



Disrupting the seed treatment market with a biological: the Rizoderma experience

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A new biologicals powerhouse

Complementary portfolios cover all major ag biological categories



Item	Specification	Rizobacter	ProFarm	Combined Portfolio
Portfolio	Bio-insecticides		✓	✓
	Bio-fungicides	✓	✓	✓
	Bio-nematicides		✓	✓
	Bio-herbicides		✓	✓
	Bio-stimulants	✓	✓	✓
	Inoculants	✓		✓
	Seeds + Seed Traits	✓		✓
Crop Type	Row Crops	✓	✓	✓
	Specialty Crops		✓	✓

- Portfolio of products with over +\$100M¹ in biological revenues covering most applications (foliar sprays, seed treatments and soil applications)
- Opportunity for 100% bio-based seed treatments (including inoculants and biostimulants, bioinsecticides, bionematicides and biofungicides)
- Ability to offer novel hybrid products combining Profarm microbials with Bioceres seeds, microgranular fertilizers and high-tech adjuvants
- Complementary manufacturing capabilities that strengthen the global supply chain

ADOPTION ADOPTION ADOPTION



BIOCONTROL

Biologicals

- Public/private co-development partnership since 2007
- *Trichoderma afroharzianum* Th2RI99. Multiple MoA
- +15 years of R&D
- Liquid formulation – 18 month on-package stability
- Seed application
- 2015: first registered biofungicide in Argentina
- 2021: +700.000 ha wheat, soybean and rice

Rizoderma



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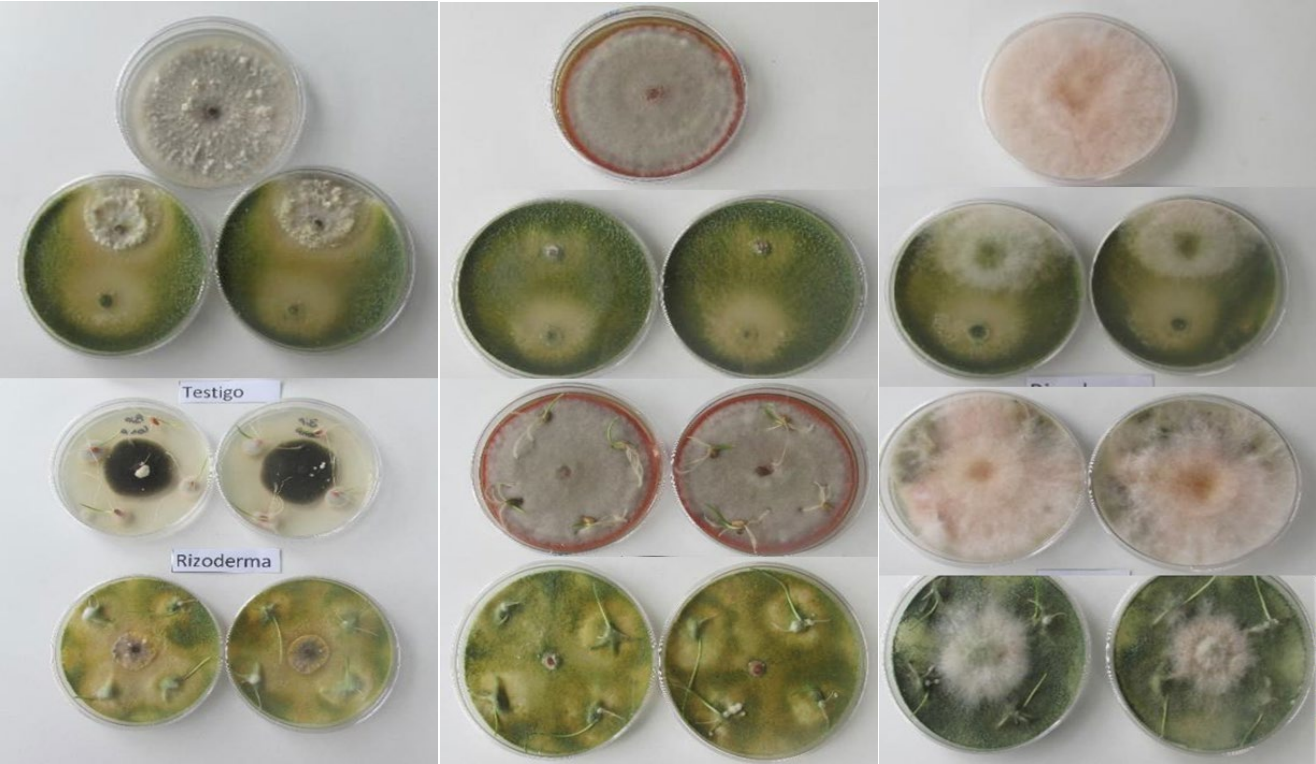
Biologicals



Bipolaris sorokiniana

Drechslera tritici-repentis

Fusarium graminearum



BIOCONTROL

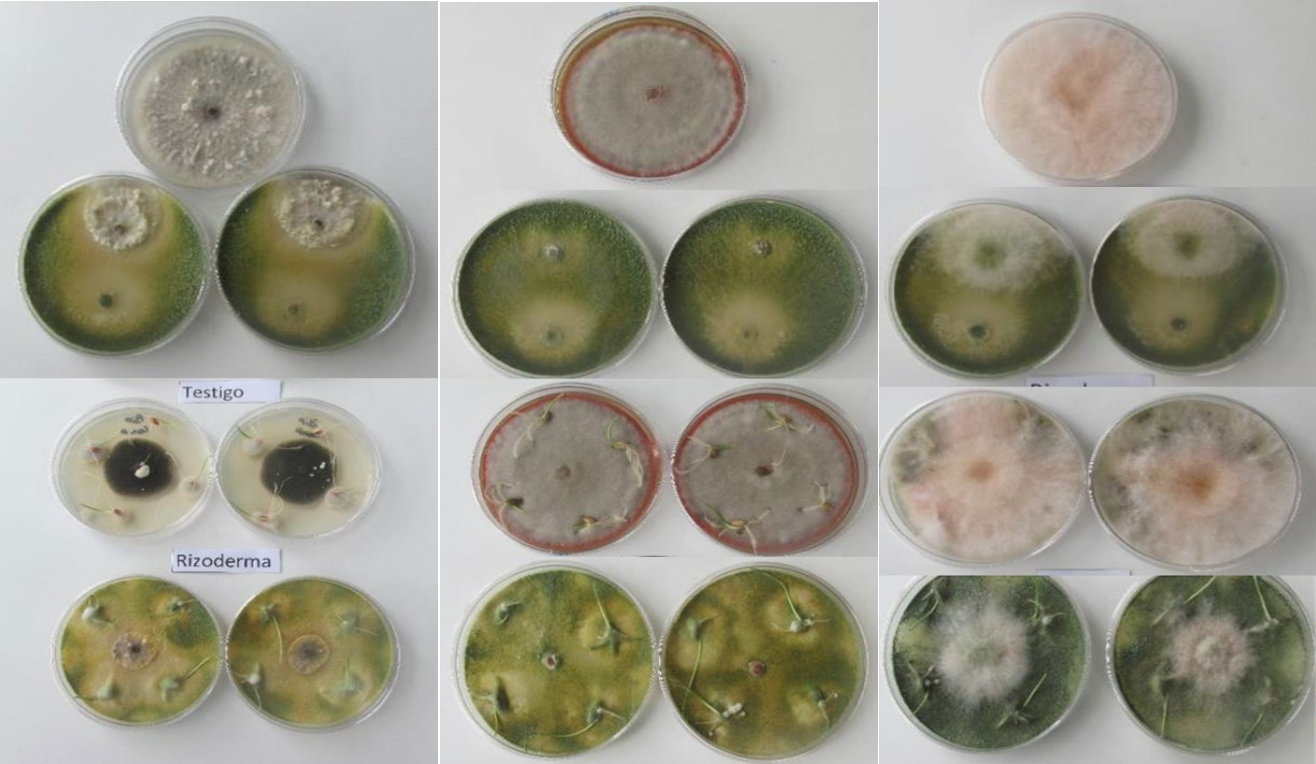
Biologicals

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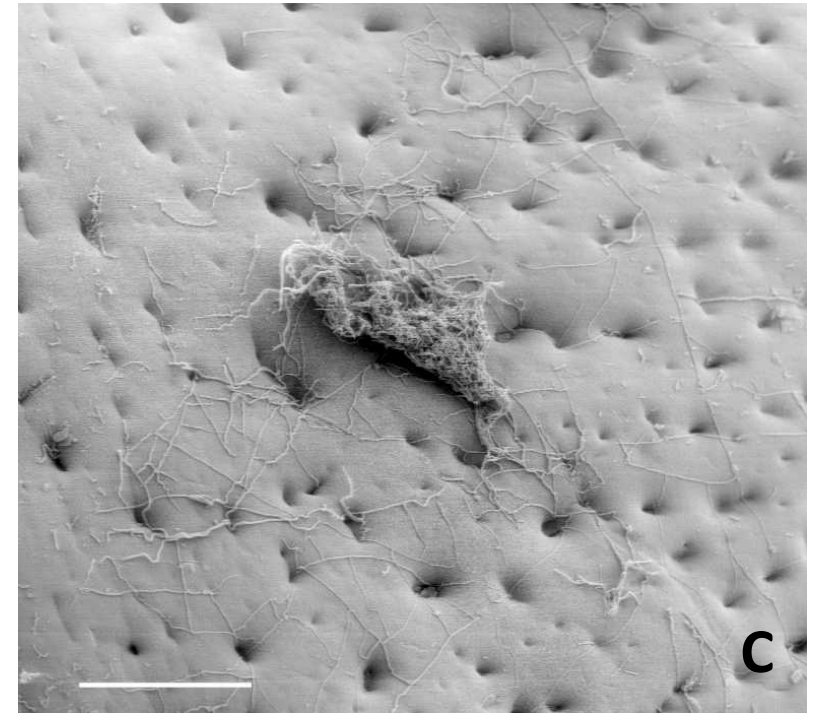
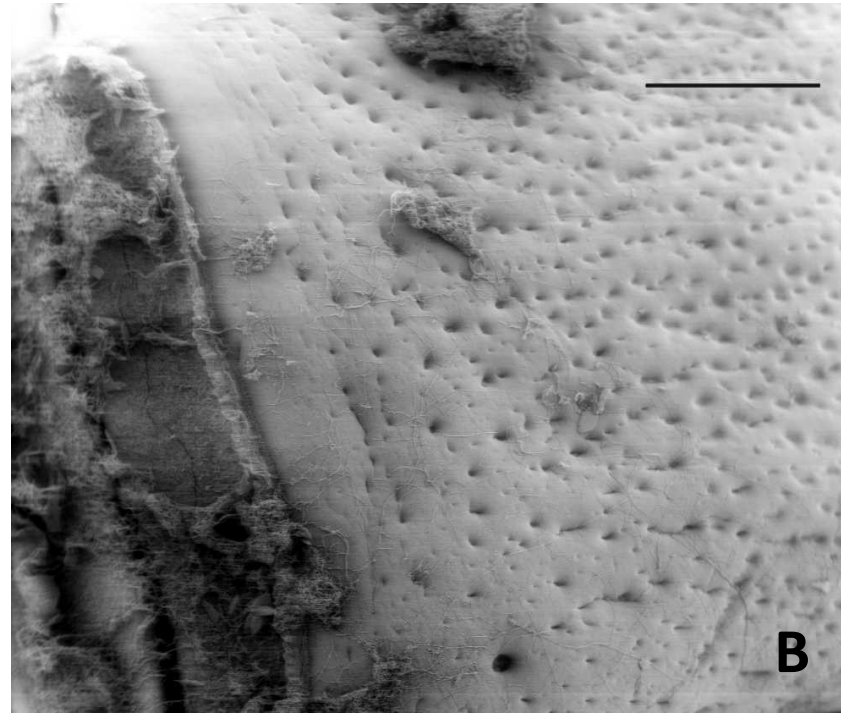
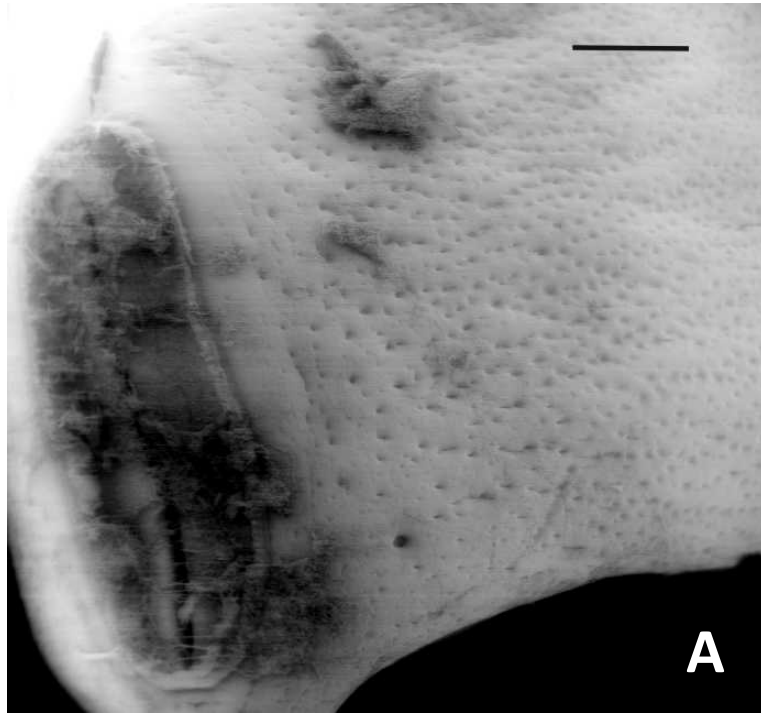
Fusarium graminearum



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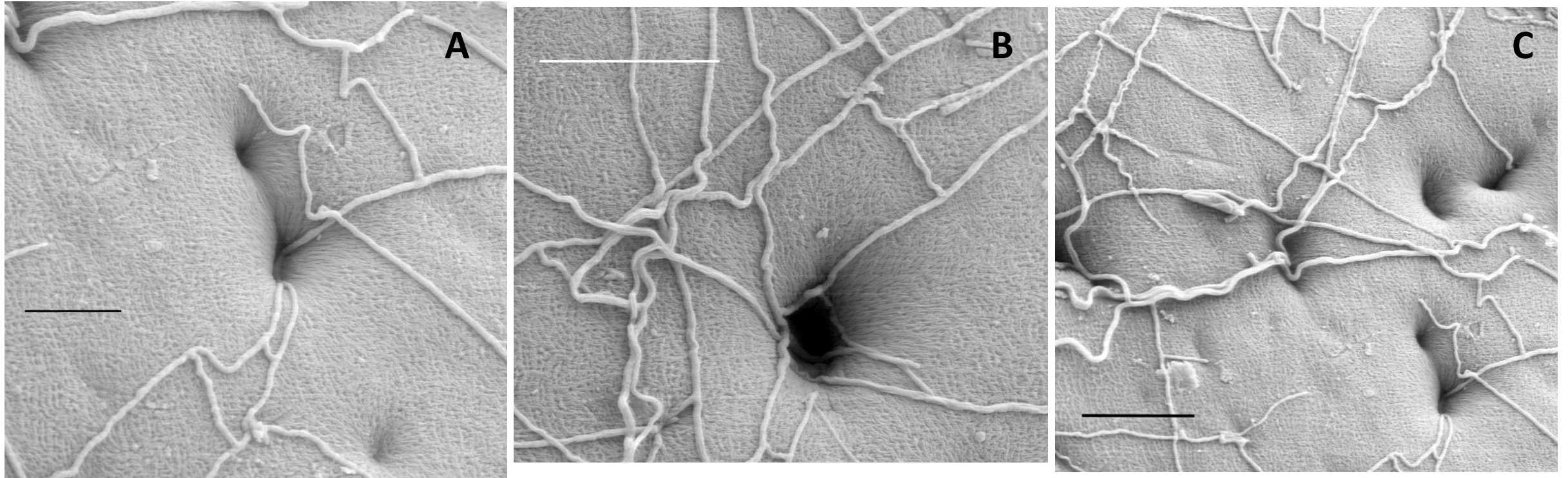
A=Soybean seed colonized by Th2RI99. B= tegument and hilum. C, colonized tegument

A = 0,5 mm, B = 0,5 mm, C = 200 μ m.



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A to C, Th2RI99 hyphae penetrating the soybean seed tegument
A = 25 μm , B, C = 50 μm .



Control



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Control



Artificial Infestation



Artificial Infestation

Rizoderma





Control



Artificial Infestation



Artificial Infestation

Rizoderma



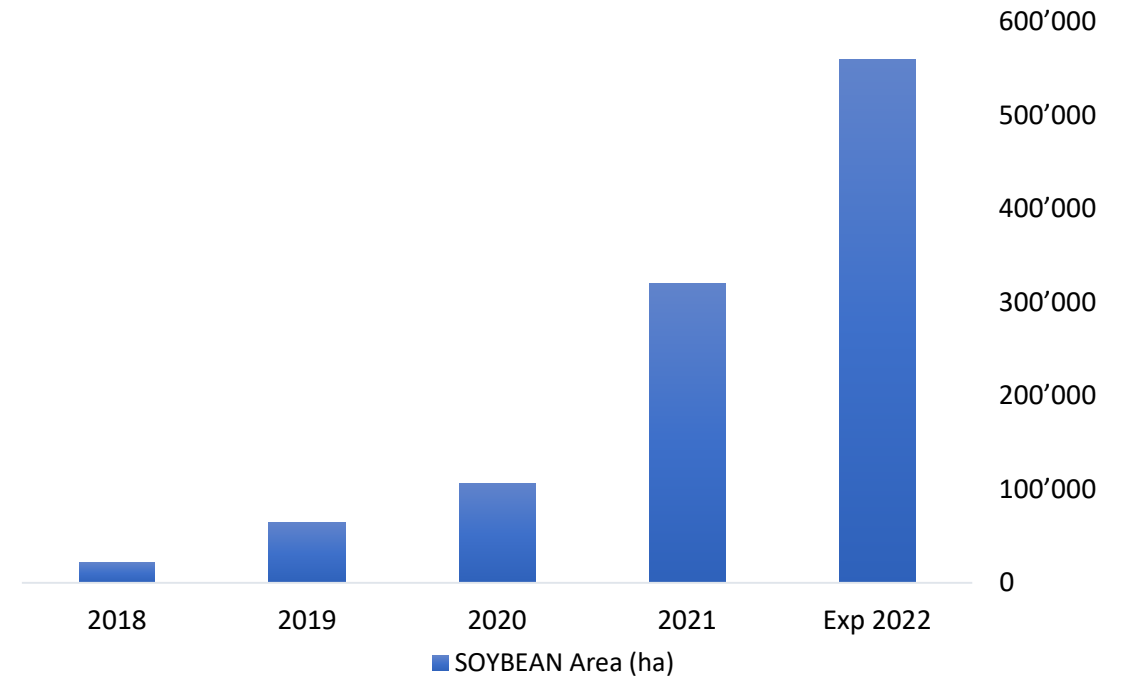
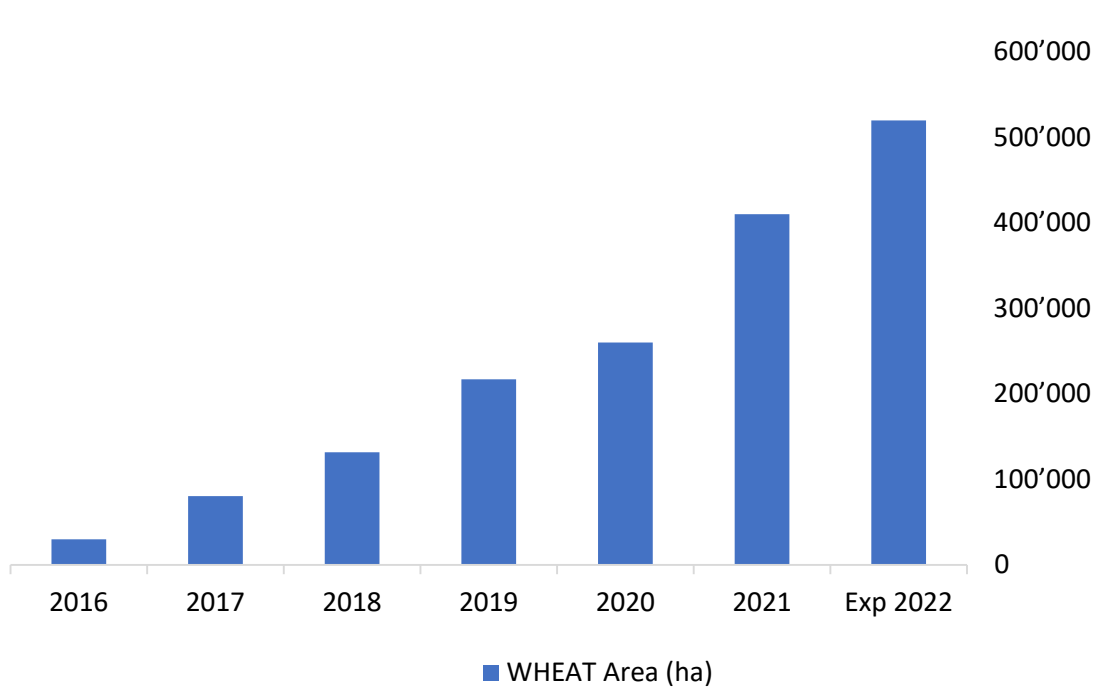
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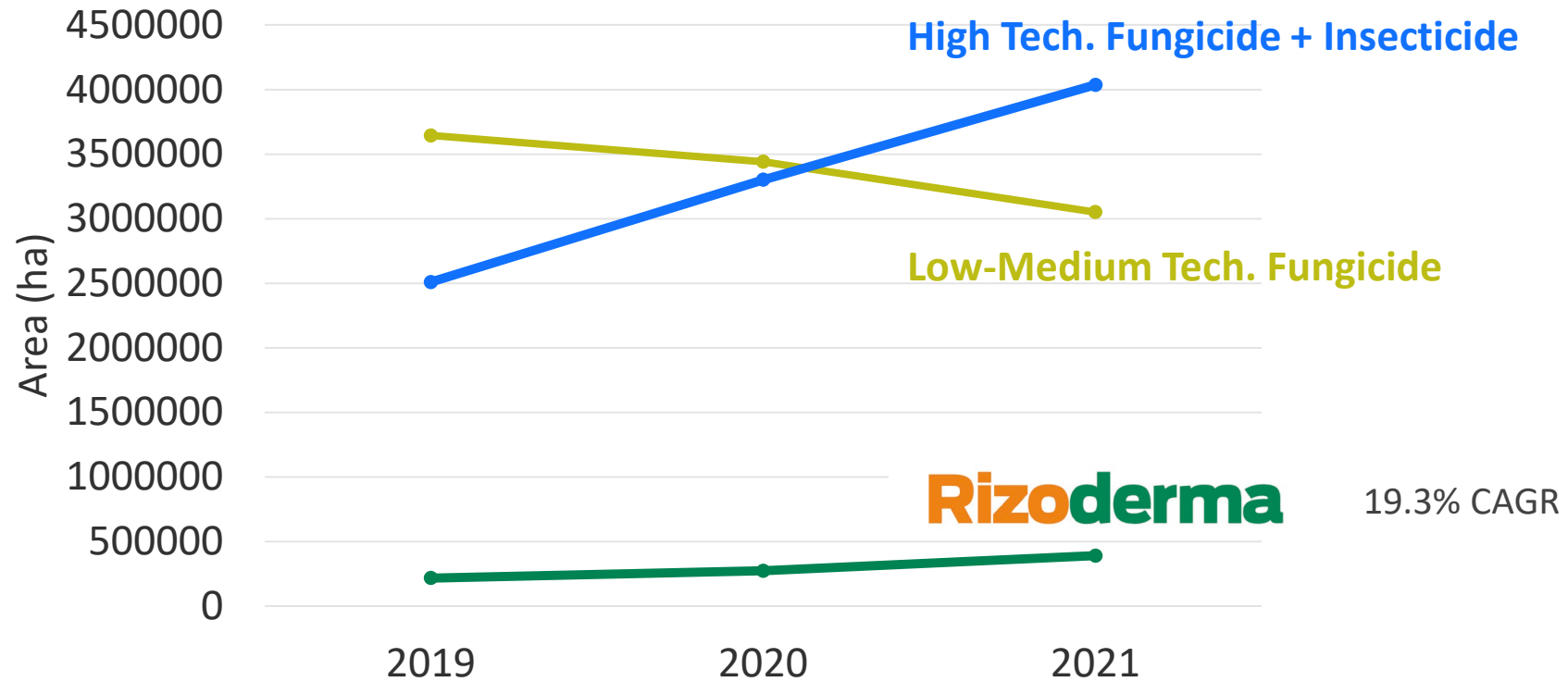
Wheat and Soybean - Adoption

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WINTER CEREALS

Market trends



Source: Kynetec and internal information

BENEFITS



Broad control spectrum

Unique and efficient pathogen biocontrol.



Suitable for IPM

and rotation of modes of action/ decrease resistance development.



Prolonged residual power. Disease suppression during crop establishment and persistence in the rhizosphere.



Environmental safety. Friendly with the environment and safe for the operator.



Easy to apply. Liquid suspension - it is applied just as any chemical product.



Extended pretreatment. Provides flexibility to the seed treatment.

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Biologicals

Key aspects for adoption:

- Adaptation to current management practices
- Competitive compared to market standard
- Technical Support aligned with good agricultural practices
- Collaboration with multiple stakeholders

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