



Costaquino Agropecuária - Mato Grosso, Brazil



Development Stage



Fazenda Santo Antonio is located in Primavera do Leste, Mato Grosso Cerrado region, focusing on the production of cotton, soybeans, corn and beef cattle in an integrated crop-livestock system. Costaquino Agropecuária strive to improve agricultural practices, to better use available natural resources and improve the production model in the economic, social and environmental spheres. Currently, a total of approx. 4.500 hectares is planted, 2.000 ha of soybeans, 1.200 ha of cotton, 580 ha of corn and 660 of pasture (2020/2021). With the assistance of reNature, they intend to start a test area for regenerative agriculture to understand the viability of this production system within the context of large scale and mechanized crops. With the model being economically viable, the intention is to make the complete transition to regenerative agriculture and help promote this production system in the region.

LOCATION:

Primavera do Leste – Mato Grosso, Brazil

SIZE OF PLANTED PLOT:

660 ha (livestock/crop integration)

SIZE OF POTENTIAL AREA:

800 ha

CLIENT:

Commodity traders (LDC, Cargill, ADM, Olam, Cofco, local cotton mills, Mantiqueira, and Amaggi); Beef processor facilities (JBS, Frigorifico Estrela)

KEY CROP:

Cotton, soybean, corn, livestock

INDUSTRY:

Agribusiness, Food & textile

GOAL:

Prove the viability of the regenerative agriculture model in the Mato Grosso Cerrado for large-scale cotton, soybean, corn, and intensive livestock farming.

MAIN FOCUS:

Improve soil & reduce chemical inputs.

PARTNERS:

Unicotton, IMEA, AMPA, ABRAPA

Finance & Planing



550.000

Investment



Gilberto Lopes da Costa &
Valmir Rodrigues de Aquino

Initiator



Assignment & Impact

Expected Beneficiaries

As this is a region of large-scale production, we see the number of hectares to transition to regenerative agriculture as most relevant. Potential of 50,000 hectares in properties neighbouring Fazenda Santo Antonio (approximately 30 producers), where soybeans, cotton, livestock, and corn are cultivated.

Development Challenge

The main development challenge is the soil type for the region where Fazenda Santo Antonio is located. The soil is classified as sandy, which is sensitive to climatic variations and limited research has been conducted in the current context. Another challenge is the high dependence on external inputs such as fertilizers and pesticides, which represents an average of 40% of the cost of production of soy and cotton. All these factors contribute to the high soil degradation in the region.

Intervention

To improve the soil a crop-livestock integration system is currently applied, rotating soybean, cotton, and pasture crops in a 3-year cycle. With the assistance of reNature regenerative practices will be tested, taking into account the main mechanized corps, adding techniques to the production system to reduce costs with external inputs, increase our resilience to face droughts and other climatic

variations, and help control pests in a more natural manner. This will be done in a way that it can be measured and proven over time. Expected interventions are an increase in crop diversity, cover crops, new revenue streams, and biological control.

Financial Details

reNature Model Farm: est. € 70k
Monitoring and Evaluation (M&E) per year: € 80k

Objective

Increase production capacity in a sustainable manner, reducing the dependence on external inputs and increasing resilience against climatic variations. The aim is to expand Costaquino's access to premium markets for regenerative products and make the best use of natural resources.

Inspirational Impact

Through the implementation of a regenerative test area in the context of Mato Grosso Cerrado on our characteristic sandy soil, we want to demonstrate, based on the analysis of performance results versus conventional areas, how regenerative techniques can improve the production system and profitability of the property. However, there needs to be a change in focus on crop/cattle quantity to a holistic landscape-level approach. It requires training and spread of knowledge as well as long-term financing to support rural farmers. reNature will provide support on these aspects.



50.000

Potential transition
in hectares



61% More

Biodiversity



45% More

Improved Water
Cycles



23% More

Soil Carbon Stock



Environmental Impact

Transitioning large cash crops in the Cerrado region from monocultures towards more sustainable land management systems such as regenerative agriculture will have a huge positive impact on the environment. Especially to reverse soil degradation and reduce the application of chemical products and fertilizers. Planting trees in between crops is a valuable contribution to the local environment as it mitigates erosion, increases biodiversity, and balances the natural system. Costaquino Agropecuária wants to introduce a sustainable land management system, with “a rotational grazing system that combines nutritious forage grasses, herbs, shrubs, and perhaps even trees” to manage livestock in a landscape approach. This grounds beef/leather production in the “efficient use of ecological processes” – creating productive and profitable systems which allow the land to recover, breathe and regenerate. Additionally, carbon can be sequestered which contributes to reversing climate change.

Social Impact

By showcasing the benefits of a regenerative system, this project will reach and inspire the farmers and communities of the region to take on similar approaches. In the medium to long term, investments will increase in the region, benefiting local communities and villagers, as a result of the investment in roads, schools, and other infrastructure in the region.

Economic Impact

Smart, efficient, and science-based solutions can bring the best out of cattle and plant life to create healthy and sustainable food systems. With the implementation of the regenerative method, the impacts of climatic variations and diseases on crops will be reduced, creating a more economically resilient production system. This way,

producers will have greater security to invest, generate new jobs, and the entire local and national production chain will benefit.

Impact Metrics

Outcome Metrics

- 1) Reduce dependence on external inputs (fertilizer/chemicals)
- 2) Reduction on the cost of production
- 3) Increase economic resilience (profitability)
- 4) Increase soil health
- 5) Crop diversification
- 6) Increase biodiversity
- 7) Increase carbon sequestration and generate carbon credits
- 8) Access to premium regenerative markets
- 9) Access to ESG finance

Evaluation Method

- 1) Measure reduction of fungicide/insecticide/herbicide/fertilizers application
- 2) Cost of production analysis regen vs testimony plot
- 3) Compare results of test plot vs testimony plot
- 4) Measure biological activity in the soil
- 5) Number of crops vs testimony plot
- 6) Measure carbon sequestration in the soil
- 7) Compare regenerative produce prices x conventional

