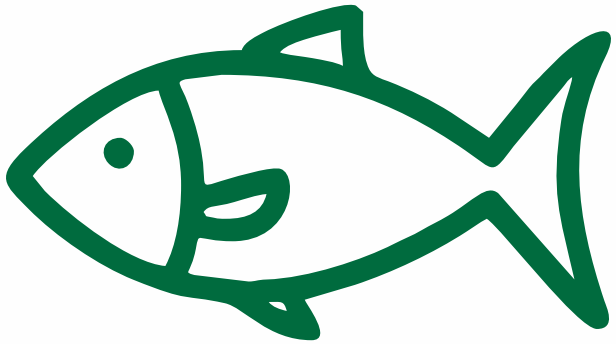
Inhumane practices in the production chain

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2045, ensure 85% of pork meat in Minerva Foods' pork supply chain is sourced from sows not raised on fully slatted floors. Interim goal: • 2022-2025: Map the entire pork supply chain to assess flooring practices for sows. • 2031-2044: Gradually adjust sourcing in Brazil and Argentina, projecting and replacing suppliers based on non-use of fully slatted floors as a business strategy. • 2045: Ensure 85% of pork meat is sourced from sows raised not raised on fully slatted floors.	2045	89.7	In progress (54.5%)

Minerva Foods considers the use of fully slatted floors for sows during farrowing and gestation an inhumane practice in its pork supply chain. In 2024, 54.5% of pork meat was sourced from suppliers housing sows on solid or partially solid floors.

FISH SUPPLY CHAIN

In 2024, Minerva Foods sourced 4,752 metric tons of fish raw material from a total of 20 fish suppliers, with 56.9% from non-extractive systems, including species such as Salmo salar (5.2%), Oreochromis niloticus (4.7%), and Pangasius hypophthalmus (47%). The extractive fish supply chain included Merluccius merluccius (20%) and Gadus chalcogrammus/Gadus morhua (23.1%). This section outlines public commitments for the fish supply chain, target years for fulfillment, status of compliance, and species-specific animal welfare indicators for non-extractive systems.



Routine mutilations

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2028, ensure 100% of fish raw material in Minerva Foods' fish supply chain is free from fin clipping. Interim goal: • 2022-2023: Map the fish supply chain to assess fin clipping practices. • 2025: Ensure 100% of fish raw material free from fin clipping.	2028	100%	In progress (81.7%)

In 2024, 81.7% of fish suppliers in Minerva Foods' fish supply chain reported not practicing fin clipping.

Long-distance live transport

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2025, ensure 100% of fish raw material from non-extractive systems in Minerva Foods' fish supply chain is sourced from animals not transported for more than eight hours. Interim goal: • 2022-2024: Map the non-extractive fish supply chain to assess transport times. • 2025: Ensure all fish suppliers for non-extractive systems implement a policy limiting transport to eight hours.	2025	100	In progress (75.9%)

Extractive fish in Minerva Foods' fish supply chain are not subjected to pre-slaughter transport. Thus, this indicator applies only to non-extractive systems. In 2024, 75.9% of fish raw material from non-extractive systems was sourced from suppliers reporting transport times of eight hours or less.

Pre-slaughter stunning

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2040, ensure 5% of fish raw material and products from non-extractive systems in Minerva Foods' fish supply chain are sourced from fish subjected to pre-slaughter stunning. Interim goal: • 2022-2023: Map the fish supply chain to assess pre-slaughter stunning practices. • 2023-2030: Detail effective stunning practices for non-extractive fish. • 2031-2035: Promote effective pre-slaughter stunning practices across the fish supply chain. • 2036-2039: Gradually adjust sourcing, projecting and replacing suppliers to meet the target.	Recurring	100	Addressed (17.5%)

Pre-slaughter stunning is not practiced in Minerva Foods' extractive fish supply chain; thus, this indicator applies only to non-extractive systems. In 2024, 17.5% of fish raw material from non-extractive systems was sourced from suppliers using pre-slaughter stunning methods, with 9.2% employing percussive stunning or cerebral concussion and 8.3% using electronarcosis.

DATA REPORTING BY SPECIES FOR THE NON-EXTRACTIVE FISHING CHAIN

Table 12: Non-extractive fish supply chain of Minerva Foods and its animal welfare indicators.

Non-extractive supply chain	*Species*		
	Salmo salar	*Oreochromis niloticus*	*Pangasius hypopthalmus*
Total volume 2024 (metric ton)	249.4	224.1	2,231.3
Number of total suppliers in 2024, n	3	1	5
Mapping status, %	100	100	100
Indicadores de bem-estar animal			
Animals kept at low stocking densities*, %	0	0	0
Pre-slaughter transport duration up to 8 hours, %	54	100	86
Animals free from fasting greater than 72 hours, %	100	100	100
Animais subjected to pre-slaughter stunning, %	100**	100***	0
Sick animals, %	2.94	1	-
Mortality rate, %	10	15	24.6
Emaciated animals, %	0.6	1	-
Animals with injuries, %	0.20	1	-

**Stocking density of 10 kg/m³ or less;*
***cerebral concussion;*
****electronarcosis; -not reported.*

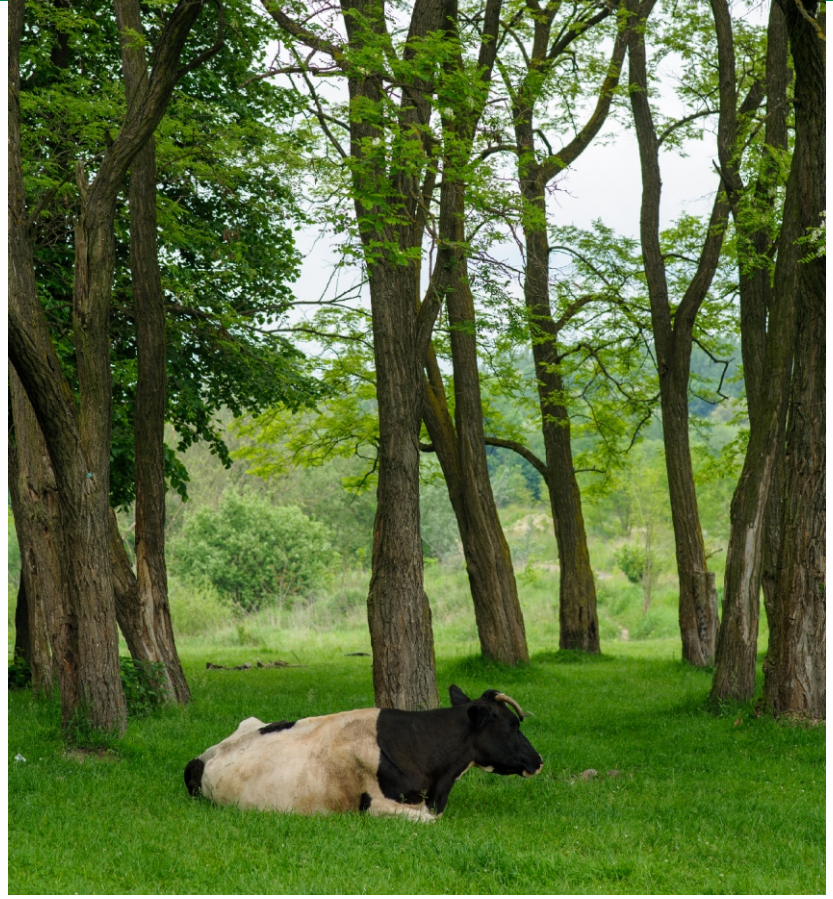
DAIRY CATTLE SUPPLY CHAIN

Minerva Foods sources powdered milk and cream for private label product manufacturing. This section outlines public commitments for the dairy supply chain, target years for fulfillment, and status of compliance, reflecting the company's dedication to animal welfare standards.

Closed confinement

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2023, ensure 100% of dairy ingredients in Minerva Foods' dairy supply chain are sourced from animals free of tethers or individual pens, maintained in group housing.	Recurring	100%	Addressed (100%)
By 2026, ensure 100% of dairy ingredients in Minerva Foods' dairy supply chain are sourced from dairy cows with at least six hours of daily pasture access. Interim goal: • 2022-2023: Map the dairy supply chain to assess pasture access practices. • 2024-2025: Project and replace third-party dairy suppliers to ensure six hours of daily pasture access for dairy cows. • 2026: Ensure 100% sourcing from suppliers maintaining dairy cows with at least six hours of daily pasture access for processed products, enforced contractually.	2026	100%	In progress (63.3%)

In 2024, 63.3% of dairy ingredients in Minerva Foods' dairy supply chain were sourced from systems providing dairy cows with at least six hours of daily pasture access for a minimum of 120 days per year. Of these, 53.3% of animals were raised in compost-barn or free-stall systems with access to external pastures, while 46.7% were raised in intensive pasture-based systems (see Figure 21). Refer to the glossary for production system definitions.



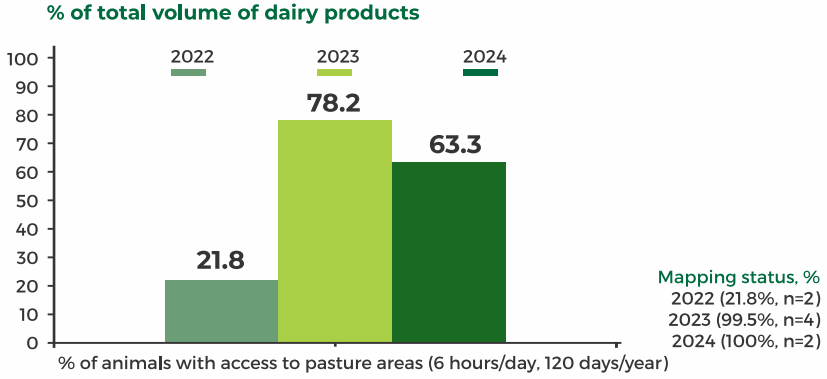


*Figure 21: Proportion of animals in Minerva Foods' dairy supply chain with six hours of daily pasture access for at least 120 days per year. Total volume: 2022 (5.2 metric tons); 2023 (39.2 metric tons); 2024 (15 metric tons). *n represents the number of dairy suppliers.*

Environmental enrichment

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2035, ensure 25% of dairy ingredients in Minerva Foods' dairy supply chain are sourced from dairy cows in systems with environmental enrichment practices. Interim goal: • 2023-2025: Map the dairy supply chain to assess environmental enrichment practices. • 2026-2030: Gradually adjust dairy suppliers to implement environmental enrichment in animal production systems. • 2030-2034: Project and encourage suppliers to adopt environmental enrichment practices.	Recurring	100	Addressed (100%)

In 2024, 100% of dairy ingredients in Minerva Foods' dairy supply chain were sourced from suppliers implementing environmental enrichment practices, including artificial and/or natural shade, evaporative cooling through sprinklers, and access to external pastures (see Figure 22).

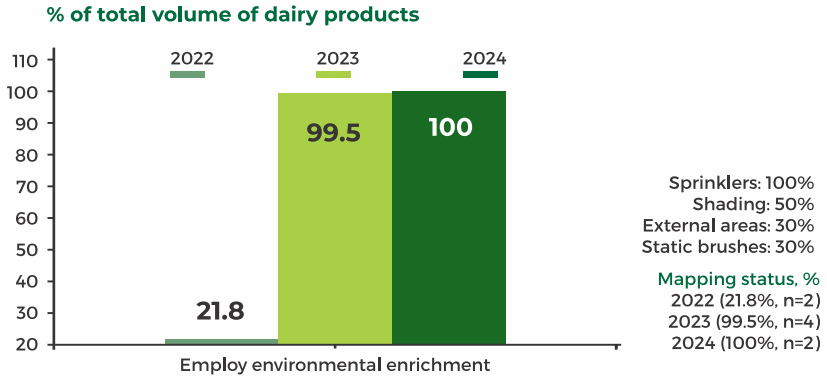


*Figure 22: Environmental enrichment practices in Minerva Foods' dairy supply chain. Total volume: 2022 (5.2 metric tons); 2023 (39.2 metric tons); 2024 (15 metric tons). Note: The sum of percentages for individual environmental enrichment practices may exceed 100%, as multiple practices may be reported on the same operation. *n represents the number of third-party dairy suppliers*

Routine mutilations

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2025, ensure 15% of dairy ingredients in Minerva Foods' dairy supply chain are sourced from animals not subjected to dehorning. Interim goal: • 2023-2030: Map the dairy supply chain to assess dehorning practices. • 2031-2034: 2031-2034: Gradual adjustment, projection, and replacing suppliers based on the dehorning criteria as a business strategy. • 2035: Achieve 15% of suppliers not practicing dehorning.	Recurring	100%	Addressed (24%)

In 2024, 24% of dairy ingredients in Minerva Foods' dairy supply chain were sourced from suppliers reporting no dehorning or other mutilation practices (see Figure 23).

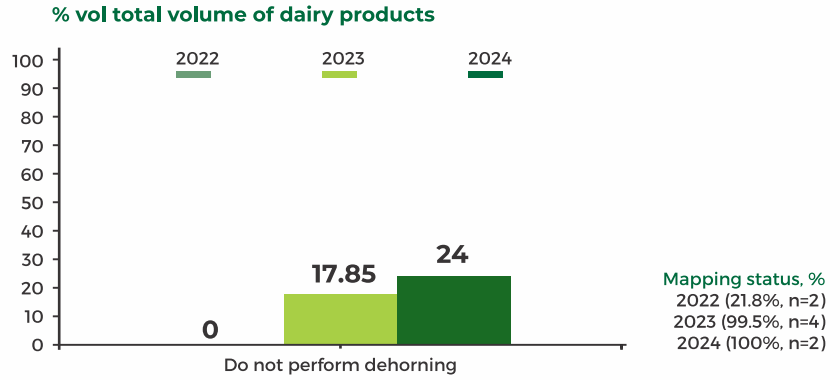


*Figure 23: Proportion of suppliers reporting no dehorning in Minerva Foods' dairy supply chain. Total volume: 2022 (5.2 metric tons); 2023 (39.2 metric tons); 2024 (15 metric tons). *n represents the number of third-party dairy suppliers*

Long-distance live transport

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2030, ensure 80% of dairy ingredients in Minerva Foods' dairy supply chain are sourced from animals with transport time of eight hours or less. Interim goal: • 2023-2025: Map the entire dairy supply chain to assess transport times. • 2030-2034: Gradually adjust sourcing, projecting and replacing dairy suppliers based on transport time as a business strategy. • 2030: Ensure 80% of third-party dairy suppliers source animals transported for eight hours or less in pre-slaughter processes.	2030	100%	In progress (75.8%)

In 2024, 75.8% of dairy ingredients in Minerva Foods' dairy supply chain were sourced from suppliers reporting transport times of eight hours or less for animals sent to slaughter units (see Figure 24).

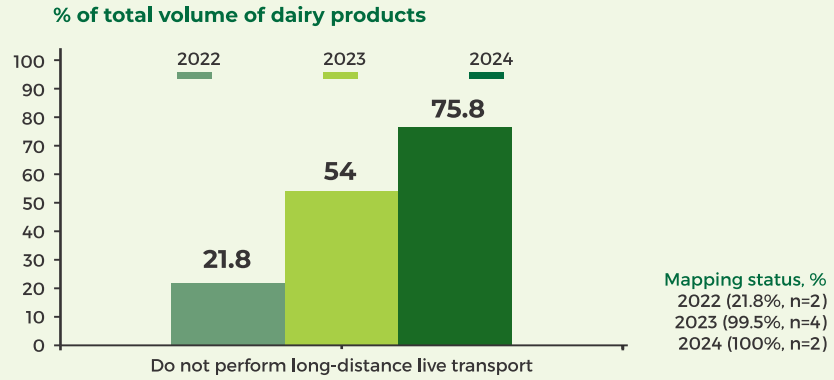


Figure 24: Proportion of suppliers reporting no long-distance transport in Minerva Foods' dairy supply chain. Total volume: 2022 (5.2 metric tons); 2023 (39.2 metric tons); 2024 (15 metric tons).
**n represents the number of third-party dairy suppliers*

Pre-slaughter stunning

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2027, ensure 100% of dairy suppliers in Minerva Foods' global dairy supply chain commit to pre-slaughter stunning of dairy cows. Interim goal: • 2022-2024: Map the global dairy supply chain to assess pre-slaughter stunning practices. • 2025-2027: Gradually adjust sourcing, projecting and replacing suppliers based on pre-slaughter stunning as a business strategy. • 2027: Achieve 100% supplier commitment to pre-slaughter stunning of dairy cows in the global dairy supply chain.	2027	100%	In progress (85.2%)

In 2024, 85.2% of dairy suppliers in Minerva Foods' dairy supply chain reported ensuring pre-slaughter stunning of animals at the end of their productive cycle (see Figure 25).

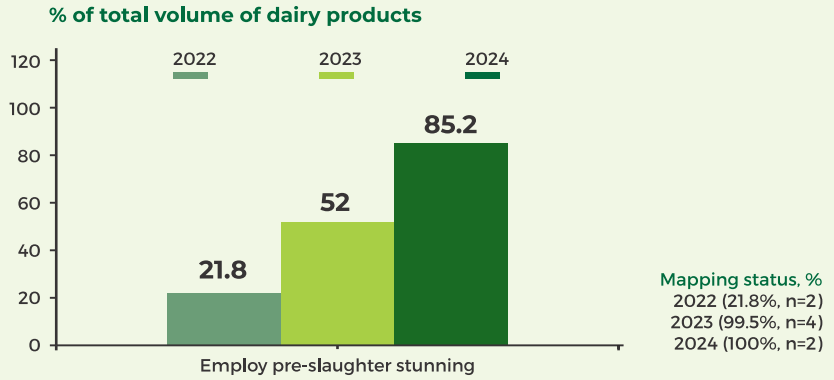


Figure 25: Proportion of suppliers reporting pre-slaughter stunning in Minerva Foods' dairy supply chain. Total volume: 2022 (5.2 metric tons); 2023 (39.2 metric tons); 2024 (15 metric tons).
**n represents the number of third-party dairy suppliers*

Inhumane practices in the production chain

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2030, ensure 25% of dairy ingredients in Minerva Foods' dairy supply chain are sourced from suppliers not maintaining animals on fully slatted floors. Interim goal: • 2022-2025: Map the entire dairy supply chain to assess flooring practices. • 2026-2029: Gradually adjust sourcing, projecting and replacing suppliers based on non-use of fully slatted floors as a business strategy. • 2030: Achieve 25% of dairy ingredients from suppliers not using fully slatted floors.	Recurring	100	Addressed (100%)

The use of fully slatted floors for dairy cattle in intensive systems (e.g., free-stall and compost-barn) is uncommon in Minerva Foods' dairy supply chain. In 2024, 100% of dairy suppliers reported animals free from fully slatted floors. Additionally, weaning practices were mapped, with 76% of suppliers reporting no data on this indicator and 24% reporting abrupt cow and calf separation 48 hours after birth.

EGG SUPPLY CHAIN

Minerva Foods sources powdered eggs to produce a specific private label product line—gourmet paté. This section outlines public commitments for the egg supply chain, target years for fulfillment, and status of compliance, reflecting the company's dedication to animal welfare standards.

Closed confinement

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2026, ensure 100% of egg ingredients used in Minerva Foods' industrial processing for private label products are sourced from cage-free hens. Interim goal: • 2022: Map all private label products containing egg ingredients and their respective egg suppliers. • 2023-2025: Project and replace suppliers to ensure all egg ingredients are sourced from cage-free production systems. • 2026: Achieve 100% sourcing of egg ingredients from cage-free hens for private label industrial processing.	2026	100	In progress (4%)

In 2024, 4% of egg ingredients in Minerva Foods' egg supply chain were sourced from cage-free systems, while 96% came from systems using caged hens. To support this transition, a technical specification for cage-free powdered eggs was developed in 2024, as well as an approval process for new egg suppliers. These steps embody the transition process towards the goal of purchasing 100% of eggs from cage-free systems.

This specification defines two cage-free egg categories:

1. Enclosed barns egg production: Egg production system in which hens of the same species and age are raised cage-free but confined indoors.
2. Free-range egg production: Egg production system in which hens have free access to pasture areas.

Environmental enrichment

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2035, ensure 25% of egg ingredients used in Minerva Foods' industrial processing for processed products are sourced from laying hens in systems with environmental enrichment practices. Interim goal: • 2023-2025: Map the egg supply chain to assess environmental enrichment practices. • 2026-2030: Gradually adjust egg suppliers to implement environmental enrichment in hen rearing systems. • 2030-2034: Project and encourage suppliers to adopt environmental enrichment practices. • 2035: Achieve 25% of egg ingredients for processed products from systems with environmental enrichment.	2035	100	In progress (4%)

In 2024, 4% of egg ingredients in Minerva Foods' egg supply chain were sourced from suppliers implementing environmental enrichment practices, including materials for exploration and foraging, perches, elevated platforms, and natural or artificial barriers.

Routine mutilations

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2026, ensure 100% of egg ingredients used in Minerva Foods' industrial processing for processed products are sourced from hens not subjected to beak trimming. Interim goal: • 2022: Map all products containing egg ingredients and their respective egg suppliers. • 2023-2025: Project and replace suppliers to ensure no beak trimming in their supply chains. • 2026: Achieve 100% sourcing of egg ingredients from hens free of beak trimming for processed products.	2026	100	In progress (4%)

In 2024, 4% of third-party egg suppliers in Minerva Foods' egg supply chain reported not practicing beak trimming.

Long-distance live transport

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2023, ensure 100% of egg ingredients in Minerva Foods' egg supply chain are sourced from laying hens not transported for more than four hours. Interim goal: • 2022: Map the egg supply chain to assess transport times. • 2023: Ensure 100% egg suppliers implement a policy limiting transport to four hours for laying hens.	Recurring	100	Addressed (100%)

In 2024, 100% of third-party egg suppliers in Minerva Foods' egg supply chain reported transporting animals for slaughter in journeys of four hours or less.

Pre-slaughter stunning

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2026, ensure 100% of egg ingredients in Minerva Foods' egg supply chain are sourced from laying hens subjected to pre-slaughter stunning. Metas Intermedias: • 2022: Map the egg supply chain to assess pre-slaughter stunning practices. • 2023: Ensure all (100%) egg suppliers adopt policies for pre-slaughter stunning.	2026	100	In progress (0%)

In 2024, Minerva Foods was unable to obtain data on pre-slaughter stunning practices in its egg supply chain.

Inhumane practices in the production chain

Public Commitment	Target for Fulfillment	Mapped Supply Chain Coverage	Status
By 2025, ensure 100% of egg ingredients in Minerva Foods' egg supply chain are sourced from suppliers not practicing the culling of day-old male chicks. Interim goal: • 2022-2023: Map the entire egg supply chain to assess culling practices for day-old male chicks. • 2023-2024: Gradually adjust sourcing, projecting and replacing suppliers based on non-culling as a business strategy. • 2025: Achieve 100% sourcing from suppliers not culling day-old male chicks.	Recurring	100	Addressed (100%)

In 2024, 100% of powdered egg ingredients in Minerva Foods' egg supply chain were sourced from suppliers reporting no culling of day-old male chicks in their production chain.

FINAL REMARKS

MINERVA FOODS ACTIVELY ADVANCES ANIMAL WELFARE PRACTICES ACROSS ITS OPERATIONS, REINFORCING ITS LEADERSHIP IN RESPONSIBLE SOURCING WITHIN THE PROTEIN SECTOR. THE FOLLOWING PRIORITY INITIATIVES AIM TO STRENGTHEN AND ENHANCE ANIMAL WELFARE STANDARDS THROUGHOUT THE SUPPLY CHAIN:

- Engage the supply chain to advance animal welfare practices across all business areas, prioritizing consistent adoption of best practices.
- Strengthen partnerships with strategic stakeholders to foster shared responsibility, ensuring animal welfare standards from raw material sourcing to final processing.
- Expand third-party audits of supplier farms and industrial units to enhance transparency, reliability, and traceability in the supply chain.
- Enhance risk monitoring and mitigation mechanisms to align with the company's long-term vision of responsible leadership in the protein sector.
- Promote best practices and technical knowledge through educational guides, expanding awareness and training initiatives across the production chain.

GLOSSARY OF TERMS

GLOBAL TOPICS

Closed confinement: Environmental conditions that restrict the expression of natural behaviors essential to an animal's species. This term applies to the following practices in the supply chain: feedlots (concentrated animal feeding operations, CAFOs) for cattle; cage systems for laying hens; high-density rearing of broiler chickens (>30 kg per square meter); high- density fish pens (>10 kg per cubic meter); gestation crates or farrowing crates for sows; and tethered animals or individual pens.

Environmental enrichment: Environmental stimuli that promotes a broader and more complex range of natural behaviors essential for animal welfare. Examples include static or non-static brushes for cattle, manipulable materials such as straw and hay for sows, substrates for poultry to peck or dust bathe, and structures providing better microclimates, such as natural or artificial shading and evaporative cooling. For fish, enrichment includes physical elements like artificial plants, sensory stimuli such as floor substrates, cover, or lighting, and occupational stimuli like water currents to encourage exercise. These practices align effective environmental enrichment standards outlined by the Business Benchmark on Farm Animal Welfare (BBFAW), which Minerva Foods adopts across its supply chain.

Routine mutilation: Removal or amputation of any biological tissue from an animal's body, such as feathers, hair, wool, or the surgical removal of one or more limbs. These practices have the potential to cause pain and, consequently, compromise animal welfare across the supply chain.

Pre-slaughter stunning: intentional process that induces unconsciousness in animals to minimize pain during slaughter, achieved through methods causing reversible or irreversible damage to brain structures responsible for perception, processing, and response to stimuli.

Cattle: Effective methods include mechanical percussion with penetrating or non-penetrating captive bolts, where cerebral concussion results from kinetic energy transfer, with the targeted brain area and force application critical for complete unconsciousness.

Sheep and Pigs: Electronarcosis is the preferred method, involving an electric current of sufficient intensity, frequency, and duration to cause immediate loss of consciousness.

Poultry: Suitable methods include controlled atmosphere with inert gas or multiphase systems, and electronarcosis without inversion of upper limbs.

Fish (Salmon): Electronarcosis is optimal, followed by a secondary method like exsanguination to ensure death.

Long-distance live transport: Transport journeys that exceed 8 hours for cattle (including dairy and beef cattle), sheep, pigs, and fish, and exceed 4 hours for poultry (including broiler chickens and laying hens).

Antibiotics: Substances that inhibit bacterial growth.

Critically important antibiotics: Critically important antibiotics meet two criteria: (1) they are the primary or sole treatment for serious human infections, and (2) these infections can be transmitted between humans and non-humans, or they can acquire resistance genes from non-human sources.

Highly important antibiotics: These are antibiotics that meet one of the two criteria described above.

THERAPY TYPES

Prophylactic use: Antibiotics administered to a group of animals without clinical signs of disease.

Metaphylactic use: Antibiotics given to a group when some animals show clinical signs.

Clinical use: Antibiotics administered only in the presence of disease.

Growth promoters: Substances intentionally added to animal diets to preserve, enhance, or modify desirable properties or suppress undesirable ones, including antimicrobial agents (e.g., antibiotics, ionophores), plant oil extracts, yeasts, anabolic implants, enzymes, beta-adrenergic agonists (e.g., ractopamine), and immunomodulators.

SPECIES-SPECIFIC TOPICS
TYPES OF REARING SYSTEMS

BEEF CATTLE

Pasture-based: Animals are raised exclusively on pasture without concentrated feed supplementation.

Pasture-based semi-confinement: Animals are raised on pasture with concentrated feed supplementation at 1% of their live weight.

Intensive pasture-based finishing (TIP): Animals are raised on pasture with concentrated feed supplementation at 2% of their live weight.

Intensive confinement (feedlots): Groups of cattle are housed in pens or paddocks of defined dimensions with ad libitum access to water and feed through troughs.

Weaning practices in the beef cattle chain

Controlled weaning: Practice in the cattle supply chain that gradually reduces suckling after 90 days of age, limiting the time the calf spends with the cow to two short daily periods (6 to 8 hours) starting from the 30th day of life.

Traditional abrupt weaning: The sudden separation of cow and calf after 90–120 days of age, with calves and cows kept in separate paddocks, permitting no visual or physical contact.

Traditional side-by-side weaning: The gradual separation of cow and calf after 90–120 days of age, with cows and calves kept in adjacent paddocks, maintaining visual, auditory, and limited physical contact.

SHEEP

Extensive system: Animals are raised exclusively in pasture areas (cultivated or non-cultivated), relying on natural grazing without supplemental feeding.

Semi-intensive system: Animals graze in pasture areas during the day and are housed in shelters at night, balancing natural foraging with controlled housing.

Intensive system: Groups of sheep are housed in pens or paddocks of defined dimensions, with ad libitum access to water and feed provided through troughs.

BROILER CHICKEN

Extensive system: Birds have unrestricted access to pasture areas, with optional shelters for protection against weather.

Semi-intensive system: Combines free-range rearing in paddocks during the day with barn housing.

Intensive system: Birds are raised exclusively in barns throughout the production cycle, often at high densities.

PORK

Extensive system: Pig farming with a low technological level and no controlled nutritional plans.

Semi-extensive system: Utilizes shelters against climatic factors and containment paddocks, with potential implementation of nutritional and sanitary management.

SISCAL (Outdoor Intensive Pig System): Sows, weaned piglets, and boars are kept in outdoor paddocks, while growing and finishing phases occur in confinement conditions.

SISCON (Confined Intensive Pig System): All pig production phases occur under slatted floors and roofing, within a single or multiple structures.

Individual gestation crates: Pregnant sows are housed in individual stalls throughout gestation until piglet birth.

Group-housed gestation system: Pregnant sows are housed in group settings throughout gestation until piglet birth.

Cobre e solta "mounting-and-release" system: Sows are transferred to group housing immediately after insemination, with a maximum of 4 hours in individual crates.

FISH

Extractivism: Removal of fish from their natural environment, such as seas or rivers, impacting welfare and ecosystems.

Extensive system: Fish are raised in lakes, reservoirs, or excavated ponds until capture, without feed or aerators, yielding an average production of 100 to 1,000 kg per hectare.

Semi-intensive system: Fish are raised in lakes, dams, fish pens, or reservoirs with provision of feed, achieving an average production of 5,000 kg per hectare.

Intensive system: Fish are raised in dedicated fish pens and fed balanced feed, with an average production of 10,000 kg per hectare.

Super-intensive system: Fish are raised in circular tanks, adapted boxes, net cages, or excavated ponds with balanced feed, achieving an average production of 40,000 kg per hectare.

DAIRY CATTLE

Extensive system: Cows produce up to 1,200 liters of milk per lactating cow per year, raised exclusively on pasture areas without supplementation.

Semi-intensive system: Cows produce between 1,200 and 2,000 liters of milk per lactating cow per year, raised exclusively on pasture areas with forage supplementation during the low pasture growth season.

Intensive pasture-based system: Cows produce between 2,000 and 4,500 liters of milk per lactating cow per year, raised exclusively on high-capacity forage pastures with forage supplementation during the low pasture growth season.

Intensive system: Cows produce above 4,500 liters of milk per lactating cow per year, kept in confinement and fed through troughs with preserved forage such as silage and hay, using systems like Free Stall, Compost Barn, Compost Barn - Wind Tunnel, or Loose Housing.

LAYING HENS

Conventional cages: Intensive confinement in barns with birds housed in cages.

Cage-free: Birds are housed in barns free of cages.

Free-range: Birds are housed in barns with free access to open areas.

Caipira: Meets cage-free requirements and complies with ABNT NBT 166437:2016 technical standard recommendations.

Organic: Meets cage-free requirements with controlled feed sourced exclusively from suppliers certified by an accredited body, as defined by Law No. 10,831 of December 23, 2003, and primarily regulated by MAPA Normative Instruction No. 46 of October 6, 2011, and No. 17 of June 18, 2014.

APPENDIX I

BIOFUEL

Minerva Biodiesel, a subsidiary of Minerva Foods established in 2012, demonstrates the company's corporate responsibility by reducing waste from beef cattle slaughter through innovative production of renewable energy from tallow, transforming by-products into sustainable products in the supply chain, with approximately BRL 250 million in invested capital. Key highlights of Minerva Biodiesel include:

- ISCC Participation: Certified under the International Sustainability Carbon Certification (ISCC), enabling expanded geographic scope through biodiesel exports to Europe and Asia, previously limited to the Brazilian market.
- Social Biofuel Seal (SBS): Participates in the SBS project, a MAPA certification for biodiesel production units (UPBs) that include family farmers under Pronaf in their supply chains, promoting socio-productive inclusion and generating employment and income through family-farmed raw materials.
- RenovaBio Program: Contributes to the RenovaBio Program, which promotes decarbonization in the fuel sector by increasing biofuel production and participation in the energy transport matrix, converting biofuel emissions reductions compared to non-renewable sources into carbon credits (CBIOs).

minerva biodiesel

GREATER USE OF RAW MATERIALS

Optimal use of raw materials in Minerva Foods' beef supply chain maximizes the utilization of primary inputs from beef cattle slaughter, with hide, tallow, blood, bones, and offal sold or transformed into by-products through its subsidiaries, Minerva Leather, Minerva Casings, and Minerva Ingredients, thereby reducing dependency on animal-derived foods by creating a cycle of bovine by-product utilization that generates alternative protein energy sources previously unexploited, while contributing to sustainability by minimizing process waste.

minerva casings

NATURAL CASINGS

Minerva Casings produces and markets natural casings used in the manufacture of processed meat products, sourcing all raw materials from Minerva Foods' slaughter and processing facilities and third parties in Brazil, Paraguay, and Colombia, which are utilized to produce smoked, cooked, and cured foods such as salames, linguiças calabresas, portuguesas, cambuí, paios, and others, contributing to sustainability by maximizing the use of beef by-products in the supply chain.

minerva ingredients

BY-PRODUCTS OF BEEF

Minerva Ingredients produces and markets ingredients derived from by-products of beef slaughter and deboning, such as pet food products and renewable fuels from tallow, with goals to expand its geographic scope and market presence for Minerva by-products in Asian and American markets.

minerva leather

LEATHER

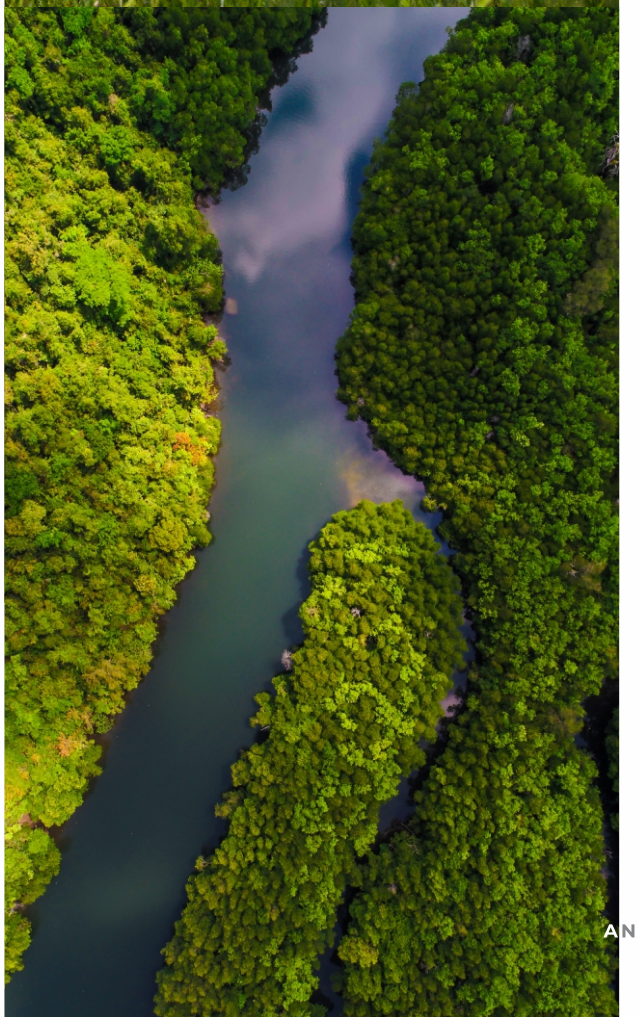
Minerva Leather optimizes raw materials from slaughterhouses, processing 100% of generated hides into new products for the leather goods market (automotive, furniture, footwear) and the gelatin and collagen market, while also promoting animal welfare through a 2024 guidebook for ranchers on fire branding to improve leather quality and welfare standards.

CARCASS EFFICIENCY PROGRAM (PEC)

The Carcass Efficiency Program (PEC) drives productivity improvements to reduce animal protein use by enhancing livestock management, increasing average carcass weights and consumption rates, thereby boosting production with fewer animals and slowing environmental damage from pastures or waste. Minerva Foods' PEC goals include: 1) maximizing raw material utilization through efficient livestock ranching and carcass standardization, encouraging producers to adopt practices that optimize final products; 2) expanding program scope.

Shift in Business Focus

Reducing dependency on animal-derived foods is achieved through investments in alternative proteins and a low-carbon economy. Minerva Foods, via its Corporate Venture Capital initiative, has committed USD 30 million to invest in up to 10 startups over five years (2021–2025), fostering businesses that extend beyond the animal protein value chain.



The Renove Program engages producers to implement sustainable, profitable, low-carbon agriculture in partnership with MyCarbon, with the following projects and goals:

1. *MRV Agro Project (2020–2021):* In partnership with Embrapa, calculated carbon balances for 23 Brazilian ranches, representing 12% of cattle purchased in 2021, with 11 ranches achieving carbon-negative status by sequestering more carbon than emitted through best practices (project completed).

2. *Carbon on-Track* – In partnership with Imaflora, calculated carbon balances for 25 ranches across Minerva Foods' operating countries (Argentina, Brazil, Colombia, Paraguay, and Uruguay), showing emissions 44% below the international average, with three farms carbon-negative.

3. *Carbon Project:* A pioneering initiative to generate carbon credits through best practices on supplier ranch operations (ongoing).

APÊNDICE II

TRADUÇÃO

ÉTICA E INTEGRIDADE

GRI 2-23 » 2-24 » 2-26 » 3-3

A condução ética e responsável dos negócios e fundamental para a Minerva Foods, formalizada em diretrizes, políticas e regimentos internos, como o Código de Ética – Guia de Conduta, aprovado pelo Conselho de Administração, o Código de Conduta dos Parceiros de Negócios, aprovado pela Diretoria, e outros documentos disponíveis em nosso Portal de Ética e Compliance.

O Comite de Ética e Integridade, colegiado independente e imparcial, atua para promover relacionamentos profissionais respeitosos, transparentes e éticos, contribuindo para a criação de um ambiente de trabalho digno, seguro e saudável para todos os públicos.

COLABORAÇÃO

Participamos ativamente de plataformas que incentivam a troca de experiencias e a disseminação de boas práticas relacionadas a ética e integridade:

- Desde 2021, somos signatários do Pacto Global da Organização das Nações Unidas (ONU), promovendo práticas éticas, respeito aos Direitos Humanos, diversidade, inclusão e relações trabalhistas saudáveis, em alinhamento com os Objetivos de Desenvolvimento Sustentável (ODS);
- Desde 2022, somos membros e fundadores da Ação Coletiva Anticorrupção da Agroindústria, que promove ações conjuntas no combate a corrupção no setor;
- Desde 2023, somos associados ao Instituto Ethos e aderentes ao Pacto Empresarial pela Integridade e Contra a Corrupção (Empresa Limpa); e
- No ano de 2024, passamos a ser membro financiador da Ação Coletiva Anticorrupção dá Agroindústria, com o intuito de contribuir na manutenção e desenvolvimento das atividades.

Em 2024, a Ação Coletiva Anticorrupção da Agroindústria foi reconhecida com o prêmio "*Gretta Fenner Outstanding Achievement*", do International Anti-Corruption Collective Action Awards, durante a 5ª Conferência Internacional de Ações Coletivas, promovida pelo *Basel Institute on Governance*.

CONEXÃO MINERVA

TRADUÇÃO

GRI 2-25 » 2-26 » 406-1 » MF-2

O Conexão Minerva é nosso canal de Ouvidoria, aberto a todos os públicos internos e externos, responsável por receber sugestões, elogios, dúvidas e denúncias. Administrado por uma empresa independente, o canal garante que os relatos possam ser feitos de forma anônima e com total confidencialidade, por meio de diferentes plataformas, como telefone ou website. O relator ainda recebe um número de protocolo que o permite acompanhar a evolução do caso de forma segura e transparente.

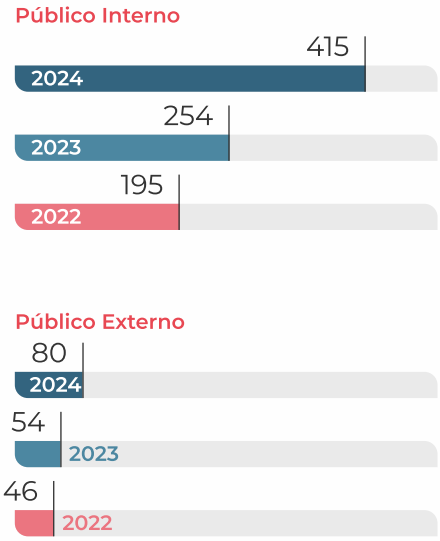
Essa estrutura reforçar a confiança dos usuários no sistema e assegura que todas as denúncias sejam tratadas com o devido sigilo. A apuração e deliberação dos relatos são conduzidas de maneira integrada pelo Comite de Ética e o representante da ouvidoria, enquanto o acompanhamento das atividades do canal e realizado pelo Comite de Auditoria Estatutário, assegurando transparência e imparcialidade no processo.

Ao longo de 2024, implementamos melhorias significativas no Conexão Minerva, com o objetivo de torná-lo ainda mais confiável e útil para as tomadas de decisão estratégias. Entre as novidades, destacamos a classificação detalhada dos relatos recebidos, que agora são organizados por categorias especificas, como:

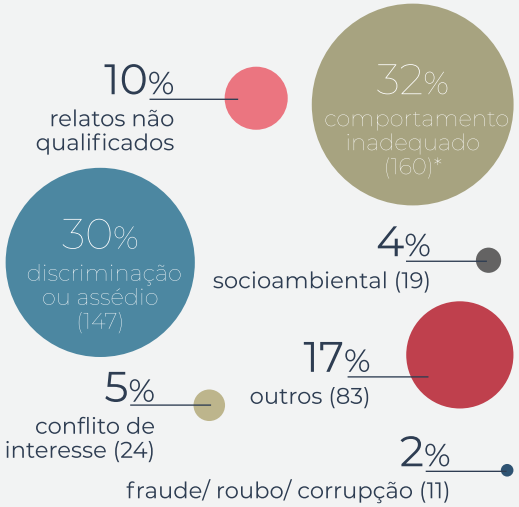
- **comportamento inadequado;**
- **discriminação ou assédio;**
- **conflito de interesses;**
- **socioambiental;**
- **fraude, roubo ou corrupção;**
- **e outros.**

Ao longo do ano, foram relatados seis casos relacionados a discriminação, todos foram devidamente analisados e encaminhados para as áreas responsáveis, assegurando a apuração adequada e a aplicação de medidas corretivas quando necessário. Essas mudanças permitem uma análise mais precisa das manifestações, fortalecendo a capacidade da Companhia de identificar e corrigir eventuais inconformidades.

REGISTROS NO CONEXÃO MINERVA (GLOBAL)



POR TIPO



100%

dos relatos foram tratados pelo Comitê de Ética de Integridade

Saiba Mais

Clique aqui e acesse a nossa plataforma Conexão Minerva.

* Comportamento inadequado refere-se ao descumprimento de diretrizes internas que não estão abarcadas nas emais categorias de registros.

** Relatos não qualificados são aqueles que, após análise interna, foram demandadas informações complementares ao denunciante. Caso não haja retorno com os dados solicitados, o relato é encerrado e devolvido com a justificativa de ausência de informações suficientes para apuração.

TRADUÇÃO

FERRAMENTAS DE INTEGRIDADE

Entre os destaques, está o desenvolvimento de ferramentas inovadoras, como:

- **Um aplicativo que coleta assinaturas dos documentos obrigatórios no momento da admissão dos colaboradores, otimizando a gestão e o controle das adesões ao Código de Ética-Guia de Conduta;**
- **A assistente virtual Iris, que disponibiliza o Código de Ética- Guia de Conduta em dispositivos moveis, garantindo fácil acesso aos colaboradores. Outro marco importante foi a criação e publicação do portal interno de Compliance, um espaço dedicado aos colaboradores para acompanhar notícias, diretrizes de compliance, abrir requisitos, preencher formulários de autodeclarações e esclarecer dúvidas na seção de perguntas e respostas. Esse portal e uma ferramenta poderosa para a disseminação da cultura ética e um grande avanço para o Programa de Integridade.**

Acesse nossa Central de Indicadores para conferir os dados abertos por país e por categoria funcional.

Comunicação e Capacitação em Políticas e Procedimentos de Combate à Corrupção

GRI 205-2

COMUNICAÇÃO

100% dos Conselheiros comunicados

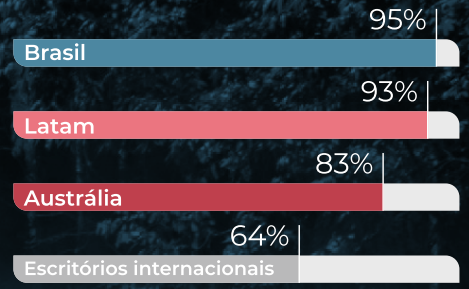
100% de colaboradores comunicados*

21% dos parceiros de negócio comunicados no Brasil**

100% dos parceiros de negócio comunicados na Colômbia***

CAPACITAÇÃO

94% do público alvo treinado****



*Considerando as divisões Brasil, Latam e Austrália e escritórios internacionais.
** No Brasil, 4.325 fornecedores foram comunicados por meio do Código de Conduta dos Parceiros de Negócio.
*** Na Colômbia, chegamos ao número de 3.561 parceiros comunicados, considerando clientes, pecuaristas e demais fornecedores.
**** Para o treinamento, foram considerados elegíveis somente os colaboradores administrativos dos escritórios e operações, uma vez que possuem acesso a computadores.

BEM-ESTAR ANIMAL

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