BioAg World CONGRESS

AN EVENT BY THE INDUSTRY, FOR THE INDUSTRY

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BIOTROP
Biosolutions for Agriculture

Soil Health Challenges and Opportunities in LATAM

Antonio Carlos Zem

CEO

BIOTROP

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- Field Biologist from São Paulo State University with a Master's Degree in Entomology and a Doctorate Degree in Agronomy from ESALQ "Luiz de Queiroz (USP).
- Also attended the Advanced Executive Program from Kellogg's Business school.
- More than 40 years of experience managing businesses in America´s Agricultural sector.
- Has consistently delivered outstanding results throughout his career - 38 years with FMC and now 3 years at BIOTROP.
- Owner of soybeans/corn farms and Leading Partner/Part-owner of a high producing and successful table grapes exporting company.

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Our Vision: TO BE THE BEST AND LARGEST COMPANY OF BIOLOGICALS AND NATURAL SOLUTIONS IN THE AMERICAS BY 2023.

BIOTROP was founded in 2018 from a unique alliance:

AQUA CAPITAL

Largest investment fund 100% dedicated to Agribusiness in LATAM

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14 platforms across different segments and geographies

Antonio Zem,

38.5 years in the crop protection industry

Soybean producer and seedless grape exporter

Founder and CEO of BIOTROP

All of **BIOTROP's** biological and natural solutions meet our 5 key-criteria, which are critical to our clients' success:

- ✓ Proven field efficiency
- ✓ Clear cost-benefit
- ✓ Longer shelf-life without refrigeration
- ✓ Strategic alliances
- ✓ Investments in innovation & registration

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Soluções em Tecnologia Biológica

My objective for this presentation is to discuss and divulge the importance of regenerative agriculture and its growing adoption throughout Latin America.

Photo: iStock

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Soil health and regenerative measures are both absolutely mandatory for modern and sustainable agriculture

- ✓ Transforming forestry in the agriculture landscape changed the soil's natural life balance.
- ✓ Excessive use of equipment, chemical fertilizers and crop protection synthetics also suppressed soil life.
- ✓ Tropical agriculture and sequential crops led to additional pressure, pest resistance and new (and more frequent) plant sanitary challenges;
- ✓ Large scale adoption of No-till practices have helped to minimize these impacts.

Solution...???

How...???

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Biologicals (bacteria, fungus and biostimulants) are now innovative and flourishing tools for regenerative agriculture.

Growers issues

- ✗ Growers facing yield plateau or decline in productivity
- ✗ Increasing dosages of fertilizers, pesticides and pest resistances
- ✗ Escalating production costs

Biologicals have multiple modes of action

- ✓ Increase in natural fertility
- ✓ Enhance root development
- ✓ Aid in soil aeration
- ✓ Increase plant strength, tolerance to pests, diseases and water stress

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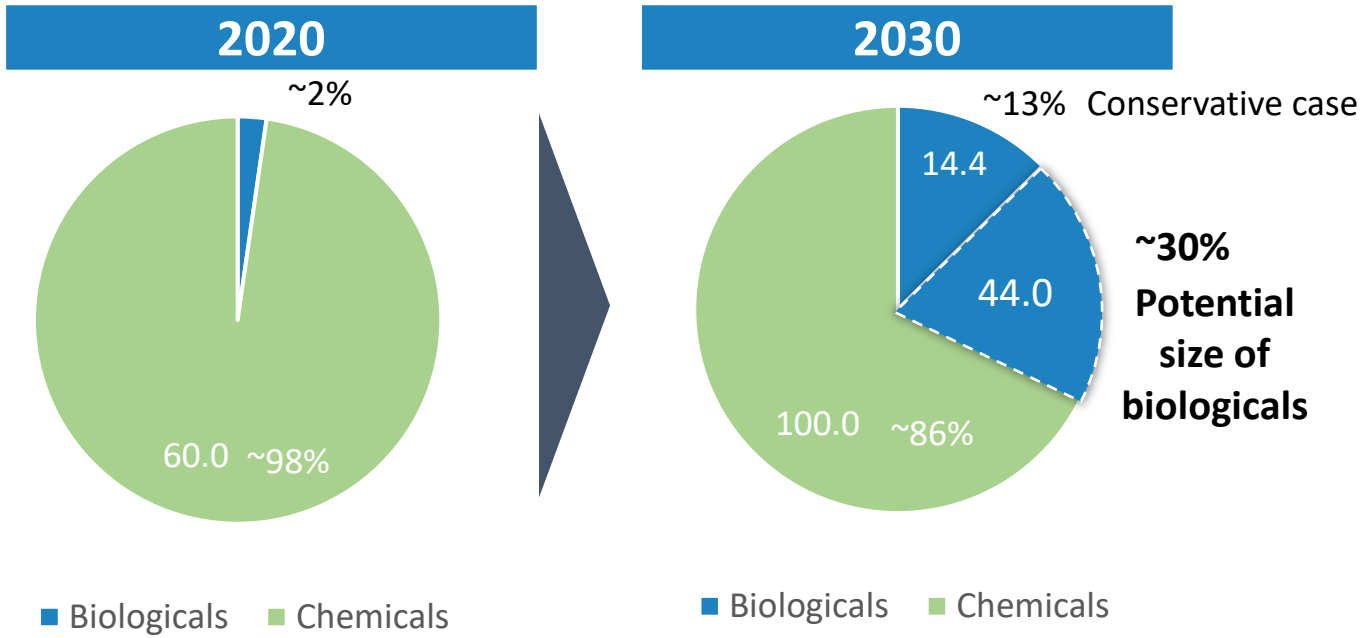
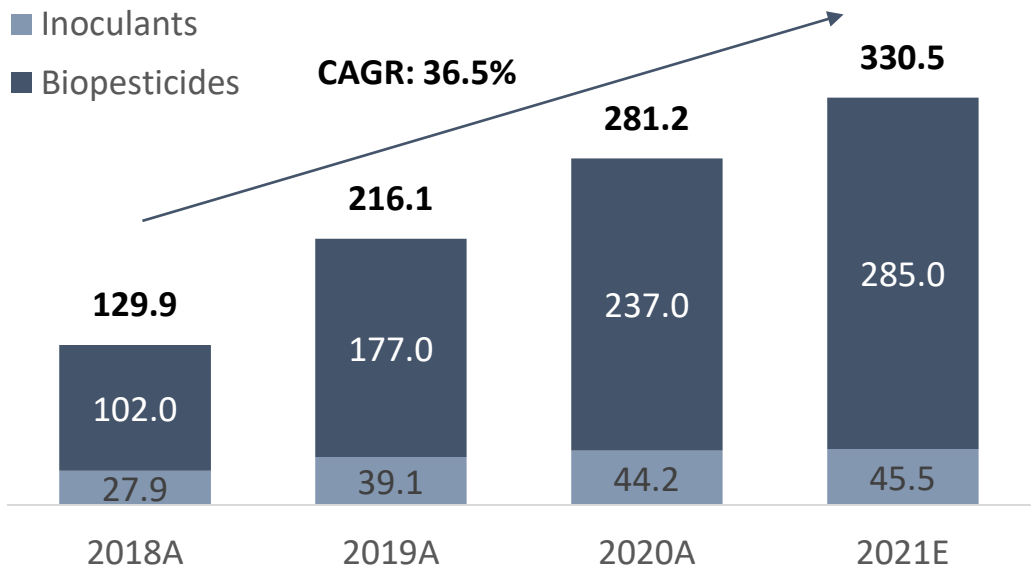
Latin America, mainly Brazil, is driving the most robust bio inputs market growth globally, in value and in treated area.

GLOBAL MARKET – INEXORABLE SHIFT TO BIOLOGICALS (USD BN)



BRAZILIAN MARKET (US$ M) – LARGEST AND FASTEST GROWING



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In such a dynamic, challenging and emerging new market, the following are critical:

R&D	✓ Strong **discovery, development and regulatory** capabilities to understand growers' needs and provide solutions.
Portfolio	✓ **Science backed products** with **defined modes of action** and **proven field performance**
Market access	✓ Strong and **technical demand generation**, **dedicated services**, **market access** and **financial support**
People	✓ People **with passion for Biologicals** and their customers

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Transformation initiatives: Biotech vision

- Proprietary library with thousands of strains collected in different geographies
- Full DNA mapping to catalog potential use-cases for each strain
- Research team backed by AI tools to effectively filter DNA bank
- Product effectiveness data from side-by-side trials
- External data sources: university data banks, meteorology, soil mapping

Biotrop Data Science

Cloud-based Data, AI, Development and Application layers

Holistic value proposition
tailor made recommendations, productivity tracking and services driving loyalty and recurrence

Frontier R&D
assertive research and effective development of innovative, sustainable biological products

- ✓ Accelerated growth phase with the **development of new product concepts**
- ✓ Brazil-based research team with **potential to export innovative formulations**

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BRAZIL IS THE FASTEST GROWING MARKET FOR BIOLOGICALS

US$ **11** billons Crop protection

US$ **800** millon Micronutrients and biostimulants

US$ **240** millon Biologicals and inoculants

Brazil represents **60 to 65%** of LATAM

Biologicals growing approximately **35%** / yr

Key crops planted area in 2019:

Soybean: 35.8M ha / 88.4M acres

Corn: 17.6M ha / 43.5M acres

Cotton: 1.6M ha / 4.0M acres

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In conclusion, the future awaits us…

Growers throughout Latin America are concerned with their soil management and are motivated to improve (recover) soil health.

The time is right to introduce proven bioproducts and to participate in this new agriculture revolution!

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