



Quintil
Valley

BASES

CHALLENGE LACTEA

“SUSTAINABLE SOLUTIONS FOR LIVESTOCK 4.0”

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I. INTRODUCTION.

This document establishes the guidelines for the LACTEA S.A. Challenge, a call for potential problem-solvers to submit innovative proposals in response to the company's strategic challenges.

This open innovation process is part of LACTEA S.A.'s strategy to drive sustainability, efficiency, and competitiveness in the livestock and biotechnology industry. The call presents an opportunity for startups and companies experienced in technological solutions to submit proposals that optimize critical processes and add value to dairy production.

The Challenge will take place in a collaborative environment, promoting interaction between LACTEA S.A., innovation experts, and technology developers. The process includes reviewing and validating challenges, defining evaluation criteria, and developing pilot solutions that may eventually be implemented in the company's operations.

II. BACKGROUND.

a. Who We Are.

Láctea S.A. is one of the leading milk producers in Peru and is part of the Rocío Group, a business conglomerate with over 50 years of experience in the agro-industrial sector. Committed to innovation and sustainability, Láctea seeks new solutions to enhance production efficiency, optimize processes, and develop high-value products as part of its sustainable business development plan.

To achieve this, it has designed an Open Innovation Program to attract startups, research centers, and technology companies that can offer innovative solutions to its strategic challenges. The goal is to build collaborative work agreements with the best innovators, materializing pilot projects in the short term to demonstrate their value and project their scalability.

For this program, Láctea S.A. has the expert support of the Quintil Valley Innovation Agency and financial backing from ProInnovate Peru.

b. Láctea S.A.: Innovation and Sustainability in the Dairy Industry

Láctea S.A. was founded in 2005 as a strategic initiative of the Rocío Group, in partnership with Tal S.A., to integrate livestock and agriculture into a circular economy model. The company leveraged the availability of agricultural by-products from the Chavimochic irrigation project in Virú, La Libertad.

Currently, Láctea S.A. operates on the outskirts of Trujillo, with its fiscal address at Carretera Industrial a Laredo Km 1.5, Sector El Palmo, La Libertad region, and its production facilities at Km. 531 Panamericana Norte, Virú province, La Libertad region, northern Peru.

The company is a key milk supplier to Gloria, producing 40,000 liters of milk daily, totaling 14.6 million liters annually. The milk meets high-quality standards with complete traceability from milking to final distribution. Additionally, 80% of Láctea's cattle possess A2A2 genetics, with plans to reach 100%, providing a competitive advantage in differentiated milk production.

Láctea S.A. has a herd of 3,000 cattle, including Holstein, Jersey, Brown Swiss, Girholando, and Fleckvieh breeds. The company's genetic improvement programs through its Sembryo laboratory employ advanced biotechnology, artificial insemination, embryo transfer, and high-performance livestock selection.

Production Process

The milk production at Láctea S.A. follows a highly technified process:

Milking and Collection: Automated milking system ensuring efficiency and quality.

Cooling and Storage: Milk is rapidly cooled to 4°C and stored in 12,000-liter tanks.

Transport and Quality Control: Comprehensive analysis of composition and health before processing or distribution.

Processing and Commercialization: Milk is supplied mainly to Gloria for further processing into various dairy products.

Business Unit: Sembryo

Láctea S.A. has a specialized biotechnology and bovine genetics unit, Sembryo, which serves as a reference center for:

- In vitro embryo production and advanced fertilization techniques.
- A semen bank with genomic testing for selecting high-value breeding stock.
- Genetic innovation to improve cattle reproductive and productive efficiency.

Sembryo allows Láctea to optimize the genetic quality of its herd and offer services to other livestock producers seeking to improve their herds.

Services Offered by Sembryo:

In vitro embryo production:

- Embryo transfer
- Genomic selection

Embryo Transfer:

- Implantation of high-quality genetic embryos in recipient cows to improve offspring.

Genomic Selection:

- DNA analysis to identify animals with superior traits (milk production, meat quality, disease resistance).

Sale of Semen and Embryos:

- Marketing of genetic material from elite bulls and cows.

Technical Advisory:

- Support for farmers in implementing genetic improvement programs.

Technologies Used:

- In Vitro Fertilization (IVF): A technique to produce embryos in the laboratory.
- Cryopreservation: Freezing embryos and semen for storage and transport.
- Genomic Selection: Use of genetic markers to predict the potential of animals.

Benefits for Livestock Farmers:

- Accelerated improvement of livestock quality.
- Increased productivity (milk, meat).
- Reduced long-term costs by having more efficient animals.

Workforce and Organization

Láctea S.A. has a team of 120 employees. Its organizational structure is designed to maximize operational efficiency and foster innovation across all business areas.

Sustainability and Circular Economy

The company has integrated sustainability principles into its business model, prioritizing:

- Utilization of agricultural by-products as feed for livestock.
- Efficient management of organic waste to reduce environmental impact.
- Optimization of water and energy resources in production.

Innovation and Future

Since 2023, Láctea S.A. has formally incorporated Open Innovation into its management, aiming to collaborate with startups, research centers, and tech companies to tackle the main challenges of the dairy sector. This year, it launched a robust version of its Open Innovation program, presenting various challenges to the global innovation ecosystem in search of solutions that contribute to its business and increase its competitiveness within a sustainable development plan.

Lactea S.A. is in constant evolution to lead the future of milk production in Peru!

III. OBJETIVE.

This open innovation call aims to identify problem-solvers capable of addressing the innovation challenges identified by LÁCTEA S.A. We seek cutting-edge solutions that can be effectively integrated into the company's processes and opportunities.

The goal is to foster collaboration between LÁCTEA S.A. and solution providers, accelerating the adoption of disruptive technologies that enhance productivity and efficiency while promoting sustainable development.

IV. TARGET AUDIENCE.

This call is open to startups, research centers, and technology companies worldwide that are legally established in their country of origin, in the expansion phase, with innovative solutions in the livestock sector or similar industries, seeking to expand markets and develop collaborative innovation processes.

V. APPLICATION PROCESS

Interested applicants can register by completing the form available on the official website: <https://desafioslactea.pe/>

The selection process includes:

- **Registration:** Applicants must submit their proposals via the official website.
- **Challenge Validation:** Proposals are refined through strategic workshops with LACTEA S.A. stakeholders.
- **Technical and Commercial Evaluation:** Solutions are assessed based on

- predefined criteria.
- **Pilot and Implementation:** Selected proposals will undergo a pilot phase for real-world validation.

VI. CHALLENGES.

The call is aimed at addressing three priority innovative challenges that reflect strategic areas for improvement within LACTEA S.A.:

CHALLENGE 1: Use of slurry for high-quality forage production.

Objective: Propose innovative methods to utilize slurry efficiently, optimizing its use in forage production that contributes to the solid content (fat and protein) of milk.

Expected Benefit: Improve the nutritional quality of feed inputs and, consequently, enhance the productive performance of the herd.

For more information: <https://desafioslactea.pe/>

CHALLENGE 2: Improving conception and pregnancy rates, as well as cleavage in the Sembryo biotechnology lab.

Objective: Incorporate technologies that optimize reproductive and laboratory processes, increasing success rates in animal reproduction.

Expected Benefit: Enhance productivity and efficiency in the generation of specimens, reducing time and costs associated with reproductive processes.

Each of these challenges represents an opportunity to innovate in critical processes that directly impact the productivity, profitability, and sustainability of LACTEA S.A.

For more information: <https://desafioslactea.pe/>

CHALLENGE 3: Manure management for new food production.

Objective: Develop technological solutions to transform manure management and treatment, generating value-added products that can be used as inputs in food production.

Expected Benefit: Increase efficiency in waste management and open new business lines based on by-products.

For more information: <https://desafioslactea.pe/>

VII. SELECTION CRITERIA.

Alignment with Challenges: Applicants must present an innovative solution that addresses at least one of the challenges outlined in this call.

Collaboration Capacity: Participating in this open innovation process requires working collaboratively with the requesting company. Therefore, it is essential that applicants have the ability and willingness to collaborate and solve the open innovation challenges presented in the call.

Innovation: Preselected applications must offer a differentiated value proposition.

Solution Maturity: The solution must have a Technology Readiness Level (TRL) of 6 or higher.

Experience Working with Companies: Applicants should have experience providing services or developing collaborative projects with other companies.

VIII. METHODOLOGY AND BENEFITS.

When applying to the LACTEA S.A. Challenge, startups and solution providers will have the opportunity not only to be part of an ambitious project aimed at creating an adaptive, sustainable, and competitive space through technology, but also to participate in an exciting competition process. The best solutions will have the chance to enter a Fitcamp, a networking space between LACTEA S.A. and the developers, where they can schedule individual meetings and interact directly with the owners of the challenges who are seeking technological solutions. The international firm "Quintil Valley" will evaluate several competing ventures during the Fitcamp days.

Within this process, established criteria and traditional aspects such as the business model, technical capacity, team, products or services, and growth and scalability potential will be considered. This will ensure a rigorous strategic and technical alignment between the startups and the participating companies.

Once a selection is made, and if the requesting company decides so, a pilot will be conducted based on the needs and progress of the startup/solution provider, with the aim of a potential partnership under the terms and conditions set by the program.

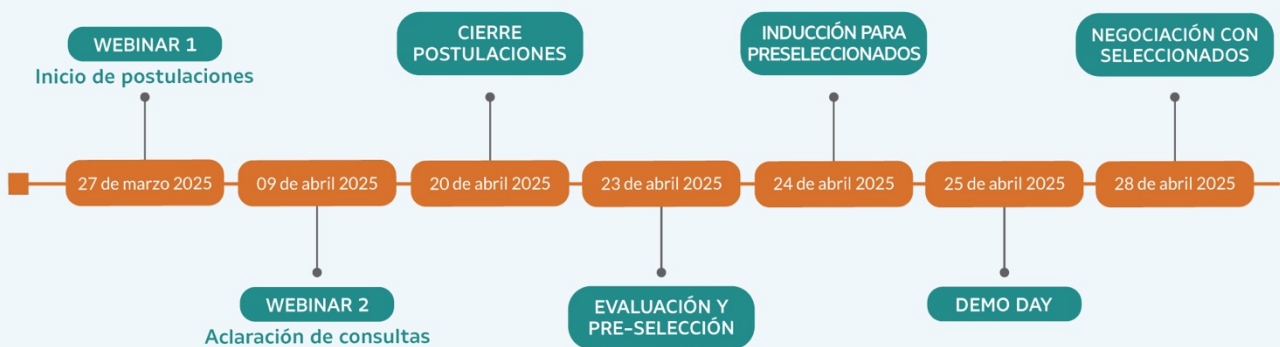
The following are some benefits that selected startups and/or solution providers will have the opportunity to obtain:

- Selected solution providers will have the chance to test their technologies and business models.

- Access to a well-recognized company in the dairy industry in Peru.
- Strengthening the development of their solutions through the experience of the professional team at Láctea S.A. and the innovation agency Quintil Valley.
- Networking with experts in open innovation and access to acceleration programs in LATAM.
- Solving key problems in the dairy industry related to sustainability, production efficiency, and genetics, with the possibility of scaling solutions regionally.
- Funding for the development of pilot processes in collaboration with Lactea S.A.

IX. TIMELINE

Calendario de actividades



X. INTELLECTUAL PROPERTY.

The organizing entities acknowledge that all intellectual property obtained from the start of participation in this contest until the final selection of the projects, whether initially anticipated, created, or originated as a result of, for the purposes of, on the occasion of, or by virtue of this contest, will be the property of the applicant.

On the other hand, the intellectual property resulting from the post-contest relationship process between the applicants and the company Láctea S.A. will be handled according to the conditions that must be agreed upon in advance between the parties in the collaboration document for the development of the joint initiative.

XI. TERMS AND CONDITIONS.

Applicants guarantee, under their exclusive responsibility, that the content they submit and present is of their original creation and does not infringe the rights of third parties, including but not limited to intellectual or industrial property rights, copyrights, trademarks, patents, trade secrets, privacy, and publicity rights, and that the content is not illegal, nor has it been created and/or submitted in a way that infringes any contractual obligation they may have with a third party. The organizers of the call may request additional documentation on this aspect at any time.

Applicants expressly and voluntarily consent to the organizers, or to third parties designated by them, to process and use their information (including personal data) for the purposes of registration in the call, the applicants' participation, the analysis of the project, and its evaluation, applying all reasonable measures of IT security and confidentiality to prevent alterations, loss, processing, or unauthorized access to the data.

If you have further questions, you can send to email address: carlos@quintilvalley.cl.