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Aphea.Bio and Bayer join forces to develop next-generation bioinsecticides for global agriculture

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Belgian agricultural biotechnology company Aphea.Bio has entered into a strategic research partnership with Bayer to accelerate the development of bioinsecticides targeting sap-sucking insects, a major class of agricultural pests responsible for billions of dollars in crop losses worldwide.

The collaboration aims to expand the crop protection options available to growers by combining Aphea.Bioâ??s microbial discovery platform with Bayerâ??s global development, regulatory, and commercialization capabilities. The companies will initially focus on fruit crops, including pome fruits, stone fruits, citrus, and grapes, while exploring future applications in vegetables and large-scale row crops such as cotton and soybean.

The agreement comes at a time when farmers are facing mounting pressure from insecticide resistance and increasingly stringent regulatory requirements that are reshaping the global crop protection landscape.

Responding to a Growing Pest Management Challenge

Sap-sucking insects remain among the most damaging agricultural pests globally, reducing yields, transmitting plant diseases, and threatening crop quality across multiple production systems.

At the same time, restrictions on certain conventional insecticides and the emergence of resistant pest populations have heightened demand for new modes of action capable of delivering effective control while meeting evolving sustainability expectations.

Aphea.Bio is seeking to address this gap through a portfolio of bioinsecticides derived from microbial metabolitesâ??naturally occurring compounds produced by selected microorganisms. Unlike many biological products based on living organisms, these solutions combine the environmental advantages of biological crop protection with the storage stability and ease of use typically associated with conventional products.

The company has built its pipeline by screening thousands of microbial strains and advancing promising candidates through a rigorous development process focused on efficacy, safety, manufacturability, and regulatory readiness.

Combining Discovery Expertise with Global Scale

Under the partnership, Aphea.Bio will contribute its expertise in microbial lead discovery, characterization, and early-stage development, while Bayer will provide its extensive capabilities in product development, regulatory engagement, and global market access.

The agreement was formally signed during a ceremony in Monheim, Germany, highlighting both companiesâ?? commitment to advancing biological crop protection technologies.

"The bioinsecticide market has been waiting for a partnership like this," said Isabel Vercauteren, CEO of Aphea.Bio. "Bayer's decision to collaborate with us reflects confidence in our ability to develop high-quality bioinsecticide leads, while Bayer brings the capability to deliver these solutions to millions of farmers around the world."

Benoit Hartmann, Insights, Innovation & Partnerships Lead at Bayer Crop Science, said the collaboration reflects the industry's growing focus on expanding biological crop protection options.

"Through this research partnership with Aphea.Bio, we aim to broaden the crop protection toolbox and accelerate the development of innovative, effective, and scalable biological solutions that meet the evolving needs of growers," he said.

Accelerating the Path to Commercialization

The companies plan to work jointly on advancing prototype products through field validation and early regulatory engagement, with development milestones tied to key performance criteria including efficacy, safety, production scalability, and regulatory feasibility.

While financial terms of the agreement were not disclosed, the partnership underscores increasing investment across the agricultural sector in biological solutions that can complement existing crop protection strategies.

Biologicals Gain Strategic Importance

The collaboration reflects a broader shift within global agriculture as growers, regulators, and agribusiness companies seek new technologies capable of balancing productivity, sustainability, and resistance management.

As biological crop protection continues to gain momentum, partnerships that combine innovative discovery platforms with large-scale commercialization capabilities are increasingly viewed as critical to bringing next-generation solutions from the laboratory to the field.

For Aphea.Bio, the agreement marks a significant step in validating its microbial innovation platform. For Bayer, it reinforces a growing commitment to expanding biological offerings within its crop protection portfolio.

Together, the companies are betting that the future of pest management will increasingly rely on biologically derived solutions capable of addressing some of agricultureâ??s most persistent and economically damaging insect threats.