



Symbiomics, Valeouro partner to bring genome-edited biologicals to Brazil

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Symbiomics and Valeouro Biotec are combining microorganism discovery, genome editing and industrial capabilities to develop a new generation of biological crop protection products for Brazil, with the first solutions targeted for market within two to three years



Brazil's fast-growing biologicals market is becoming a proving ground for a new layer of agricultural biotechnology: using genome editing to improve the microorganisms that underpin biological crop protection. Symbiomics and Valeouro Biotec are joining forces to develop disease-management solutions based on proprietary microorganism discovery and genome-editing technologies, with the companies targeting commercialisation within the next two to three years.

Under the partnership, Symbiomics will contribute its microorganism discovery and genome-editing platform, while Valeouro will bring its knowledge of Brazilian agriculture, market access, technical capabilities and industrial infrastructure. The companies' objective is to shorten the route from microorganism discovery to a commercial biological product while improving the consistency and performance of microbial solutions under field conditions.

Brazil's biologicals market is moving into a new phase

The partnership comes as biological products gain scale in Brazil's agricultural economy. According to data cited from CropLife Brasil, the country's biologicals market generated R\$6.2 billion in 2025, representing a 15 per cent increase from the previous year. The area treated with biological products grew 28 per cent to 194 million hectares.

Soybean, corn and sugarcane account for more than 90 per cent of biological technology use in Brazil, while biocontrol products—including bioinsecticides, bionematicides and biofungicides—generated approximately R\$5.4 billion in 2025. The market already has more than 700 registered biological products, raising the competitive bar for companies seeking to introduce the next generation of microbial solutions. The opportunity is therefore shifting from simply adding more biological products to developing products with measurable differentiation, consistency and performance.

Genome editing moves into biological crop protection

That is where Symbiomics is positioning genome editing. The company combines a proprietary collection of thousands of isolated microorganisms with microbiome analysis, genomic sequencing, machine learning and genome-editing technologies. The objective is to identify microorganisms with agricultural potential and then enhance specific characteristics that could improve their performance as biological crop protection agents.

Potential advantages include greater robustness, efficiency and stability, as well as more consistent performance across different soil and climatic conditions. The technology could also allow developers to explore microorganisms that may not otherwise meet the performance requirements of commercial agriculture.

“To develop a product that truly differentiates itself from what is already available on the market, it is necessary to expand the diversity of microorganisms explored and use technologies capable of enhancing their characteristics,” said Rafael de Souza, CEO and co-founder of Symbiomics. He said Symbiomics' objective is to convert its microorganism and genome-editing capabilities into products with clear differentiation and consistent field performance.

The bottleneck is not discovery alone

The partnership is also designed to address one of the biggest challenges in agricultural biologicals: moving promising science from the laboratory into reliable industrial production and commercial distribution. Discovering an effective microorganism is only the first step. Developers must subsequently demonstrate efficacy, establish manufacturing processes, navigate registration requirements and build a route to market.

Valeouro is bringing that commercial and industrial dimension to the partnership. Founded in 2021, the company already has more than 20 products marketed in Brazil and has been expanding investment in research and development, including with support from Finep. Its planned biomanufacturing facility is intended to provide additional capacity to scale new technologies from development into industrial production.

“Our biomanufacturing facility, scheduled to begin operations in the coming years, was designed to provide the industrial capacity required to scale up and manufacture new technologies,” said Luciano Galera, CEO of Valeouro Biotec.

The company expects the facility to help move technologies emerging from the Symbiomics alliance towards industrial scale.

Shortening the path from microbe to product

For Symbiomics, the value of the partnership is also about development speed. Biological product development can involve long cycles of screening, testing and optimisation. The company says its platform is designed to make earlier decisions more precise by combining microbiome studies, genomic sequencing, machine learning and genome editing.

“In biologicals, gaining speed does not mean eliminating steps, but making better decisions earlier,” said Jader Armanhi, COO and co-founder of Symbiomics. According to Armanhi, the integrated platform allows Symbiomics to select and improve microorganisms with greater precision, potentially shortening development cycles compared with conventional approaches.

Valeouro's participation adds industrial and commercial considerations at an early stage rather than after the technology has already been developed. That integration could prove important in biologicals, where a microorganism that performs well in laboratory or controlled conditions may not necessarily translate into a commercially viable product at field scale.

Disease management is the first target

The initial focus of the partnership will be disease management in Brazil's major agricultural systems. The companies expect the resulting technologies to be incorporated into broader disease-management programmes rather than necessarily functioning as standalone replacements for existing crop protection products.

The intended commercial proposition is to combine biological performance with greater consistency and scalability. Flávia Camargo, Executive Manager of Research, Development and Innovation at Valeouro Biotec, said the partnership is focused on translating scientific innovation into solutions that deliver performance, consistency and value to growers.

The companies expect the first generation of solutions emerging from the partnership to reach the market within two to three years.

From biological diversity to commercial differentiation

Brazil's biologicals market has already moved beyond being a niche segment. Its growing scale is now creating a new competitive question: how much further can biological technologies advance in terms of performance, consistency and specificity? Symbiomics and Valeouro are betting that the answer will increasingly involve biotechnology applied not just to discovering useful microorganisms, but to engineering their characteristics for agricultural use.

If the partnership can successfully connect microorganism discovery, genome editing, field validation, regulatory development and industrial production, it could provide a model for how Brazil's biologicals industry moves from a proliferation of products towards a more technology-intensive generation of crop protection solutions. The first commercial launches expected over the

next two to three years will provide the test of whether that laboratory-to-field proposition can deliver at scale.