

Biotalys' ongoing trial program demonstrates strong potential of its new generation protein-based biocontrols

- Company receives favorable feedback from external parties on first biofungicide Evoca™
- Comprehensive global field trial program comprising 300 trials, demonstrating product strengths and best-in-class product formulation

Ghent, BELGIUM – 17 June 2021 — <u>Biotalys</u>, an Agricultural Technology (AgTech) company focused on addressing food protection challenges to enable a more sustainable and safer food supply, today announced the strong performance of its first protein-based biocontrol Evoca[™]* in its product testing program. Next to the confirmation of the product's efficacy, the field and greenhouse trial results also provide indications of Evoca[™]'s best-in-class product formulation, combining conventional chemical-like performance and consistency with the safety profile of biological controls when used in Integrated Pest Management (IPM) programs.

Evoca[™] aims to provide growers with a new rotation partner in IPM programs to help control diseases such as Botrytis and powdery mildew, thus reducing the dependency on chemical pesticides with corresponding residues in harvested produces, while offering a distinctive new tool to manage pathogen resistance development.

Under the field trial program, an additional 200 field and greenhouse trials were performed in 2020 for Evoca[™] product development and positioning, comparing its performance to conventional chemical and biological crop protection products. The company's global fruit and vegetables trial program has now reached over 300 trials across multiple regions, pathogens and crops.

Patrice Sellès, CEO of Biotalys, said: "Our comprehensive field trial program has demonstrated, under a broad range of environmental conditions, the potential value of our innovative first protein-based biofungicide product candidate Evoca[™] to growers, retailers and consumers for high value fruit and vegetable crops such as strawberries and wine grapes. The results provide further evidence to show that our AGROBODY Foundry[™] platform is capable of providing a novel approach to deliver sustainable alternatives for the food protection market."

Trials have been conducted by specialised Contract Research Organisations (CROs) and renowned independent institutes such as the Department of Plant Pathology of the University of Davis, California and the Cal Poly Strawberry Center (US). Regulatory trials were conducted according to industry standards and European and Mediterranean Plant Protection Organization guidelines (to comply with EU regulatory requirements). The statistical analysis of the robust data package provides the required insights for product positioning and user recommendations for growers.

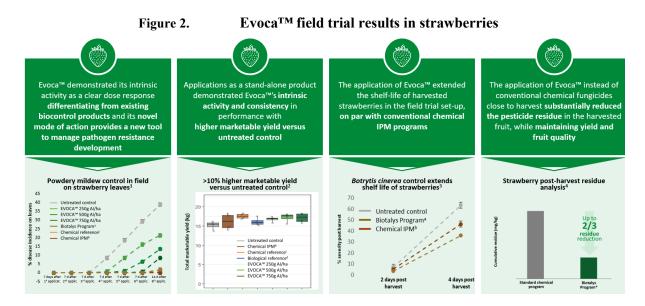
One of the CROs conducting the multi-season Evoca[™] field program is Botany in the Netherlands. **Peter Korsten, CEO at Botany, said**: "The results of Evoca[™] in the trials at Botany are a clear example of the added value of biofungicides in the sustainable food production chain. Trials with Evoca[™] surprised us by its high efficacy and consistent control results. The product is able to outperform market standards and is able to boost IPM programs."





Notes: 1. When used as per label recommendation; 2. Compared to untreated check; 3. Result obtained on strawberries, residue reduction may vary with different types of IPM, crops and treatment timing.

Field trials conducted in the 2019 and 2020 seasons show the combination of benefits Evoca[™] delivers for strawberries, as exemplified in figure 2 below:



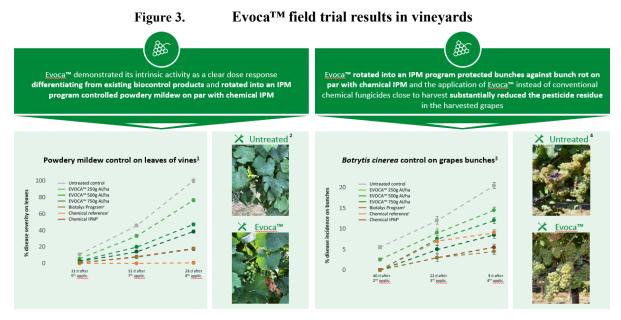
Notes: Panel A: differentiation versus existing biocontrol products as confirmed by external party; Panel B and C: a. Biotalys program = EVOCA (@500g Al/ha) rotated into the standard chemical IPM, replacing two commercial chemical fungicide applications; b. Chemical IPM = standard integrated pest management program as per local farmer practice to control the disease; c. Chemical reference: commercial chemical fungicide applied as per label and local farmer practice; d: Biological reference: commercial biological fungicide applied as per label and local farmer practice. Sources: 1. Biotalys field trial 2019 - EU, IT, Pontecagnano Faiano; 2. Biotalys field trial 2020 - US, CA; 3. Biotalys field trial 2019, ES, Cartaya, Huelva area; 4. Biotalys field trial and fruit analysis, 2019.



- Panel A: Disease control. Positioned as a preventative biofungicide, Evoca[™] in solo applications controls the key strawberry pathogen *Erysiphe necator* (*syn Uncinula*) (causing powdery mildew) under low to moderate disease pressure when rotated in an IPM program. Evoca[™] (shades of green) demonstrates its intrinsic activity as a clear dose response differentiating from existing biocontrol products. The same observations apply to *Botrytis cinerea*.
- **Panel B: Yield.** Applications as a stand-alone product demonstrated the intrinsic activity and consistency in performance of the product, resulting in an overall higher marketable yield as compared to untreated plots (in grey) and generally above the biological reference (in blue).
- **Panel C: Fruit quality.** In addition, the application in the field of Evoca[™] rotated in an IPM (light brown) generally performs on par with conventional IPM programs (dark brown) in terms of extension of shelf-life of harvested strawberries, by controlling *Botrytis cinerea* post-harvest.
- **Panel D: Reduced residue.** The application of Evoca[™] instead of conventional chemical fungicides close to harvest, substantially reduces the pesticide residue in the harvested fruit, while maintaining yield and fruit quality.

In addition, the minimal Restricted Entry Interval ("**REI**") and Pre-Harvest Interval ("**PHI**"), with exact duration pending review by the regulators, would provide growers with extra operational flexibility to apply Evoca[™] very close to harvest in response to variable weather conditions.

Further to the trials in strawberry, Biotalys has realized in 2019 and 2020 efficacy and regulatory trials in multiple locations and crops such as grapes (figure 3 below), cucurbits and tomato (figure 4 below).



Notes: Left panel: differentiation versus existing biocontrol products as confirmed by external party; Right panel: a. Biotalys program = EVOCA (@500g Al/ha) rotated into the standard chemical IPM, replacing two commercial chemical fungicide applications; b. Chemical IPM = standard integrated pest management program as per local farmer practice to control the disease; c. Chemical reference = commercial chemical fungicide applied as per label and local farmer practice; d. Biological reference = commercial biological fungicide applied as per label and local farmer practice. Sources: 1. Biotalys field trial 2019 - EU, IT, Mornico Losana – Casamadama; 2. Biotalys field trial 2019 - EU, IT, Mornico Losana – Casamadama; 3. Biotalys field trial 2019 - FR, Rhônes-Alpes area, Saint-Savin; 4. Source(s): UC Davis Cooperative Extension trial 2020 https://ucanr.edu/sites/eskalenlab/files/334906.pdf.

In the context of the grapes field trials results, Evoca[™] has been tested against two key diseases, powdery mildew (left panel) and Botrytis bunch rot (right panel). These representative examples demonstrate the intrinsic activity with a clear dose response of Evoca[™] (increased efficacy with increased dose when tested as a stand alone – in green on the graphs), and this consistency is a key feature differentiating from existing microbial pesticides. In addition, in the context of IPM programs where Evoca[™] is replacing synthetic fungicides used in a commercial rotation program, Evoca[™]



performed on par with the full chemical program (different shades of brown on the graphs), providing the same protection but resulting in reduced chemical pesticides residues on the harvested grapes.

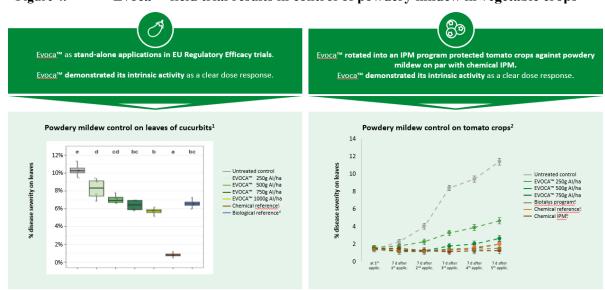


Figure 4. Evoca[™] field trial results in control of powdery mildew in vegetable crops

Notes: a. Biotalys program = EVOCA (@500g AI/ha) rotated into the standard chemical IPM, replacing 2 commercial chemical fungicide applications; b. Chemical IPM = standard integrated pest management program as per local farmer practice to control the disease; c. Chemical reference = commercial chemical fungicide applied as per label and local farmer practice; d. Biological reference = commercial biological fungicide applied as per label and local farmer practice; d. Biological reference = commercial biological fungicide. Sources: 1. Biotalys field trial 2020 - EU, IT; 2. Biotalys field trial 2019 – EU, ES, Alginet.

When used to protect cucurbits against powdery mildew (left panel above), Evoca[™] again demonstrated its intrinsic activity and the clear dose response (EU regulatory efficacy trial) as well as efficacy on par with chemical IPM programs during the entire growing season for the tomato crop (right panel) when rotated in such program.

The product attributes demonstrated by Evoca[™] rotated in an IPM program in the field combine the strength of conventional chemical products under low to moderate disease pressure with the safety profile of biologicals, reducing the impact on our environment, our soils and our biodiversity. Evoca[™] truly demonstrates the potential of the AGROBODY Foundry[™] platform to participate in transforming agriculture towards safer and more sustainable practices, answering the urgent need from growers, consumers and retailers. In addition and pending review by regulators, Biotalys expects the following additional attributes to be claimed:

- Best-in-class formulation, similar to conventional chemical food protection products, for quality control, shelf-life, mixing and spraying, offering growers with convenience and reliability.
- New mode of action providing more flexibility and options to manage resistance. In this respect, the product's activity was confirmed in laboratory assays against known fungicide resistant Botrytis isolates, making Evoca™ a good tool to manage resistance in Botrytis in the context of an IPM program.
- Minimal REI and PHI (exact duration pending review by regulators). REI and PHI are critical attributes for growers and field workers to maximize efficiency, flexibility and ensure the safety of the personnel in the field.
- Tolerance exempted, i.e. no need to establish the maximum amount of pesticide residue allowed to remain on food, as required for conventional chemical pesticides (pending review by regulators).
- Post-harvest shelf-life benefit from in-field application, keeping produce fresh, thus reducing food loss and waste in the downstream value chain (demonstrated for strawberries as described above).



- Reduced synthetic fungicide residues in harvested fruits.
- The ready biodegradability prevents accumulation in soil and the environment.

Biotalys' 2021 field trial program is ongoing and consists of over 150 additional trials. The program currently focuses on the impact of adjuvants on product performance and further evaluation on Evoca[™]'s contribution in IPM programs, next to continued regulatory trials in the EU.

Biotalys submitted Evoca[™] for EPA registration in December 2020 and for EU registration of the active substance in March 2021. Assuming Biotalys is granted registration, it intends to test the market with Evoca[™] through a focused distribution as of late 2022, beginning in selected states in the US. The aim of the market test will be to to familiarize key growers and trade partners with the product and the potential of the AGROBODY Foundry[™], hereby building the foundation to further develop Biotalys' pipeline.

* Evoca™ (formerly named BioFun-1): Pending Registration. This product is not currently registered for sale or use in the European Union, the United States or elsewhere and is not being offered for sale.

About Biotalys

Biotalys is an Agricultural Technology (AgTech) company focused on addressing food protection challenges with protein-based biocontrol solutions for a more sustainable and safer food supply. Based on its novel AGROBODYTM technology platform, Biotalys is developing a strong and diverse pipeline of effective products with a favorable safety profile that aim to address key crop pests and diseases across the whole value chain, from soil to plate. Biotalys was founded in 2013 as a spin-off from the VIB (Flanders Institute for Biotechnology) and has raised &62.8 million (US\$74.9 million) to date from Belgian and international specialized investors. The company is based in the biotech cluster in Ghent, Belgium. More information can be found on www.biotalys.com.

For further information, please contact

Toon Musschoot, Strategic Communications Manager T: +32 (0)9 274 54 00 E: <u>Toon.Musschoot@biotalys.com</u>

Consilium Strategic Communications Amber Fennell, Chris Gardner, Chris Welsh T: +44 (0)203 709 5700 E: <u>Biotalys@consilium-comms.com</u>

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