INIA, INSTITUTO NACIONAL DE INVESTIGACIÓN AGROPECUARIA, URUGUAY

New horizons in AgTech: Scaling innovation in pastoral systems of Latin America and the Caribbean

Scaling AgTech tools to maximize pasture harvest and utilization in pastoral systems of Uruguay, Argentina, and Costa Rica, enhancing productivity and sustainability through digitalization and data-driven decision-making.

From the cloud to the pasture: An innovation platform to bring digitalization to pastoral systems

The implemented initiative

This project will strengthen and expand an innovation platform for pastoral systems, composed of producers, technicians, and researchers, to validate, improve, and scale digital tools in Uruguay, Argentina, and Costa Rica, with expansion to other FONTAGRO member countries. The focus is on digitalization and data-driven decision-making to enhance productivity efficiency and sustainability. The tools to be scaled have proven effective in field implementation, achieving significant improvements in pasture harvest and utilization. Additionally, a User-Centered Design approach will be adopted to integrate new functionalities and optimize existing digital technologies, ensuring they meet the needs of end users, thus enhancing usability and adoption.

3RWeb: Scaling Digital Transformation in Pasture Management Across Latin America and the Caribbean

The technological solution

3RWeb is a digital platform designed to optimize pasture harvest and utilization in pastoral systems. It operates as a cloud-based service that collects and processes farm data to generate key indicators (stock, growth rate, and residuals), enabling real-time decision-making for grazing and forage reserves. Its adoption has proven to increase pasture harvest by up to 30%, enhancing the profitability and sustainability of production systems. This new project phase will expand its functionalities, incorporating animal nutrition modules, GHG emissions estimation, and integration with other digital services via APIs. Additionally, producers and technicians will be trained for effective implementation, and its scalability to more FONTAGRO member countries will be promoted. With a focus on digitalization and data-driven decision-making, 3RWeb contributes to improving the efficiency, resilience, and sustainability of livestock production.

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Results

The expected results include increased adoption of 3RWeb in Uruguay, Argentina, and Costa Rica, with expansion to other FONTAGRO member countries. A pasture harvest increase of at least 30% is anticipated in participating farms, improving productivity efficiency and reducing reliance on external inputs. New functionalities will be developed, such as animal nutrition modules and GHG emissions estimation, along with integration with other digital platforms via APIs.

More than 400 producers and technicians will be trained to strengthen pasture management in pastoral systems. Regional benchmarks will also be created to compare productivity efficiency and sustainability. Finally, the solution will be validated in commercial and experimental farms, promoting its scalability and consolidating a regional AgTech innovation platform for pasture management in Latin America and the Caribbean.

Main donors

Te Kāwanatanga o Aotearoa New Zealand Government

GLOBAL RESEARCH ALLIANCE ON AGRICULTURAL GREENHOUSE GASES

Participating Organizations

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