

# Responsible Production



Issue No. 14 January / December 2024



## Citrusvil's Climate Transition Plan



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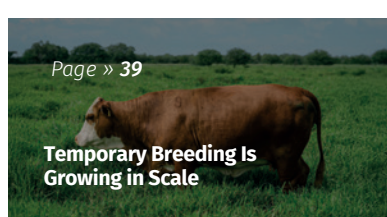
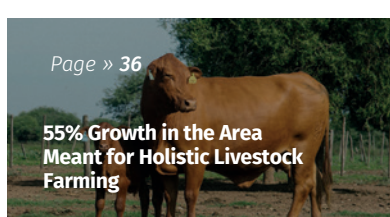
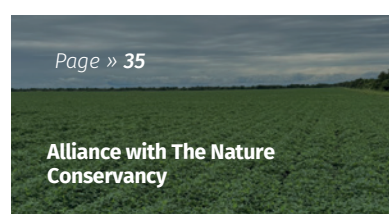
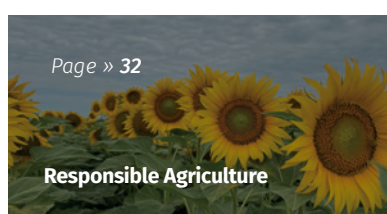
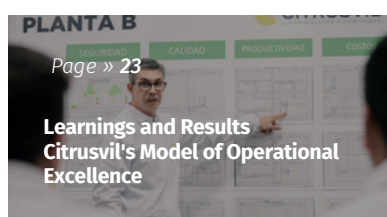
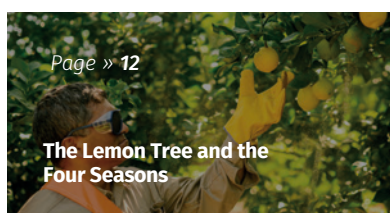
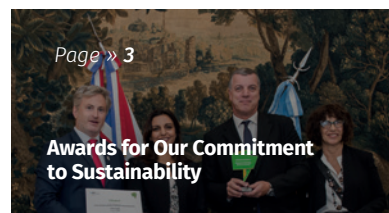
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*Citrus Production*

## Customer Service, Innovation and Commitment in Each Product

**W**e are aware of the importance of the Argentine citrus activity for a sustainable economic and social development in northwestern Argentina.

We know that, in order to continue being up to international quality, cost and sustainability requirements, we must work on several dimensions of the business.

At Citrusvil, we focus our activity on a firm commitment to continuous improvement, competitiveness, sustainability and innovation as strategic management pillars.

We firmly believe that these fundamentals are essential to face future challenges and to accompany the needs of our customers around the world with the demands of international markets.

One of the most important milestones is the search for innovative solutions that streamline our production processes. That is why, through constant improvement in our agricultural and operational practices, we seek not only to

remain at the forefront in the Argentine citrus sector, but also to contribute to social and environmental welfare, while we continue manufacturing industrialized lemon-based products for the world meant for the food, beverage and fragrance industries.

However, despite these promising breakthroughs, we face significant challenges. Climate volatility, health constraints and economic tension are some of the factors that threaten our sector. But, with every challenge we overcome, an opportunity arises so that we can grow together in an industry that must become more sustainable every day.

We continue working together on a path where each lemon represents future, genuine work, innovation and production development.

These pages reflect innovations and breakthroughs. All of them consist in practices which allow us to improve day by day and be always committed to new generations and to caring for natural resources.



**Martín Carignani**  
Citrusvil S.A. CEO

*Agriculture and Livestock Farming*

## Productive Development Growth of Agriculture and Livestock Farming in Northwestern Argentina

**T**he birth of Agroganadera del NOA represents an opportunity to expand our production and a firm commitment to sustainable practices that ensure a prosperous future for both our communities and our different stakeholders.

We have achieved the change of our corporate name, and, in this way, we are implementing the strategy of becoming a single large company of agricultural and livestock activities at Grupo Lucci.

Our business integration and growth allow us to achieve greater administrative, financial, tax and structural synergy, consolidating resources and all the productive potential in constantly evolving markets.

We have promoted holistic livestock farming, which is not just a technique but a philosophy. Through this approach, we learn to see our lands as interconnected ecosystems where each element plays a fundamental role. This vision allows us to optimize animal and forage production, while improving soil health and biodiversity. With every step we take, we are building a stronger company and a healthier environment for everyone.

Likewise, regenerative farming practices teach us to farm while respecting our natural environment. We focus on methods that restore soil fertility and promote the natural cycle of

nutrients. This commitment goes far beyond maximizing yields; it is about creating resilient systems capable of meeting future climate challenges.

In the midst of these agricultural and environmental breakthroughs, the growing demand for sustainable products is shaping new opportunities in both the grain and meat sectors. Our efforts to integrate innovative techniques position us favorably to meet these demands while we keep focusing on local development.

We are an active and inspiring part of this positive development in northwestern Argentina. Together we can build a lasting legacy based on solid principles: responsible innovation, sustainable food production and operational efficiency.

I invite you to read the articles in this new edition of the Responsible Production Magazine and learn more about the practices we carry out in our lands.



**Pablo Cianci**  
Agroganadera  
del NOA CEO

# Awards for Our Commitment to Sustainability



By Agustina Lucci, Sustainability Manager at Grupo Lucci

**S**ustainability management trends are transforming the operation and social and environmental impact of companies.

- Renewable energies
- Circular economy practices
- Conscious consumption
- Technological innovations and data analysis
- Energy efficiency
- Regenerative farming practices
- Sustainable logistics

These trends, together with biodiversity protection in our ecosystems, are shaping a business outlook that grows in responsibility for the well-being of the planet and responds to the different expectations of consumers.

Sustainability management in food production requires adapting to an ever-changing global environment. We are firmly committed to the principles of sustainable development and we show it by means of our actions, motivated by our Sustainability Policy.

The efforts made by our companies have been recognized by well-known entities, which fills us with pride and encourages us to continue making progress.

- **BritCham Argentina Award, SME:** “Committed to Climate Change Mitigation” Citrusvil S.A.
- **BritCham Argentina Award, NGO:** Volunteer Program - Fundación Vicente Lucci
- **Ecumenical Forum Award:** 2023 Sustainability Report - Grupo Lucci
- **Recognition from the Argentine Business Council for Sustainable Development (CEADS):** Contribution to the SDGs, 2024 edition - Grupo Lucci

These awards motivate us to continue on our path towards a more sustainable future that generates significant value for our clients, the local communities, our collaborators and the various institutions in our ecosystem.

We sincerely appreciate these awards. They reflect our collective effort towards a sustainable future. Thank you!





Citrusvil

# Climate Transition Plan

*In today's world, sustainability and competitiveness are two sides of the same coin.*

**C**limate change mitigation has become a global priority, encouraging companies to set ambitious goals to reduce their greenhouse gas emissions.

Aware of these challenges, Citrusvil is committed to the development of our own comprehensive decarbonization strategy.

*“The transition to a low-carbon economy is crucial to mitigate the effects of climate change. Throughout 2024, we have focused on our climate transition plan, which promotes cleaner and more efficient practices,” says Agustina Lucci, Sustainability Manager.*

*“At Citrusvil, we aim to reduce our environmental impact and strengthen our competitiveness by optimizing resources and incorporating innovative practices in our production processes,” adds Martín Carignani, CEO.*



**Martín Carignani**  
Citrusvil S.A. CEO



**Agustina Lucci**  
Sustainability Manager

## Measuring and transparency

Since 2019, we have been calculating the carbon footprint in our value chain to manage the main sources of emissions. We are working to align with international standards that are verifiable and demonstrate integrity and transparency.

In the past year, we have focused on low-carbon production and the use of cleaner sources of energy, in line with the global trend:

- We have implemented new digital process control and recording systems.
- We have made progress in the automation of our processes.
- We have achieved shorter periods of downtime in grinding, resulting in an energy reduction per ton produced.
- We have replaced steam generators with high-performance ones.
- We have replaced natural gas with biogas (internal production) for steam production.
- We have generated more renewable electric energy which has been injected into the national power grid.
- We have refurbished pumps, motors and conveyors so as to improve productivity while saving energy.

## The key to decarbonization: renewable energies

Climate change has prompted companies around the world to adopt renewable energy sources, not only to reduce their dependence on fossil fuels but also greenhouse gas (GHG) emissions and the carbon footprint associated with their operations.

### In primary production:

We have entered into a renewable energy supply agreement. *“By next year, our goal is to supply our 23 production units with renewable electric energy only, a milestone in northwestern Argentina,”* added Bruno Armando, Energy Analyst.

### In industrial plants:

The portion of renewable electric energy in our industrial energy matrix has continued growing, showing a 65% growth during the grinding season and reaching 95% during the harvesting recess, as a result of the new energy agreements executed.

In our Renewable Energy Plant (PER), investments have been made so that we can provide renewable electric energy for ourselves by 2025. This will enable us to reduce our emissions by approximately 450 tons of CO<sub>2</sub> equivalent.



## Investments in decarbonization

In 2024, to continue managing our waste efficiently and in a sustainable manner and generate more biogas, we launched a new biodigester at our Renewable Energy Plant (PER), which increases our effluent treatment capacity by around 25%.

*“The more biogas we generate, the more natural gas we can replace in our boilers, thus reducing our dependence on fossil fuels. In addition, we maintain effluent treatment quality, complying with environmental parameters and anticipating future growth,” explained Germán Roig Babot, Head of the Renewable Energy Plant.*

The new boilers installed at Citrusvil's industrial plants optimize our energy efficiency and lay the foundations for long-term sustainable development, allowing us to adapt to current and future steam demand.

*“These new units allow us to move from an average thermal efficiency of 78% to 95%. In addition, they optimize gas consumption, reinforcing our commitment to more sustainable practices. Towards 2025, our plan*

*consists in dualizing the boilers so that they can operate on both biogas and natural gas (70%-30%), which will significantly reduce our emissions by approximately 1,200 tons of CO2 every year,” explained Maximiliano Ocon, Project and Energy Coordinator, and Gerardo Cigliutti, Engineering and Maintenance Manager.*

## Accurate data, efficient decisions

In line with our objective to decentralize the control of our industrial operations, we have implemented the Distributed Control System (DCS).

By the end of 2024, we could measure variables such as water, steam, gas, and electric energy. This allowed us to identify points of improvement to optimize our energy consumption. In 2025, we will start the next stage focused on monitoring and automating processes at Plant B, in order to achieve maximum efficiency and productivity by 2026.



## Towards net-zero emissions

We know that we need to make huge transformations to have a stable and resilient planet as well as societies. In the business world, we are convinced that a climate transition plan is crucial. We are facing this challenge with new learnings that we share with our clients and taking into account their needs for business sustainability.



**Gerardo Cigliutti**  
Engineering and  
Maintenance Manager



**Bruno Armando**  
Energy Analyst



**Germán Roig Babot**  
Head of the  
Renewable Energy  
Plant



**Maximiliano Ocon**  
Project and Energy  
Coordinator





## Acting Now Is Preparing the Business for the Future

By: **Virginia Vilarino**

Coordinator of the Climate and Energy Department  
Argentine Business Council for Sustainable  
Development (CEADS)

The impacts of climate change are already affecting every region in the planet and lead the ranking of global risks to development to which we will be exposed in the next decade, according to the World Economic Forum's Global Risks Report 2024.

Aware of this reality, as evidenced by increasingly frequent and intense extreme events, the international climate action agenda has been marked by the global goals established in the Paris Agreement, which seek to limit global warming to levels that avoid the most catastrophic and irreversible impacts on the climate system and thus allow us to adapt our societies and production systems in order to be more resilient.

Specifically speaking, these global efforts are made clear in goals to reduce greenhouse gas (GHG) emissions in the medium and long terms:

- Global CO<sub>2</sub> emissions must be reduced by 45% by 2030 (in comparison with 2010 levels).
- Global CO<sub>2</sub> emissions must reach “net zero” by 2050.
- In addition, other GHGs, especially methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), must be significantly reduced.

The sooner global emissions are reduced, the greater the chance of limiting global warming to 1.5°C and the fewer the challenges we will have to face in the transition to a decarbonized economy. But without a systemic, society-wide transformation and rapid implementation of ambitious goals, limiting global warming to 1.5°C while achieving a sustainable development will be extremely difficult.

Therefore, every country and actor will need to strengthen their contributions as a matter of urgency.

For the business sector, the goal of net-zero emissions is the new standard for corporate climate action. Over 6,000 companies in 70 countries and 15 different industries, representing more than a third of global market capitalization, already have goals to reduce their emissions by 50% by 2030 and achieve net-zero emissions by 2050, in keeping with the ambitious level established in the Paris Agreement. In turn, these international companies are encouraging climate action among about 20,000 SMEs worldwide, which together account for 60% of the global market.

While they manage and reduce their emissions, the companies admit that climate change poses financial risks to their businesses: 83% of the companies in the world admit that they face physical risks as a result of climate change and 88% state that policy changes and new regulations will be the main risks to be faced in the transition to a low-carbon economy.

To conclude, I would like to emphasize that these ambitious climate goals are not only possible, but they are also an opportunity for development and innovation in every economic sector, provided that the right policies and incentives are designed. And, for such purpose, it is crucial that the private sector get involved and participate responsibly in the design and implementation of the country's climate policies, especially for its sector. The challenge we face is not technological: the best available science tells us that we already have the options to reduce emissions by 50% in each productive sector by 2030.



Citrusvil

## Sustainable Supply

*Sustainable Juice Covenant*

**C**itrusvil is one of the 14 companies in the world which has adhered to the Sustainable Juice Covenant (SJC), which aims at having all the products manufactured in a sustainable manner by the member companies by 2030.

We are part of the juice supply chain for the main companies in the beverage industry in the world. This standard promotes sustainability for our customers.

*Our adherence to the Sustainable Juice Covenant reasserts the commitment we have been working on for years to the sustainable origin of our products.*

During the 2023 season, Citrusvil managed to have 99% of the raw materials processed certified in accordance with the Covenant. This outstanding performance proves our commitment to quality and sustainability while it gives us a privileged position in terms of the goal set for the next six years.

### **Promoters of Sustainable Practices**

Citrusvil has been certified regarding its production method, and one of the challenges posed as a result of its participation in the Sustainable Juice Covenant is the incorporation of also certified raw material suppliers into the grinding process.

*“In this sense, we have been working and we will continue to be committed to promoting good agricultural practices in the region by training local producers in the value chain and promoting their continuous improvement,” stated Noelia Lescano, Head of Quality Assurance and Environment at Citrusvil S.A.*



Sustainability is mainly verified by means of GlobalG.A.P. certification, which focuses on good practices in terms of agriculture, environment and employment, and GlobalG.A.P. GRASP, which focuses on good social practices.

*Being part of the Sustainable Juice Covenant benefits Citrusvil as a leading company in its sector and promotes a sustainable change, improving the juice supply chains all over the world.*

### **Sustainable Juice Covenant**

It is a protocol which gathers the leading juice companies in the world and poses the challenge of achieving a responsible supply chain progressively. In total, this group produced over 21 million tons of juice in 2023, 67% of them (14 million tons) being produced in a sustainable manner. 87% of the lemon used by the members of the Sustainable Juice Covenant is already produced in a sustainable manner (the other fruits are apple, mango, orange and pineapple).



### **Noelia Lescano**

Head of Quality Assurance and Environment at Citrusvil S.A.





Citrusvil

## Ready to Face the Organic Lemon Demand in the Food and Beverage Industries

*Four years have passed since Citrusvil decided to launch its organic primary production. The experience has already born fruit and we have the relevant knowledge to extend the area and increase efficiency levels.*

**T**he trend towards the consumption of more natural and healthier food products and beverages has boosted the interest in organic lemon products, which has resulted in Citrusvil innovating and diversifying its offer.

In a market where quality and sustainability are increasingly valued, Citrusvil stands out as a strategic partner for companies which look for natural, safe and certified products which are a clear response to the current consumer demand.

By means of the work we have been carrying out for several years and the acquisition of technical knowledge in organic production, we managed to obtain concrete results in terms of the

increase of production levels and greater efficiency levels.

*“In 2024, we managed to have our first season of certified organic production in La Ramada, a company’s orchard which has 230 hectares. This change was the result of great learning, which involved consulting experts and transforming the production culture related to the conventional matrix. The conditions are ripe for, upon demand, incorporating another unit which enables us to reach 500 productive hectares. This way, our organic production would reach 8% in our production universe,” stated Juan Altamiranda, Primary Production Manager.*

## Challenge and Performance

Even though conventional and organic production involve different techniques, they are both aimed at obtaining a sustainable product in the company, in keeping with the market requirements.

*“There is a common misunderstanding which consists in relating organic crops with abandoned fields or low production expectations. We aim at a state-of-the-art technology, which is already available in the world and which combines productivity with quality in accordance with the organic standard,” emphasized Altamiranda.*

*“The team is technically qualified and this enables us to have a different commercial approach since organic products have greater value in comparison with conventional products. Our big challenge consists in finding markets which are willing to pay this value,” reflected the Primary Production Manager, who added: “we are capable of producing organic lemons because the world is moving towards that direction, and our company, having a yield of 50-55 tons of organic lemon per hectare, is ready to meet the demand as soon as this opportunity arises.”*

## Response to the Demand

*“The demand for organic lemon is growing, and, in our case (industrial products), we are increasing our sales volumes and we expect to keep on this path of continuous improvement,” said Alex Nolte, Global Commercial Manager.*

With a positive perspective about the sector pace, Alex stated: *“With regard to 2023 sales, we have doubled our volumes. At the beginning, we had to make the world get to know our product, which was a slow task which is now bearing fruit. We are having a positive response in terms of organic concentrated juice sales in the different markets where we participate.”*



**Juan Altamiranda**  
Primary Production  
Manager



**Alex Nolte**  
Global Commercial  
Manager





Citrusvil

## The Lemon Tree and the Four Seasons

*The uniqueness of the lemon tree manifests throughout its life cycle. This tree stands out due to its capability to adapt to various weather conditions, which makes it possible for the lemon tree to survive in different environments throughout the year. In addition, its resistance and versatility turn it into a tree of great significance both for agriculture and landscape.*

**A** ccording to the report “Estudios fenológicos y manejo del cultivo del limón en Tucumán” <sup>1</sup>, the methodical observation of the production cycles of Tucumán lemon trees (sprouting, flowering, formation and ripening of the fruit) is intimately related to the weather conditions of each season and is determining when it comes to make decisions about carrying out some activities in plantation management, especially regarding phytosanitary care.

Like any other living being, lemon trees are sensitive to light, water, soil conditions and the characteristic temperature of each season. However, unlike those species which change completely, the foliage of these trees undergoes smooth and subtle transformations. The most intense contrast is found in the lemon peel itself, which is first green and, then, as time goes

by in the branches, it turns into shiny yellow, which means it has successfully completed the ripening process. When temperatures drop, it changes its colour.

At the end of winter, lemon blossom bunches open, and the workers at Citrusvil's 23 orchards start to get ready to see the fruits which will then be processed, resulting in the products that Citrusvil industrializes to the world.

It is a phenomenon which pervades the air with a sweetish perfume. It is a clear sign that the biological cycle is taking place as expected and that spring is coming. Since then, temperatures start to rise and tops are shiny and lush due to sprouting.

## Autumn

### *Beginning of Harvesting*

Lemon trees keep part of their vigor but they show signs of change when temperatures start to drop. Although their leaves are still green, they may lose some brightness and they start falling gradually. Naturally, their foliage is less dense in comparison with summer.

As from April, lemon trees usually show a more intense yellow colour, since they have completely reached ripeness. Their branches are still arched due to the weight of the fruits, but the trees show a more modest appearance. Harvesting begins in this season, and over 2,500 temporary workers are employed in our orchards for such purpose.

## Winter

### *Barer branches*

Although they are perennial trees which keep the majority of their leaves, during winter, harvesting finishes and lemon trees are completely freed from the weight which made their branches arched. Such branches are a little bit bare, and the log keeps its greyish or light brown colour. During this season, the resting state prevails: minimum activity makes it possible for lemon trees to have their energy focused on sprouting and flowering, which usually take place between the end of August and the beginning of September.

## Spring

### *Rebirth*

In spring, lemon trees awaken in search of brightness. Their green leaves are bright and their foliage is dense, full of vitality. The main characteristic of this season is the abundance of small white flowers full of perfume, known as lemon blossoms, which cover the tree and pervade the air with their sweet aroma.



*These flowers prelude the future fruits. During this season, we can see some green lemons growing. Full of leaves and flowers, the branches attract pollinators such as bees, which produce the precious honey of Tucumán lemon blossom flower. The tree's surroundings are fresh and they create the feeling of rebirth and energy.*



## Summer Pleasant Shade

Lemon trees have a vibrant and full of life aspect. Their foliage is dense, with big and shiny dark green trees. During this season, lemon trees are full of lemons whose colours vary among different shades of green. Lemons are oval and different in size, and they are distributed among the branches. The branches begin to arch due to the growth of the fruits and they offer some pleasant shade which is really valuable during those days when temperature rises above 40 °C.

## Area Grown in Tucumán in 2023/24

Based on a study conducted by the Remote Sensors and Geographic Information Systems Department of Obispo Colombres Agroindustrial Experimental Station (EEAOC),<sup>2</sup> Tucumán had about 41,990 net hectares of lemon trees of two years of age or older during the 2023/24 season (about 9% is deducted due to narrow passes, harvesting open spaces and other facilities).

Plants are equitably distributed in the northern area, in the districts of Burruyacu and Tafi Viejo, and in the centre and southern areas.

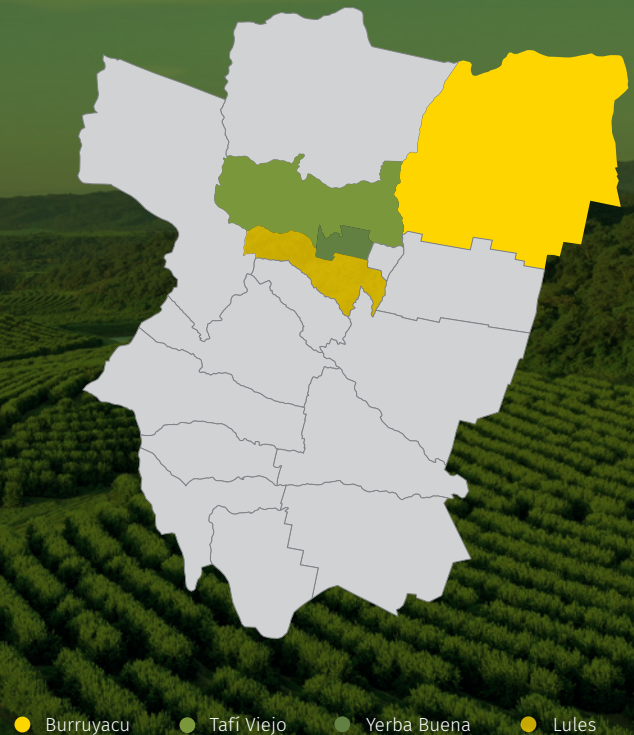


**34%**  
plantations older  
than 20 years of age

**66%**  
plantations between  
2 and 19 years of age

**Burruyacu** is the district which has the largest planted area.

**Tafi Viejo, Yerba Buena and Lules** are the ones having the greatest number of old plantations (older than 19 years of age) and the lowest renewal rate, since some lands are now of urban use.



## References

[Click here to access the article](#)



1) "Phenological Studies and Lemon Crop Management in Tucumán": Nelson D. Aranda, Dardo H. Figueroa, Nicolás Mitrovich, M. Inés Valdéz, M. Belén Roig, Hernán Salas. "Estudios fenológicos y manejo del cultivo del limón en Tucumán." Fruit Growing Section. 2023.

2) EEAOC. "Estimación del área implantada con cítricos en Tucumán en 2024".





Citrusvil

## Circular Economy Soil Care Through the Incorporation of Chips

*Citrusvil implements an innovative practice within the framework of the circular economy by eradicating lemon plantations that have completed their production cycle. These trees are shredded and converted into chips that are reincorporated into the soil, thus closing a circle that began more than 25 years ago.*

**T**his trial was carried out in 20 hectares and was accompanied by a number of innovations aimed at enhancing sustainability in primary production, which could have a positive impact on our carbon footprint.

*Juan Altamiranda, Primary Production Manager at Citrusvil, explained: "The biomass generated by the eradicated trees acts as a soil replenisher. For some time now, we have been working on recovering the physical and chemical components of the soil by incorporating organic waste from pruning. This is complemented with*

*service crops to enrich the soil. This way, we can let the soil rest for one year after having produced citrus crops for 25 years."*



The chip experience took place at El Rodeo Orchard, and it is only one part of a wider set of sustainable actions undertaken by Citrusvil in its primary production:

- **Efficient water use:** irrigation and fertigation sensors.
- **Biological sustainability:** selective application of biological insecticides and fungicides.
- **Advanced technology:** exploration/implementation of different technologies, such as drone use, that contribute to greater efficiency in growing tasks.
- **Operational management:** incorporation of the Agrobot operating system to improve production processes.

*Altamiranda added: "Some initiatives in this comprehensive package have already been implemented while others are planned for the short term and a third group is part of our planning up to 2030. All of this is aligned with our Model of Operational Excellence (MEOC), where every technological innovation must be accompanied by adequate training."*

In 2024, zone managers and heads in the 23 orchards were trained under this model. *"Our goal is to optimize the responsible and intelligent use of resources while increasing our productivity with a vision for the future," concluded Altamiranda.*



**Juan Altamiranda**  
Primary Production  
Manager





Citrusvil

# Innovation and Continuous Improvement at the Heart of Industrial Processes

*At Citrusvil, we promote research and innovation by creating new products, streamlining processes and strengthening customer relations.*

**A**t Citrusvil's laboratories, ideas and new methods are tested to improve products and their applications in order to meet the expectations of the global market.

In this respect, the Research and Development (R&D) Department is responsible for addressing customer needs, transforming them into opportunities to optimize costs, improve processes and offer products with quality standards aligned with the dynamic requirements of the industry.

*"Citrusvil's R&D team is a multidisciplinary group that is distributed among the different operating units, laboratories and the commercial team and works every day in the search for solutions that our customers demand," explained Federico*

*Sosa, Head of the Research and Development Department.*





## Process streamlining

In 2024, in order to improve the efficiency and effectiveness of our processes, the R&D Department expanded its duties to control, streamline and standardize production processes. One of the most outstanding achievements was the standardization of the pulp cell production process, which allowed for a sustained increase in efficiency.

*“The constant analysis of the processes ensures that we continue making progress in our commitment to operational excellence,” added Sosa.*

## Customer service, the central focus

The R&D Department works to develop new products, improve processes and strengthen our customers' trust through a comprehensive approach where customer dialogue and active listening become the starting point for the creation of innovative solutions.

*“We aim to be a technical reference for our customers' queries, with the main objective of obtaining inputs to work on different developments, achieving interaction with users, offering our products and enhancing their applications.” explained Federico.*

### This approach allows us to:

- Understand customer needs in order to respond more effectively in terms of production.
- Provide personalized support by knowing the feedback on our service.
- Create stronger relations among the technical teams.

## Quality control at our laboratory

Quality and food safety are pillars at Citrusvil. In 2024, we intensified quality control and pulp safety at our laboratories with more than 200 analyses per day, from physicochemical tests to sensory tests.

*“We control every stage, from product to packaging, ensuring that every detail meets the most demanding requirements to fully satisfy our customers' demands.” explained Beatriz Pérez Camaño, Head of Plant B Laboratory.*

## Commitment to continuous improvement

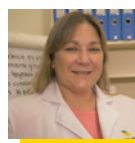
Through a comprehensive approach that combines innovation, technology and customer service, Citrusvil strengthens its position in the global industry.

Each solution developed contributes to the success of both the customer and the company, confirming our role as strategic partners.



**Federico Sosa**

Head of the Research and Development Department



**Beatriz Pérez Camaño**

Head of Plant B Laboratory



Citrusvil

## Biodiversity, the Protagonist in Our Orchards

*Fundación ProYungas, under the coordination of Roberto Cáceres, conducted a mammal survey at Citrusvil's orchards which reinforces the balance between sustainable production and environmental preservation.*

**L**earning about what mammal species are present in the Protected Productive Landscapes (PPP) is important because of their role in numerous ecological processes and in the provision of ecosystem services. Mammal species diversity and composition are indicators of environmental quality.

In four orchards of “high environmental value,” images of 14 species of mammals were recorded, and four of them are threatened species: **the red weasel, the ocelot, the tayra and the collared peccary**. These findings prove the success of the Protected Productive Landscape model, which was implemented in 6,147 hectares, 68% of which remain in their natural state.



Geoffroy's cat (*Leopardus geoffroyi*)

# Preserving biodiversity in the context of the Protected Productive Landscape Program

## Monitoring results:

### 14 species of mammals

were recorded in 4 of the 23 lemon production units.

### Medium and large size:

significant diversity for the area.

## Threatened species:



Red weasel



Ocelot



Tayra



Collared peccary

## A shared ecosystem

The monitoring, carried out in 2024 with 43 camera traps at Don Vicente, La Cruz and Ischillón Orchards, as well as at San Rafael Orchard in previous years, allows us to record the current biodiversity and how animals interact with the different elements of the landscape, such as continuous forest, riverbanks and lemon plantations. *According to Roberto Cáceres, “this understanding is crucial to coordinate actions that strike a balance between environmental conservation and production.”*

This work is part of a planned Environmental Monitoring Protocol that Citrusvil implements to monitor variables such as the mammals that inhabit our forests and even for production areas.

Species such as the ocelot, captured in all the monitored orchards, highlight the environmental quality of the territory. In addition, the collared peccary also stood out for being a key “architect of the forest” for flower diversity due to its role in ecosystem regeneration.

*“By preserving biodiversity in the orchards, we are protecting the natural balance and setting an example in terms of leadership in a sector that is committed to sustainability,” said Noelia Lescano, Head of Quality Assurance and Environment at Grupo Lucci.*

The list of native animals observed includes: weasels, red weasels, six-banded armadillos, crab-eating boxes, Pampa foxes, Geoffroy's cats, ocelots, jaguarundis, tayras, ferrets, mayuatos, collared peccaries, brown brockets and tapetis.

## The importance of the Yungas

The Yungas, which together with the Paraná Rainforest concentrate 40% of the country's biodiversity, are a bastion of unique species. The study conducted by Citrusvil reinforces the value of these areas as essential natural reservoirs for human and ecological well-being.

### About the study

*In the context of the Environmental Monitoring Protocol, each of the 43 cameras installed by Fundación ProYungas in 2023 at Citrusvil's orchards was considered a sampling station. The cameras were programmed to shoot three photos with a time delay of 5 minutes between successive recordings. The sampling stations were placed in the field following the criterion of keeping a distance of more than 1 kilometer between stations, in order to avoid sampling the same individuals of each species and to ensure that each station is a valid replica of the sampled situation.*



Ocelot

### **Citrusvil participated in the third Annual Meeting of the Protected Productive Landscapes Network in Tucumán: Sustainability, Innovation and New Market Paradigms**

In November, Tucumán hosted the third annual meeting of the Protected Productive Landscapes (PPP) Network, which brought together more than 100 leading figures from different areas: large, medium-sized and small companies, civil society organizations, international certifying organizations, academic institutions, researchers and technicians from Argentina and neighboring countries. Representatives of the European Union Delegation in Argentina, which has co-financed the PPP program in Norte Grande since 2021, also took part in the meeting.

During the event, key issues such as sustainability, innovation and the challenges of the current market were addressed, with special emphasis on European Union regulations. The attendees discussed the opportunities and challenges faced by the PPP program in the context of these new paradigms, as well as strategies to ensure the sustainability of the program and boost innovation in the participating companies, including the role of international certifications.

The slogan of the meeting, “More production, more nature conservation”, reflected the main objective: to generate a space for dialogue and exchange to find innovative solutions and financing models that strengthen the integration between sustainable production and biodiversity conservation.

**Today, the PPP program covers nearly 3 million hectares in Argentina and neighboring countries, with more than 40% of this area engaged in the protection of natural areas at the landscape scale. This effort demonstrates that the production sector can be a fundamental part of the solution for preserving nature.**

### **More actions together with ProYungas**

#### *Actions meant for tapir conservation and refuge in the Aconquija Protected Park*

ProYungas held different meetings to promote collaboration among organizations, the Government and companies to address conservation problems in Aconquija Protected Park.

Work was carried out on tapir reintroduction, 160 teachers were trained to introduce environmental issues in schools, and artificial intelligence was used for fauna monitoring.

In addition, we suggested transforming the Santa Ana Central Park into an educational space about the local flora, updating a survey of trees and plants. The workshop highlighted the importance of extending conservation beyond geographic boundaries, and it will continue in 2025 with an institutional project that will involve communities in the protection of the tapir and biodiversity.



Crab-eating fox



Tayra



Brown brocket

### **Expression of interest agreement for the sustainable management of the Aconquija Protected Park**

Citrusvil signed the expression of interest agreement of the Aconquija Protected Park, an important step in the conformation of the Aconquija Protected Landscape.

This agreement seeks to strengthen the management and governance of the province of Tucumán, Argentina, through a public-private partnership to preserve the natural resources in the region.

One of the main objectives of this initiative is to ensure the conservation of the most important sources of water resources, guaranteeing their long-term availability for both human consumption and industrial uses. In this sense, it seeks to promote sustainable use of natural

resources, establishing comprehensive management guidelines that are agreed upon between the public and private sectors.

The project also aims to value the environmental services offered by the protected landscape, highlighting the importance of these services for human well-being and the ecological health of the region. In this way, it will promote the responsible and balanced management of the territory, contributing to the sustainability and preservation of the ecosystems in the area.



Learn more about the different activities that we have been carrying out with ProYungas since 2016.





Citrusvil

## Learnings and Results

*Citrusvil's Model of Operational Excellence*

At Citrusvil, the pursuit of operational excellence has been constant, and over time, it has become deeply integrated into our organizational culture. In 2024, we celebrated three years of Citrusvil's Model of Operational Excellence (MEOC), a fundamental tool that has enabled us to reach new levels of efficiency and organization. This model, inspired by the Lean Management philosophy and aligned with the Lucci Way, motivates us to keep a relentless focus on the continuous improvement of our production processes.

Since its implementation in the industry, the MEOC has helped generate an order that has already reaped tangible benefits, such as the reduction in the stoppage time in the production processes. This year, the model was

expanded to the Primary Production area with training courses in 10 citrus orchards, thus consolidating the methodology in field operations and task standardization.

### Organizational culture transformation

#### 1. Impact on the industry

At Citrusvil's Plants A and B, the MEOC has established a strong system of individual, collective and process indicators. These tools make it possible to monitor and improve key operational aspects, being a turning point in our management. One of the most significant changes has been the implementation of the Asakai morning meeting, where daily indicators are analyzed in order to plan tangible actions.

*“We are doing something that we know will be positive for the future. The Asakai meeting can also be improved, but it already allows us to read the indicators in a different way and, for example, to emphasize predictive maintenance tasks,” said César Romero, Process Engineer.*

## 2. Field progress

In the Primary Production area, the MEOC was able to involve engineers and orchard managers in the implementation of standardized practices and the development of key indicators, such as irrigation, pruning remains removal, nursery and herbicide application. The initial 10 orchards that adopted the model became learning laboratories and stood out for their commitment and technical level.

*“In the field, we have seen an excellent technical level, communication and commitment. The results will be seen in the production in the short term,” said Sebastián Dopico, Industrial Process Auditor.*

## 3. A deep-rooted cultural change

The MEOC is ordering our processes. It is creating a culture of continuous improvement that is reflected in every task we perform. The results are tangible, and the team commitment has been crucial for this success.

### Continuous progress

Next year, we will continue consolidating and expanding the MEOC, setting goals that reflect our vision of sustainability and operational excellence. These initiatives will position us as leaders in the efficient management of resources and will strengthen our organizational culture focused on continuous improvement.

Next steps:

- 1. Consolidation of the model in the current orchards and expansion to new orchards**
- 2. Team strengthening**
- 3. Monitoring and assessment**



*Our commitment to this model reinforces the philosophy of continuous improvement defined by Citrusvil, demonstrating that operational excellence is not an end goal but rather a constantly evolving process.*



**Sebastián Dopico**  
Industrial Process Auditor



**César Romero**  
Process Engineer



Grupo Lucci

## Human Capital Stories of Growth

*At Grupo Lucci, our commitment to the development of our collaborators is reflected in tangible results through policies and tools that promote professional and career growth. The stories of Marcos Romeo Aralde, Eduardo Guevara, Paola Lazarte and Cyntia Gómez are examples of how investing in human talent benefits both the company and the individuals involved, inspiring teams and colleagues.*

### **Marcos Aralde: Innovation and Leadership in the Field**

With a sound training as an Agricultural Engineer at the National University of Tucumán, Marcos Romeo Aralde joined the company in 2017 as a Field Manager. Since then, his innovative approach and commitment to continuous improvement have made it possible for him to lead agricultural and livestock operations in different production areas of the company.

In 2020, he completed a specialization in extensive crops at the National University of

Córdoba, which allowed him to apply the acquired knowledge to production processes. In 2022, he took on a new challenge by leading a mixed field, where he combined agricultural and livestock production successfully.

*"I always aim at growing personally and professionally. In this company I found a place that allowed me to work with really valuable people with different profiles who enriched my knowledge and values. I am grateful for the opportunities they gave me and for the constant learning I got in this collaborative environment," said Marcos.*



### **Eduardo Guevara: Technical Excellence and Originality**

Eduardo Guevara has a degree in Biotechnology. He joined Grupo Lucci in 2017 as a laboratory chemist in the area of essential oils at Citrusvil's Industrial Plant. Throughout his career in the company, he focused mainly on the area of microbiology, contributing and developing specific knowledge, and he is currently in charge of the area. He took on other roles and currently leads the sensory analysis panel.

Over the years, Eduardo has strengthened his professional profile with specialized certifications and continuous training in sensory analysis, which has been key to improving the quality and sensory perception of products.

*"At the company, I strengthened my skills in microbiology and had the opportunity to innovate in practices that streamline processes. The development of the attribute wheel and our library of aromas was a unique work that allowed us to highlight the distinguishing values of our products in the market," explains Eduardo.*



### **From Intern to Manager: The Inspiring Path of Paola Lazarte**

In 2006, Paola Lazarte a Certified Public Accountant graduated from the National University of Tucumán began her career at Grupo Lucci as an intern. Her passion, commitment and the support from the company made her build a career full of achievements. During these years, she traveled a path of constant learning that allowed her to take on increasingly challenging roles, until she became an Administration Manager in 2023.

Throughout her career, Paola has complemented her experience with top-notch academic training, studying for an MBA at Universidad del Norte Santo Tomás de Aquino (UNSTA) and specializing in management skills at Universidad de Belgrano. Her participation in the migration of the information system to SAP S4 Hana is one of the milestones that consolidated her leadership position.

*"This company gave me the opportunity to study and grow professionally. I have been fortunate to have great people who guided and accompanied me along the way. I am passionate about my work, and that is what I try to transmit to my team, helping them grow and reach their full potential. I strongly believe that human capital is the greatest asset in an organization," says Paola.*



### **Cyntia Gómez: Artificial Intelligence and Innovation in Citrus Management**

Cyntia Gómez, a Certified Public Accountant graduated from the National University of Tucumán, joined Grupo Lucci in 2015 as an Accounting Analyst. Her professional growth has led her to hold the position of Primary Production Controller since 2021, where she focuses on costs, planning and monitoring of this strategic sector for all Citrusvil's integrated production.

In 2022, she started her MBA at UNSTA, where she presented her thesis on a citrus management program that integrates artificial intelligence and multidisciplinary teams. This project not only allowed her to obtain the highest grade, but also to implement new tools such as Power BI in her current position.

*“Thanks to the support from the Human Capital Department and my leaders, I can take on new challenges that help me deepen my knowledge of the business. The collaborative work with my colleagues in the field has been key; there is where everything begins. We have been able to build a constant learning environment that is enriching both personally and professionally,” says Cyntia.*

### **Talent Enhancing Practices**

- **Nine Box and personal development plans:** strategic tools to identify talents and design customized plans for team growth.
- **Performance assessment:** through periodic performance tests that are based on results and also on the development of skills and competences.
- **Ongoing training:** programs tailored to the needs of each area which foster the development of technical and leadership skills.
- **Feedback culture:** an environment of constant feedback strengthens trust and improves team performance.
- **Mentoring and coaching:** in the mentoring programs, the most experienced collaborators guide the least experienced ones. Coaching can also help employees achieve their professional goals.
- **Learning culture:** we foster a culture that values and promotes continuous learning, where mistakes are seen as opportunities for growth.
- **Challenging projects:** many collaborators are assigned to tasks and projects that represent a challenge for them while they allow collaborators to apply and develop their skills and incorporate new ones.

*Developing talent in a company is crucial in order to foster a productive and motivating work environment. The Human Capital Department bases its work on solid pillars to ensure that its collaborators can reach their full potential.*

## Commitment to the Future

*“Our commitment to the development of Grupo Lucci’s collaborators is based on the conviction that each member has the potential to contribute significantly to the company’s results and progress. For this reason, investing in personal and professional growth with a focus on creating an environment where everyone can flourish is part of Grupo Lucci’s construction of a present and future of excellence,” said José Palacio, Human Capital Manager at Grupo Lucci.*

The Human Capital Department faces the challenge of planning the development of skills and competences in the teams, aligning the different initiatives with the business needs and the development of organizational talent.



**José Luis Palacio**  
Human Capital  
Manager

## Educational Allies: MBA at the Business School of UNSTA

Our collaborators’ development is a key factor to drive growth and ensure Grupo Lucci’s sustainability over time. Investing in talent development improves personal performance and strengthens the ability to face the challenges of a competitive and changing environment.

*“An MBA helps develop a systemic view. Before making any decision, it teaches the person to analyze from a comprehensive perspective,*

*imagining how the different areas are interconnected and how decisions can affect the whole,” said Máximo Bulacio, MBA Director and Head of the Business School of UNSTA.*

*“The MBA strengthens organizational culture and equips participants with key tools to understand and align their objectives with the company’s genuine purpose. This contributes to the company’s strategy and promotes a work culture based on continuous improvement and adaptation to changes in the environment,” stated Bulacio, emphasizing the importance of this educational opportunity.*





Agroganadera del NOA

## Agroganadera del NOA Is Created

*Grupo Lucci takes a major step forward by positioning Agroganadera del NOA as a leader in the region, thus consolidating its presence and reasserting its commitment to agricultural development.*

**G**rupo Lucci will develop its agricultural activities under a new corporate name. This change is part of a strategy aimed at bringing all Grupo Lucci's assets and agricultural and livestock farming activities together in a single company. In this way, resources are optimized and a strong organization is consolidated with synergies aimed at sustainable growth.

Likewise, the new corporate identity seeks to reflect the company's commitment to the sustainable development of the agro-industrial and livestock farming sector in northwestern Argentina.

This allows Agroganadera del NOA to achieve a significant administrative, financial, tax and structural synergy. By consolidating resources and potentials, the new entity is strengthened and reinforces its position in the agricultural sector, consolidating the methodology in field operations and task standardization.

### **Operational efficiency and sustainability**

One of the fundamental pillars of this merger is production process optimization. Agroganadera del NOA aims to generate circular economy practices and maximize its scale. This not only improves the company's competitiveness, but also contributes to a more sustainable approach to agricultural and livestock farming practices.

### **Innovation and technology in the field**

In order to remain at the forefront, Agroganadera del NOA is committed to investing in applied research and technological innovation. The joint implementation of new technologies will guarantee a high-quality production process, offering products that meet the most demanding market standards.

## Strengthening the brand

In addition to the operational benefits, this merger also seeks to build a strong employing brand. With a shared organizational culture at its origins, it seeks to attract and retain the best talent in the agricultural sector.

With the creation of Agroganadera del NOA, Grupo Lucci takes a firm step towards the future, consolidating its commitment to innovation, efficiency and sustainable development in the region. This is a significant moment not only for the company, but also for the agricultural sector in northwestern Argentina, which continues to strengthen its ability to compete and lead in the market.

This new company will be identified with the following isologotype that joins Grupo Lucci's brands and with the slogan "Sustainable Production", thus reflecting the link between the production in our land and nature and its care.

*"This isologotype visually represents our connection to the land, our sustainable practices and our commitment to the highest quality standards in our products. It reinforces our positioning as leaders in responsible agricultural production in northwestern Argentina," said Pablo Cianci, Agroganadera del NOA CEO and leader in this growth process.*



*In the last five years, there has been a 40% growth with the incorporation of 25,000 net productive hectares, 10,000 of which are meant for agriculture and 15,000, for livestock farming.*

## Agriculture

### Winter

wheat, rapeseed, safflower, chickpea.  
Service crops.

### Summer

soybeans, corn, cotton, sunflower, sorghum,  
peanuts and beans: black bean, green bean,  
cranberry bean, dark bean, mung bean.

## Livestock farming

### Domestic market

- Steer
- Heifer
- Young Bull

### Foreign market

- Young Bull
- Cow



## Production capacity in northwestern Argentina

With its 15 establishments, Agroganadera del NOA has a diversified production capacity that includes both agriculture and livestock farming. The agricultural business unit focuses on growing a wide variety of products, including corn, soybeans and wheat, as well as specialty crops.

On the other hand, in terms of livestock farming, it specializes in the production of high-quality beef from breeding, rearing, fattening and herds, positioning itself as a reliable supplier in the domestic and international markets (the latter is focused on the European Union and other countries through key partners).



## Extended product portfolio

- **Cereals and grains:** production and commercialization of agricultural products, including commodities and specialty crops. We combine innovation and technology, guaranteeing traceability and certified processes.
- **Beef:** production of high-quality beef, known for its flavor and texture, which is commercialized both in the domestic and foreign markets.



**Pablo Cianci**  
Agroganadera del  
NOA CEO

## The team that makes change possible

In this transformation process, the members of Agroganadera del NOA's work team play a key role. *"We have a committed, talented and highly trained team, who share the values of the organization and are ready to face the challenges of the agricultural sector. Dedication, professionalism and passion for what they do are the basis for the new company's success. Agroganadera del NOA seeks to continue attracting the best professionals, promoting an organizational culture characterized by innovation and continuous growth,"* concluded Pablo Cianci, Agroganadera del NOA CEO.





Agroganadera del NOA

## Responsible Agriculture

*We have added safflower and sunflower to our crop portfolio*

**B**oth agricultural productions have clear objectives: to contribute to soil conservation as a service crop and as another option for plantation rotation.

These crops were added to the product portfolio, which includes soybeans, corn, cotton, beans of different colors, peanuts, sorghum, rapeseed, rye and fodder radish.

Soil conservation is a crucial aspect of agricultural sustainability and ecosystem health. Practices such as crop rotation and the implementation of service crops play a key role in this process. Crop rotation not only helps prevent erosion and maintain soil fertility, but also interrupts pest and disease cycles, reducing the need for agrochemicals.

On the other hand, service crops, such as pulses and grasses, protect the soil during periods of agricultural inactivity, improve soil structure and

promote biodiversity. In addition, these practices contribute to nitrogen fixation, which reduces dependence on synthetic fertilizers.

The combination of crop rotation and service crops not only preserves soil quality, but also promotes a more resilient agricultural system adapted to the challenges of climate change.

*Moreover, “crop diversification allows us to participate in different markets and sell our products at different times of the year,” said Ramiro Aznar, Agriculture Manager.*

We have managed to plant 399 hectares of safflower at Pozo de la Espuela establishment (Salta) and we took the first steps by planting 290 hectares of sunflower in Las Marías orchard (Tucumán), which responds to the window of opportunity generated by the early harvest of corn.



*“We harvested 1,000 kilos/hectare of safflower, and we expect 2,500 and 2,600 kilos for sunflower. These results are due to the heavy rains that have taken place since September,” said Ramiro Aznar.*

Safflower is an erect and branched annual oilseed of the same family as sunflower, which is characterized by being a species highly adapted to arid conditions. According to the Crop Index of the Agronomy School of the University of Buenos Aires, safflower was originally grown for its flowers, which were used to make red and yellow pigments for coloring clothing and food. Today, safflower is used to generate oil, flour and bird food, and is part of the so-called “biofuel boom” for its energy potential.<sup>1</sup>

According to the August 2024 edition of the Agricultural Estimates Report prepared by the Ministry of Economy, 13,000 hectares of safflower were planted in the country, constituting an incipient development of this crop.<sup>2</sup>

On the other hand, the area devoted to sunflower grew by 9.3%, compared to 2022/23, to reach 2.3 million hectares, according to the aforementioned report.

*In the 2024/2025 summer season, Agrogranadera del NOA will sow 39,000 hectares, representing a 34% growth in the area in comparison with the previous 2023/2024 season.*

*This growth results from the incorporation of 3 new establishments, Tenené Establishment (Isca Yacu, Santiago del Estero), El Trébol Establishment and Buenaventura Establishment (Las Lajitas, Salta). As a result, 10,000 hectares meant for agricultural use exclusively have been added.*

In addition, in agriculture, 3,000 hectares were added under lease. The added fields will be used for traditional crops (soybeans and corn), cotton and pulses. Both properties are located in areas where the company has already been working, thus consolidating its presence and making better use of the company’s infrastructure. Both El Trébol and Estancia Tenené have joined production with the summer harvesting seasons.

*We managed to join Argentine Responsible Cotton (ARA), a platform that certifies production which respects people and the environment. ARA is a voluntary standard inspired by the Better Cotton Initiative (BCI) model, the specific seal for cotton plantations that covers more hectares in the world. ARA is in keeping with the crop certification policy that we promote and through which we have already achieved certification for soybeans (Round Table on Responsible Soy or RTRS) and corn (RTRS and Farm Sustainability Assessment SAI).*

*“We know that agricultural certifications are a fundamental pillar to guarantee the quality and safety of our products. In northwestern Argentina, where crop diversity and weather conditions are unique, adopting sustainable practices is not only an environmental responsibility, but also an opportunity to position ourselves in international markets.*

*The implementation of sustainability standards enhances our reputation and increases the*

*competitiveness of our products, benefiting us as producers and as well as the development of the regions,” said Ramiro Aznar, Agriculture Manager.*



**Ramiro Aznar**  
Agriculture Manager

Percentage of hectares planted 2023/2024 Summer crops	
Corn	41%
Soybeans	31%
Colored Beans	11%
Black beans	8%
Sorghum	6%
Confectionery peanuts	2%
Cotton	1%

Percentage of hectares planted 2023/2024 Winter crops	
Rye	46%
Bread wheat	31%
Rapeseed	11%
Chickpea	9%
Radish	3%

## References

### Read the article



1) “Cártamo” [“Safflower”], Department of Industrial Crops. Agronomy School, University of Buenos Aires.

### Read the article



2) “Estimaciones agrícolas” [“Agricultural Estimates”], Office of the Secretary of Agriculture, Livestock Farming and Fishing, Ministry of Economy. 2024.



Agroganadera del NOA

## Alliance with The Nature Conservancy

**R**egenerative agriculture in Gran Chaco is a project to assess and support the transition to regenerative agriculture in productive fields. It is carried out by The Nature Conservancy (TNC), which Agroganadera del NOA joined in 2022, for a period of five years at its Rancho Grande establishment in the province of Santiago del Estero.

This alliance seeks to optimize the planning and management of the native areas in the establishment, integrating continuous improvement principles to achieve a balance between productivity and environmental conservation.

Every year, Grupo Lucci's technical team, together with TNC specialists, design the actions to be taken, which are recorded and assessed systematically.

*“Like other countries in the region, Argentina is facing significant challenges due to the expansion of agriculture and livestock farming. The growing global demand for food is driving a steady increase in cultivated areas. To address such challenges, it is crucial to adopt systemic approaches and develop sustainable models that ensure environment regeneration. Only in this way will we be able to achieve a successful long-term transition for Argentina as well as for the rest of the region and the world,” said Ramiro Aznar, Agriculture Manager.*

The project currently covers seven establishments located in Gran Chaco region and distributed between Santiago del Estero and Chaco. This joint model seeks to become a benchmark for the implementation of sustainable and regenerative farming practices in the region.



**Ramiro Aznar**  
Agriculture Manager





Agroganadera del NOA

## 55% Growth in the Area Meant for Holistic Livestock Farming

*Rancho Grande, an 8,200 hectare establishment, joined the holistic livestock farming program implemented by Grupo Lucci in 2024. This innovative approach combines grazing plans for the different stages of the year with agricultural crops in the livestock farming area, having positive impacts on both livestock productivity and the fight against climate change.*

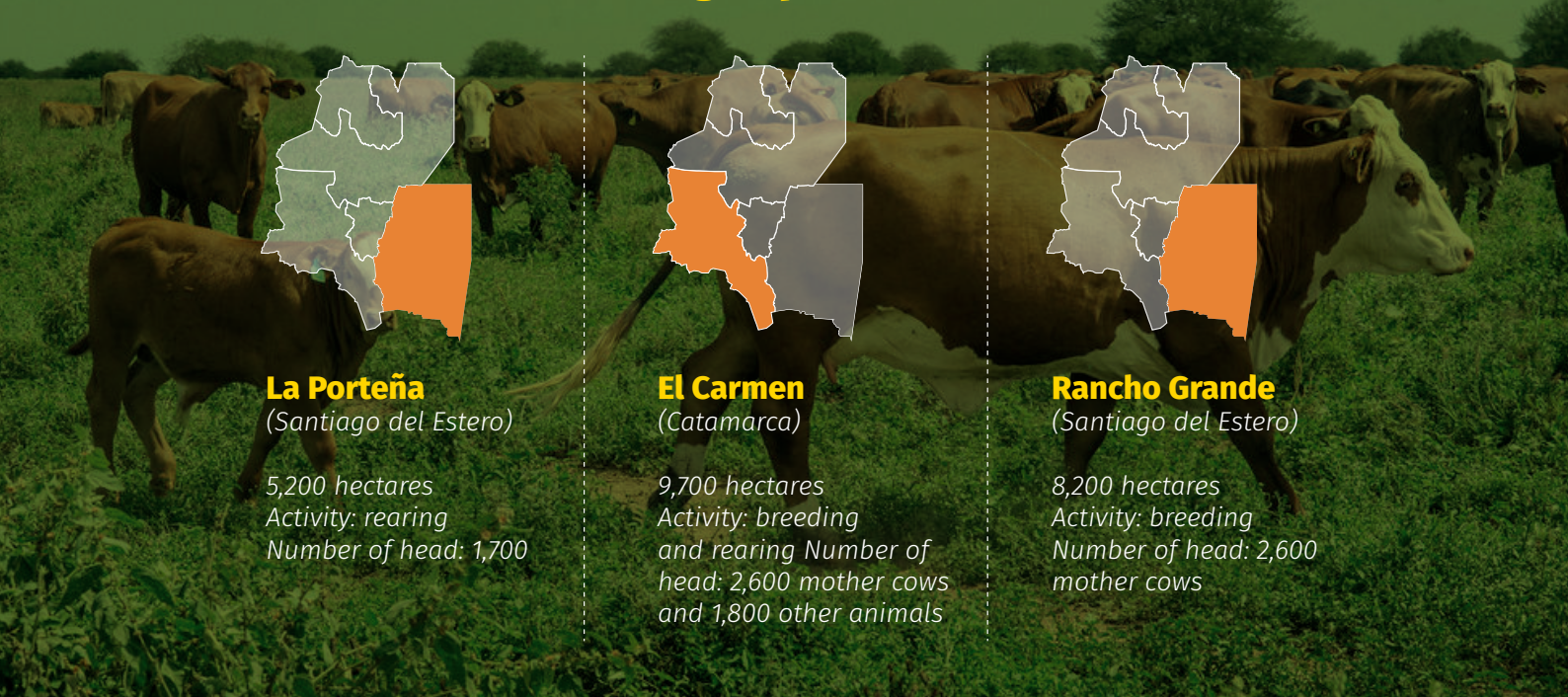
**T**he adoption of this production model benefits the environment by improving soil health, increases carbon sequestration, optimizes grazing management and promotes a natural balance in ecosystems. This sustainable scheme, which is already applied in three establishments managed by Agroganadera del NOA, experienced a 55% growth compared to 2023, thus positioning itself as a strategic pillar in Grupo Lucci's livestock production.

In 2024, the incorporation of Rancho Grande, a 7,000-head establishment located in Santiago del Estero, to the holistic management of livestock farming reaffirms and strengthens Agroganadera del NOA's decision to apply a soil

regeneration system. The holistic scheme was first applied in El Carmen and La Porteña, covering 23,100 hectares and 14,000 animals in total.



## Holistic livestock farming implementation



### **La Porteña** (Santiago del Estero)

5,200 hectares  
Activity: rearing  
Number of head: 1,700

### **El Carmen** (Catamarca)

9,700 hectares  
Activity: breeding  
and rearing Number of  
head: 2,600 mother cows  
and 1,800 other animals

### **Rancho Grande** (Santiago del Estero)

8,200 hectares  
Activity: breeding  
Number of head: 2,600  
mother cows

*“Holistic or regenerative livestock farming is a way of planning grazing and field use where the whole team is involved in the goal of feeding and animal care, which results in greater meat production. Among the measures involved, soil regeneration helps enrich the soil and sequester carbon from the environment,” explained Daniel Navarro, Livestock Farming Manager.*

Growing service crops contributes forage resources in winter (closed plan) to the holistic model, resulting in a better forage quality in the dry pasture season.

*“The holistic process involves agronomic work on pastures and growing service crops. These crops were grown at Rancho Grande and were used for grazing. It was a way to generate green and growing pasture within a closed plan,” said Navarro.*

Winter crops provide an ecological service by increasing the levels of nutrients, roots, microorganisms and soil permeability, all conditions that will give more strength to summer pastures and which are measured over time from geo-positioned points.

### **Environmental benefits**

Holistic livestock farming offers a competitive advantage by optimizing the relation between productivity and sustainability. This approach maximizes the available food per square meter, which reduces the animal's effort to obtain it and, in turn, makes it possible to increase livestock density without compromising soil preservation. The result is a more efficient production, with less environmental impact and greater long-term profitability.

The environmental benefits generated by this model are key to ensure the sustainability of the business. Some of those benefits include:

- **Improved soil fertility:** by promoting natural nutrient recycling, soil quality is enhanced.
- **Increased organic matter content and water retention:** the model reduces the need for irrigation and protects against drought.
- **Increased vegetation cover:** it favors carbon sequestration, a valuable contribution to climate change mitigation.

- **Protection against erosion:** both water and wind erosion, guaranteeing soil stability.
- **Regeneration of native grasslands:** it rescues and preserves local species that are fundamental for ecosystem balance.
- **Conservation of natural habitats:** it protects native flora and fauna, promoting biodiversity.

For Agroganadera del NOA, this model represents an environmental solution, as well as a business strategy that integrates production efficiency and environmental care, in line with the global trends of responsible consumption and sustainable production.

### **The future of holistic livestock farming in Grupo Lucci**

*“With the advance of holistic planning in the fields, we are generating a quality grazing capacity that guarantees responsible livestock production now and in the future,” said Daniel Navarro, Livestock Farming Manager*

The next strategic step is to extend this approach to the entire 49,000 gross hectares that comprise the seven livestock establishments.

Regarding global challenges, Grupo Lucci continues leading initiatives that integrate innovation and sustainability, leading the way towards a future where livestock farming will be synonymous of respect for the environment and contribution to sustainable economic development.



**Daniel Navarro**  
Livestock Farming Manager







Agroganadera del NOA

## Temporary Breeding Is Growing in Scale

*About 1,400 mother cows participate in our rearing program that extends their productive lifespan, helps them gain weight and provides calves for the rearing fields. This strengthens the productive method through a strategy focused on maximizing benefits.*

In 2024, the temporary breeding of heifers and cows was consolidated in Cien Leguas and La Porteña orchards, reaching 1,400 mother cows, which represents a significant growth compared to 2023, when there were 950 mother cows.

The temporary breeding model maximizes the productive lifespan of animals and improves their final weight, while making a key contribution: new calves that strengthen the rearing establishments and boost the overall productivity of the operation.

*“This is a unique way of working in the region, which favors reproduction by means of pastoral rearing, a hormonal treatment, an artificial insemination service and a review with bulls during the estrus season,” said Daniel Navarro, Livestock Farming Manager.*

Thanks to the implementation of rearing systems in November 2024, part of the replacement heifers reached between 60% and 65% of their adult weight at an early age. At an early age. This allowed us to bring forward their pregnancy from the traditional 24 months to 15-18 months, generating a positive impact on reproductive efficiency.



## Two selection terms

The females meant for temporary breeding are initially selected from among calves entering a rearing field, prioritizing those with optimal meat and maternal conditions. When they reach 350 kilograms, these calves are considered heifers and get pregnant. Once they are pregnant, they become temporary pregnant heifers within the same system, continuing their development and weight gain during pregnancy. When the cycle is completed, they deliver a calf, thus achieving the efficient production of a mother and its calf.

After breastfeeding, which lasts six to seven months, the animals are separated: the mother enters a completion, fattening and discarding phase, while the calf is incorporated into the rearing field.

Secondly, temporary breeding is complemented with empty adult breeding cows, which make up about 20% of the females. In a traditional system, these cows would be discarded, but this approach gives them a new opportunity to become pregnant, provided they meet maternal and meat conditions.



## Fast weight gain

For female calves, this system allows them to gain weight at an accelerated rate as they breed, reaching approximately 480 kilograms at the end of the process, which represents an increase of almost 130 kilograms since the beginning of temporary breeding. This reproductive approach allows us to generate our own new animals for rearing, optimizing our processes.

Temporary breeding is an innovative strategy within the livestock farming model for Agroganadera del NOA. This system integrates advanced knowledge and continuous monitoring, ensuring a more efficient and sustainable production.

*“Committed to continuous improvement, through multiple tests and adjustments, we have managed to identify and define the best time, weight, treatment and type of animal for temporary breeding. This accumulated knowledge now gives us the ability to scale up the model with confidence and efficiency,” added Navarro.*

The decision on how many animals to retain every year depends on forage availability, a key variable to ensure the success of the system.

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## 2025: Scaling up to a more efficient and sustainable livestock farming practice

The goal is clear: to increase the number of head incorporated into this system every year, promoting calf production in a sustainable manner. This strategy strengthens the development of a more efficient and modern livestock farming practice, while reaffirming Grupo Lucci's commitment to innovation and excellence in the sector.



**Daniel Navarro**  
Livestock Farming Manager



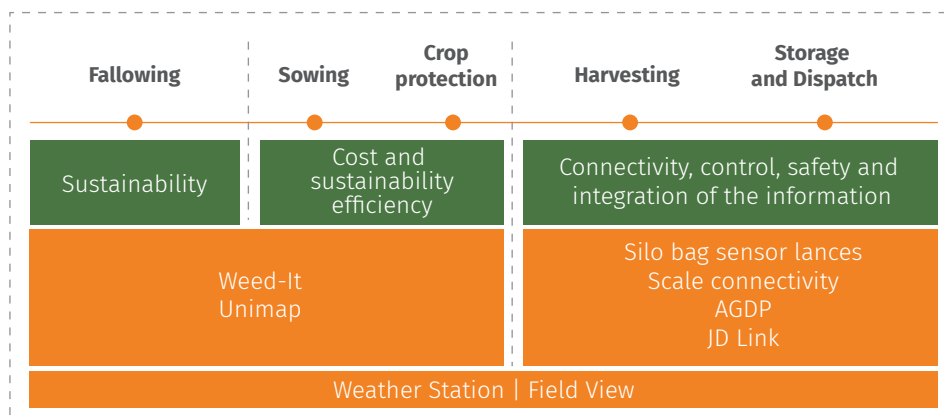
Agroganadera del NOA

# Agricultural Digital Transformation

In a world where agriculture faces growing challenges, from climate change to resource optimization, Agroganadera del Noa leads the way towards digital transformation, which redefines farming practices.

By integrating advanced technology at each stage of the agricultural cycle, the company demonstrates that innovation can go hand in hand with sustainability, achieving operational efficiency while caring for the planet.

## Technologies applied at each stage of the agricultural cycle



The use of technology throughout the production process allows us to carry out sustainable and reliable processes and to improve efficiency and quality at each stage.

Integrated Management System: Agrobot

## 1. Soil preparation and sowing: precision from the very beginning

In this initial stage, technology allows us to maximize resources and reduce the use of inputs:

- **WeedIt:** advanced sensors that apply herbicides only where weeds are detected, achieving a significant reduction in the use of chemicals and promoting more sustainable practices.
- **Unimap:** a system that collects weather data, such as wind, temperature and humidity, during applications, helping to explain deviations and optimize processes.

## 2. Crop protection: data-driven decisions

In crop management, we benefit from the use of digital tools that integrate data to make more accurate decisions:

- **Field View:** a platform that connects activities such as spraying, fertilization and sowing, allowing for specific adjustments based on the needs of each land lot and thanks to specifications based on production data.

## 3. Harvesting, storage and dispatch: guaranteed quality and efficiency

With the technologies we use, we ensure that each harvested grain is handled with precision:

- **JD Link:** John Deere platform that monitors field performance in real time and generates harvesting maps with variability data.
- **AGDP:** a system that records and geolocates the production weight, optimizing traceability during harvesting.
- **Scale connectivity:** integration with SAP that synchronizes truck weight data with stock in real time.
- **Silo bag sensor lances:** sensors that measure moisture and temperature in the stored grain, preventing losses and ensuring quality.



## Climate management: data for decision making

The weather stations installed in the fields collect key information such as temperature, humidity and wind speed, which are essential for adjusting the farming strategies.

*“The incorporation of technology in agriculture transforms production processes, and also allows for an in-depth analysis of the data generated. Such digitization is key to optimize resources, increase efficiency and improve sustainability in the sector. By leveraging digital tools, we can make informed decisions that promote a more responsible production, adapted to future needs,” said Ramiro Aznar, Agriculture Manager.*



### Data integration in the field

A distinguishing aspect of Grupo Lucci's technological model is the ability to centralize and cross-reference data from various tools. For example, the information generated by Weed-It can be linked to JD Link's harvesting maps, providing a comprehensive perspective for decision making.

Maximiliano Van Messeem, IT Manager, highlights the role of Agrobot, a SAP-approved software that connects field operations with administrative systems in real time. *"This integration optimizes resource management and enables precise control of every task performed, from sowing to commercialization," he said.*

### Future projections: artificial intelligence and global connectivity

Agroganadera del NOA's commitment to innovation does not stop. The incorporation of

artificial intelligence, advanced sensors and global connectivity through systems such as Starlink will continue transforming agriculture into a more efficient and sustainable model.

### New future challenges

- Expanding the use of artificial intelligence to forecast climate scenarios and optimize farming planning.
- Implementing emerging technologies such as drones for advanced monitoring and automated applications.
- Strengthening human resources training to ensure a smooth transition to the full use of digital technologies.



**Maximiliano Van Messeem**  
IT Manager



**Ramiro Aznar**  
Agriculture Manager



*Nueces de Catamarca*

## **Nueces de Catamarca Makes Its Way in the Arab World**

*Nueces de Catamarca's 2024 harvest was enhanced in terms of quality and the company recovered its average yield volumes after the impact of the climatic event in 2023.*

**T**hanks to good weather conditions, land recovery was possible, and Nueces de Catamarca, Grupo Lucci's integrated walnut production project, is making its way in the Arab world, one of the regions with the highest demand of walnuts.

Besides being about to close a deal in Türkiye and Dubai, the company has already made a deal to operate in Italy and, for the first time, in Spain.

*"We want to reach India. Arab and Asian markets have significant volumes which pave the way for new opportunities. The harvesting season in Argentina is in keeping with the demand in the Northern Hemisphere, which favours our exports," said Martijn Hazeu, Commercial Representative at Nueces de Catamarca.*

After having obtained GlobalG.A.P. certification in 2022, Nueces de Catamarca has managed to strengthen its business relations in various markets such as Germany, a key market which usually orders products in the last part of the year. Not only does this certification guarantee high quality and food safety standards, but it also boosts the competitiveness of the company in the sector.

*"In 2024, we managed to produce 520 tons of top-quality Chandler walnuts in shell. As a result of this 60% growth, we can make the most of export competitive advantages and supply the domestic market too. Chandler walnuts are highly demanded products worldwide, and Argentina represents less than 1% of this business, which confirms its growth potential," asserted César Tello, Head of Production and Packing at Nueces de Catamarca.*

*“In Argentina, 22,000 tons are produced every year. China is the main producer of walnuts in the world, with 1,100,000 tons of production. We are quite far from that number and we are even far from Chile, which produces 135,000 tons,” reflected Tello.*

### **Plantation Expansion**

*“Nueces de Catamarca operates in 245 hectares, and 215 of them are productive today. Walnut trees take about six years to bear fruit. That is why we are working on plantation development in our expansion plan, and, in the next years, 30 hectares will be added to the production,” added Tello.*

*With this expansion plan, the company aims at producing, in the mid-term, 1,000 tons of walnuts in shell every year. This goal has served as a reference to design the facilities of the production project commenced 22 years ago, promoting industry growth and development.*

*“Nueces de Catamarca is among the five major walnut production companies in the country in terms of size and technology. We have invested in operational spaces and base infrastructure of 800 m<sup>2</sup> with a storage capacity of 300 tons of packed walnuts, as well as in a harvest and post-harvest traceability system. Such advances consolidate a quality-assured business model,” concluded César Tello.*



### **Nueces de Catamarca in the Spotlight**

- Nueces de Catamarca’s facilities (field, packing house and offices) are located 60 kilometers north of San Fernando del Valle de Catamarca, near Los Varela, a village of 1,800 inhabitants.
- The staff of permanent collaborators consists of 15 workers, but, during the harvesting and packing seasons, that number increases, resulting in about 35/40 temporary jobs.
- The walnut crop cycle starts in October and ends in March. Walnuts are harvested in March, April and on the first days of May. After harvesting, packing and order preparation for sale take place.



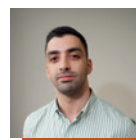
*Chandler walnuts are known for their quality, flavour and other features which make them ideal for consumption. Their popularity has grown in European, Asian and North American markets, where they are used both in the food industry and the retail sector.*



**César Tello**  
Head of Production  
and Packing at Nueces  
de Catamarca



**Martijn Hazeu**  
Commercial  
Representative at  
Nueces de Catamarca



**Octavio Murcani**  
Commercial  
Representative at  
Nueces de Catamarca



Fundación Vicente Lucci

## From Beneficiary to Volunteer Lucas Galván's Story

**Lucas Galván was first a beneficiary of Fundación Vicente Lucci at Soldado Cajal School (Las Cejas, Cruz Alta, Tucumán) and today he is a volunteer who actively participates in the programs while studying, working, making music and playing sports.**

**L**ucas Joaquín Galván is 20 years old and he met Fundación Vicente Lucci (FVL) at the school where he attended secondary school.

*“The work performed by Fundación Vicente Lucci inspired me from the very first day. I enjoyed the activities and dynamics of each visit, so, when I finished secondary school, I didn't hesitate to join as a volunteer. It is an enriching experience that allowed me to identify opportunities to grow,” said Lucas, who is currently studying Agricultural Engineering at the National University of Tucumán.*

As part of the Educating in Values program, Lucas ran a workshop at Mariano Ramos Agro-technical School, where he addressed the topic of emotional intelligence. The aim of this workshop was to encourage reflection on the conflicts that arise in the classroom and

transform them into opportunities for change and growth, working on empathy and communication.

*“During the activity, the fifth graders were asked to identify the strengths and weaknesses of a classmate. It was exciting to see how, despite their differences and conflicts, they found more virtues than they imagined. The activity not only served to bring them back together, but also allowed them to appreciate the positive side in each other,” Lucas recounted.*

### Multiplying the help

Lucas works in a supermarket, practices volleyball, plays the guitar and participates in his religious community. Nevertheless, he spends part of his time volunteering because of his vocation for service.





Lucas volunteering during an operation in rural schools

*“In Las Cejas, where there are fewer than 20,000 inhabitants, many young people do not have the opportunity to study and do not know about the impact that a foundation such as Fundación Vicente Lucci can have. I feel fortunate to have found these opportunities and I want to share them with others,” he said.*

One of the aspects he values most about his volunteer experience is the work environment and the values present in the interaction between people. *“I felt part of the team from the very first day. Ideas and proposals were always welcome. It is a space where one feels valued and where every effort comes back multiplied,” he added.*

### Inspiring new generations

For Alejandra Oviedo, Head of Fundación Vicente Lucci, Lucas's story not only reflects the impact of FVL, but also the power of education as a driver of change. *“It motivates us to continue contributing to education so that new generations can choose and develop their path with determination. In Lucas, we see an example*

*of effort and conviction in the value of studies as a tool to reach his goals. His account as a volunteer encourages us to continue with Fundación Vicente Lucci's mission in northwestern Argentina, which started 21 years ago,” she said.*

### Social investment

Founded in 2003, Fundación Vicente Lucci works in the rural communities in northwestern Argentina with a focus on three key pillars: education, labor inclusion and entrepreneurship, and citizen engagement. It has influence in 36 communities and 43 schools and benefits over 5,000 people by means of its annual programs such as:

- **Educating in Values Program:** educational workshops for primary and secondary school students.
- **Sowing Life Program:** reforestation and environmental education activities for children and young people in school transition stages.
- **Updating courses for rural teachers**
- **Training courses for rural entrepreneurs**
- **Internship Program:** secondary school students do internships at Grupo Lucci's companies, strengthening their skills for the labour market.

### Competences for the development of young people for the labour market

Soldado Cajal, the agro-technical school Lucas attended, is one of the public educational institutions in Tucumán that benefits from Fundación Vicente Lucci's proposals.

*Bruno Grasso, a teacher at that school, valued, for example, that, thanks to initiatives such as the Internship Program, it is possible to teach students theory into practice: “These experiences connect students with the local productive reality and allow them to project themselves into the future with solid tools for their development.”*

Fernanda Sierra, one of the beneficiary students of the Internship Program, also attends Soldado Cajal School, and she has been assigned to tutor Exequiel Briones, who has an Undergraduate Degree in Animal Production and is Head of the Eastern Sector of Agroganadera del NOA.

*“We want the kids to have an overview of the activity and see the work they could do in the future. We show them all the stages of cattle breeding and rearing in a farm such as Rancho Grande, which has a 6,000-head feedlot. We are a company that innovates, grows and considers the local link with families and different social actors to be of great importance. It is a source of pride and a very important responsibility as a company to make students meet the productive reality, which is next to their schools, and to help them discover their vocation,” said Briones.*

### E-learning platform with courses to improve the job skills of young people

In 2024, Fundación Vicente Lucci launched its digital training program aimed at young people seeking to improve their entry into the labour market. The educational offer consists of 2 courses:

#### Enhance your employability and Entrepreneurship.

“We far exceeded the annual goal in this year when the tool was launched, and we were able to train 383 students, demonstrating the high demand in the communities where we presented it and the effectiveness of this modality, which also allows us to widen our outreach and benefit other localities,” commented Alejandra Oviedo.

#### Internship Program Video



#### Learn more about the courses available at our e-learning platform



This tool is available here and you can register by filling in a simple form to access these educational proposals for free, which strengthen competences for adult life.



**Exequiel Briones**  
Undergraduate degree in Animal Production



**Alejandra Oviedo**  
Head of Fundación Vicente Lucci



# Ethics Hotline

Grupo Lucci aims to ensure transparency and good practices in its operations, promoting good corporate governance.



## How Does the Ethics Hotline Work?

1



- » Visit <https://grupolucci.com.ar/>
- » Call +54 381 4515563
- » Go to Ruta 302 km 7, Cevil Pozo, Tucumán.

2



Leave your suggestion or complaint.

3



The evaluation committee will analyze your case and proceed accordingly.

4



The actions necessary to handle and solve the case will be determined.

### YOUR SUGGESTION OR COMPLAINT MAY BE RELATED TO:



Environment



Ethics



Community



Regulations



Information



Product Safety



Please report any incident in an anonymous and confidential manner. We assure you that we will safeguard the information and maintain discretion.

YOUR CONTRIBUTION HELPS US CONTINUE GROWING RESPONSIBLY



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