

Reverte – Restoring Degraded Pasturelands in Cerrado Biome

Background

The Cerrado biome in Brazil is Latin America's largest tropical savannah landscape, comprised of shrubland, forests, as well as large spaces of open plain. It is a global hotspot for biodiversity that has experienced widespread land conversion into agriculture and ranching. The soils have naturally low fertility and, in many areas, have been impacted by a history of ranching for beef production, leading to the degradation up to 18 million hectares of soil. This degraded soil either lies barren or has been incorporated into pasture with low productivity.

Last year (2020) Syngenta, with guidance from The Nature Conservancy, launched the Reverte program, putting in place tools to enable local farmers to restore degraded land.

Introduction

Reverte is an initiative to influence the sustainable expansion of agriculture in the Cerrado biome. It aims to enable farmers or ranchers to make the investment needed to bring degraded pastureland back into cultivation, together with the inputs and guidance that are needed to guarantee the investment's pay back.

Reverte facilitates the adoption of integrated land and pasture management practices and sustainable technologies, guiding agricultural expansion into degraded pasture lands and restoring productivity. In this way, the project holds promise to offer a more sustainable means of scaling agricultural production, enabling farmers to grow their businesses and provide more food without contributing to further land conversion. Also, degraded pastureland recovery brings benefits that result in a regenerative, climate resilient agriculture, such as the sequestration of carbon, soil recovery, and water efficiency.

The focus is to optimize the land use, improving efficiency and sustainability of agricultural cultivation expansion on degraded pasturelands with the following objectives:

Objectives

1. Enable farms to improve production on land that would be otherwise less valuable.
2. Reduce the rate of deforestation and land-use change for agriculture.
3. Demonstrate the technological viability and economic potential of land regeneration around the world.

This is a holistic approach to enable farmers and ranchers to make the investment needed to bring degraded pastureland back into cultivation. The program includes the best agriculture practices that need to be implemented to have a win-win scenario for productivity, conservation, and to guarantee a return on investment.

We are integrating different tools such as financing, seed varieties adapted to local conditions and soils, agronomic practices that enhance soil conditions and digital tools to allow farmers to control and monitor the improvement in soil and agricultural conditions.

Implementation

In the first five years of implementation, the goal is to reach one million hectares¹ – and that is basically with a combination of Syngenta’s technology and other production systems (integrated livestock systems, crop rotation, cover cropping, etc.). With technological developments, it is possible that even more land could be brought into this equation, allowing a sustainable expansion of agriculture in Brazil. As digital agriculture is a component of Reverte and it allows precision agriculture practices, other benefits are expected.

Reverte will start in three main regions in the Cerrado (in Mato Grosso, Goiás and Maranhão), where we aim to increase adoption of best agriculture practices for sustainable expansion of agriculture into degraded pasture lands. In addition, Syngenta is planning a commercial offer to reach 30 thousand hectares in its first year, with the expectation to scale to 100,000 hectares in the second year and 200,000 in the third year.

We will engage with producers and rural associations in the territories, to foster integrated systems of production, respecting the current stakeholders in the territory, and supporting the transition to a more efficient land use and soil recovery.

In order to have access to the agricultural inputs² and guidance that are part of Syngenta’s commercial offer in Reverte, a grower/producer must ensure that their land is in compliance with the program’s environmental criteria, (e.g., the Forest Code is being duly followed) and get the financial approval by the involved banking entities. Also, during the entire time a grower stays on the program, he must follow the Reverte agronomic protocols.

Syngenta’s role

Syngenta is committed to Reverte and this initiative is a significant portion of the US\$ 2 billion investment we are making in sustainable solutions. We trust adoption will be in line with our plans, considering how much we can support and be supported by other initiatives to foster sustainable agriculture throughout the Cerrado, especially with a financial pillar in place – as that is currently one of the biggest blockers for farmers to invest to bring degraded lands back into cultivation.

Partners

We are relying on a network of partners that are contributing since the design of Reverte. TNC is a key advisor.

- The Nature Conservancy (TNC) is Syngenta’s foremost collaborator³ in the Reverte program, providing ground-level agronomic recommendations and scientific support. TNC also engages with partners beyond Syngenta to widen the project’s scope and replicability. TNC will discuss ideas and scientific information about degraded soil restoration, best agricultural practices, landscape planning and responsible production expansion with different entities, producers’ representatives and regional key players in order to guide and support Reverte directives in an environmental and science-based way.
- The Brazilian Agricultural Research Corporation (EMBRAPA) and RedeILPF support the project through providing agronomic inputs and guidelines.
- Syngenta has identified Itaú as its Financial partner for the program.

¹ There are approx. 90 million hectares of the total area are in some level of degradation in Brazil. Of these, 18 million hectares are in the Cerrado region. However, only 5.4 million of these hectares are in actual condition of becoming arable land - use of machinery is possible, the geography and soil composition are favorable. This means in the first five years of implementation, there is a potential to reach 1 million hectares – and that is basically with Syngenta’s current technology and currently known systems of production. With technological developments, it is possible that even more land could be brought into this equation.

² Inputs such as fertilizers, machinery, and digital agriculture tools are all part of Reverte.

³ Syngenta and TNC have a long-standing collaboration in Brazil, which started back in 2006 with the program called Lucas do Rio Verde Legal, which supported the municipality to fulfill its compliance with environmental legislation. That was later extended into Soja + Verde, expanding this support to a total of 7 soybean producing cities in the Amazon biome in the state of Mato Grosso. In addition, guidance was provided to farmers on what they needed to do to be compliant with the environmental legislation, providing technical assistance in this process. This collaboration is now evolving into Reverte.