

RMT **BESTim**'ACTU

Spotlight news on agroecological plant immunity

The English version of the **BESTIM Joint Technology Network newsletter**

April 2023 - Eng#1

You have received this email because you have been subscribed by a Bestim member.

News from the network



An English version of the website exists

About ▾ Wo **Work and resources** ▾ Contact

What is an RMT?	Applications and transfer actions in the field
Key definitions	
Partner networks	Understanding the levers: from lab to system
The facilitators	
The members	Communications
The JTN Bestim	Labelled projects

All information about the network, its work and resources.

[Access to the website](#)



About ▾ Work and resources ▾ Contact   

RMT BESTIM

Officially set-up in 2020 by the ministry of Agriculture and, the Bestim Joint Technology Network (JTN) is focused on the concept of "agroecological immunity".

[For more details](#)

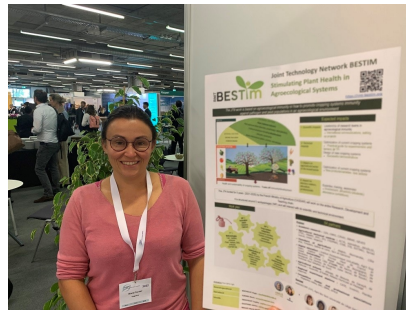
A poster in English to promote the Bestim JTN at international events

With the help of ACTA,

the Bestim JTN poster was translated into English in order to present the

network at international events. Many thanks to Solène Batard and Philippe Delval for this precious work!

Upload the english version poster



IPMWORKS, an online resource platform for farmers and advisors

Contact : [Philippe DELVAL](#)



The IPMTOOLBOX

launched in January 2023, is an interactive, online library of IPM resources designed for farmers and advisors. Topics and resources in the toolbox include alternative agronomic practices, decision support systems, case studies, economic analyses, training guides and links to past and current IPM initiatives.

Access to the IPMTOOLBOX

Developed in the framework of the European IPMWORKS project (<https://ipmworks.net/>), Horizon 2020 grant no. 101000339), the toolkit is built on an open-source content management system, and can be easily extended to integrate resources from all IPM initiatives.

For more information

Launch of the European project Adopt-IPM

Contact : [Philippe DELVAL](#) WP4 leader " Field demonstrations and implementation by end-users "

The kick-off meeting of the European Adopt-IPM project took place from 9 to 11 January in Paris.



The full name is "EU-CHINA joint action to increase development and adoption of IPM tools". The consortium includes 18 European partners, 3 British and 13 Chinese.

The French partners are INRAe, ACTA, CTIFL, ACTA DS, Agriodor, IFTech, Rougeline and INRAe Transfert. The project leader is Dr Nicolas Desneux, research director at INRAe in Sophia-Antipolis.

The project will test, among other things, biostimulants and elicitors in its research and development component on tomato, salad, cabbage and cereal

crops.
A project website will open soon.



Our next annual meeting will be held in Brittany

On 10 and 11 May 2023, the plenary session of the Bestim network will be held in Saint Pol de Léon in Finistère.

On this occasion, the organisers will present an assessment of the projects carried out by the Bestim network in 2022. This assessment will be followed by reflections on the continuation of the work to be carried out in 2023.

In addition, in order to enrich the exchanges, presentations and visits will also be scheduled.

A detailed schedule of the two days will be sent to network members in the coming months.

The latest scientific publications of our members

This section lists the latest scientific and technical publications in English from Bestim members.

- Ballini, E., Berthelot, R., Turner, M., Brisset, M.-N., Gauthier, A., Héloir, M.-C., & Trouvelot, S. (2022, septembre 20). **Bestim network: Stimulating plant health in agroécological systems**. 5. Congress Natural products & Biocontrol 2022. <https://hal.inrae.fr/hal-03884744> (Communication in a conference)
- Chavonet, E., Gaucher, M., Warneys, R., Bodelot, A., Heintz, C., Juillard, A., Cournol, R., Widmalm, G., Bowen, J. K., Hamiaux, C., Brisset, M.-N., & Degrave, A. (2022). **Search for host defense markers uncovers an apple agglutination factor corresponding with fire blight resistance**. *Plant Physiology*, 188(2), 1350-1368. <https://doi.org/10.1093/plphys/kiab542> (Fee-based access)
- Fortier, M., Lemaitre, V., Gaudry, A., Pawlak, B., Driouich, A., Follet-Gueye, M.-L., Vicré, M., 2023. A fine-tuned defense at the pea root caps: Involvement of border cells and arabinogalactan proteins against soilborne diseases. *Front. Plant Sci.* 14. <https://doi.org/10.3389/fpls.2023.1132132> (Open access)
- Lemaitre-Guillier, C., Chartier, A., Dufresne, C., Douillet, A., Cluzet, S., Valls, J., Aveline, N., Daire, X., Adrian, M., 2022. **Elicitor-Induced VOC Emission by Grapevine Leaves: Characterisation in the Vineyard**. *Molecules* 27, 6028. <https://doi.org/10.3390/molecules27186028> (Open access)
- Mejri, S., Ghinet, A., Magnin-Robert, M., Randoux, B., Abuhaie, C.-M., Tisserant, B., Gautret, P., Rigo, B., Halama, P., Reignault, P., Siah, A., 2023. **New plant immunity elicitors from a sugar beet byproduct protect wheat against Zymoseptoria tritici**. *Sci Rep* 13, 90. <https://doi.org/10.1038/s41598-022-26800-z> (Open access)
- Péliissier, R., Brousse, A., Ramamonjisoa, A., Ducasse, A., Ballini Elsa, Jean-Benoit Morel (2022). **Unsuspected transcriptional regulations during rice defense response revealed by a toolbox of marker genes for rapid and extensive analysis of expression changes upon various environments** (p. 2022.12.14.520374). bioRxiv. <https://doi.org/10.1101/2022.12.14.520374> (Open access)
- Romanet, R., Lemaitre-Guillier, C., Jacquens, L., David, V., Roullier-Gall, C., Trouvelot, S., Lebleux, M., Nikolantonaki, M., Noirot, E., Héloir, M.-C., Gougeon, R. D., Tourdot-Maréchal, R., Adrian, M., & Alexandre, H. (2022). **Biovi: A research program for reducing chemical input in vine and wine**. 5th edition of the International Conference Wine Active Compounds. WAC 2022. <https://hal.inrae.fr/hal-03867889>

(Communication in a conference)

- Roudaire, T., Marzari, T., Landry, D., Löffelhardt, B., Gust, A.A., Jermakow, A., Dry, I., Winckler, P., Héloir, M.-C., Poinssot, B., 2023. **The grapevine LysM receptor-like kinase VvLYK5-1 recognizes chitin oligomers through its association with VvLYK1-1.** *Frontiers in Plant Science* 14. <https://doi.org/10.3389/fpls.2023.1130782> (Open access)
- de Tombeur, F., Pélissier, R., Shihan, A., Rahajaharilaza, K., Fort, F., Mahaut, L., Lemoine, T., Thorne, S.J., Hartley, S.E., Luquet, D., Fabre, D., Lambers, H., Morel, J.-B., Ballini, E., Violle, C., 2023. Growth-defence trade-off in rice: fast-growing and acquisitive genotypes have lower expression of genes involved in immunity. *Journal of Experimental Botany* erad071. <https://doi.org/10.1093/jxb/erad071> (Open access)
- Trong, N.-H., Doré, J., Gaucher, M., Jacquard, C., Richet, N., Leclère, V., Aït Barka, E., Brisset, M.-N., Kerzaon, I., Lavire, C., Clément, C., Vial, L., Sanchez, L., 2022. **Biological Control of Grapevine Crown Gall Disease, Caused by *Allorhizobium vitis*, Using Paraburkholderia phytofirmans PsJN.** *PhytoFrontiers* 2, 391-403. <https://doi.org/10.1094/PHYTOFR-03-22-0018-R> (Open access)
- Urban, L., Lauri, F., Ben Hdech, D., Aarouf, J., 2022. **Prospects for Increasing the Efficacy of Plant Resistance Inducers Stimulating Salicylic Acid.** *Agronomy* 12, 3151. <https://doi.org/10.3390/agronomy12123151> (Open access)

BESTIM's Calendar



Some events spotted by the Bestim team

2023 International Scientific Workshop "Diversifying Business Models for Biocontrol Deployment"



From May 31 to June 2, 2023

In Paris, France (+ visioconference)

Organisers : INRAe

[More information](#)

PlantBioRes 2023 - ICPP Satellite Symposium

Induced biological resistance of plants against pathogens and their vectors using beneficial micro-organisms and natural substances: recent advances and future challenges

From August 19 to 20, 2023

In Lyon, France

Organisers : société française de Phytopathologie ; RMT Bestim ; Consortium biocontrôle ; Institut Carnot Plant2Pro® ; Réseaux EMBA et ENVIE

[More information](#)



PlantBioRes 2023
ICPP Satellite Symposium
18-20 August 2023 – Lyon, France



Biological induced resistance in plants against pathogens and their vectors using beneficial microbes and natural substances: Recent advances and future challenges

Scope

Invited articles on a resistance of plants against pathogens and their vectors using beneficial microbes (bacteria, fungi, viruses, natural substances (essential molecules or extracts, plant metabolites or extracts, bioactive compounds, etc.) or genetic engineering, and plant-microbe interactions. The symposium will be held in Lyon, France, from August 18-20, 2023. The symposium will be held in Lyon, France, from August 18-20, 2023. The symposium will be held in Lyon, France, from August 18-20, 2023.

Keywords

Plant induced resistance
Beneficial microbes
Essential molecules
Plant metabolites
Bioactive compounds
Genetic engineering
Plant-microbe interactions

Abstract Submission: <https://www.icpp2023.com/abstracts>
Deadline for Submission: October 17, 2023
Registration Fee: Students, post-grads, and 5th year included:
• 0 (ICPP2023) / 100 (PlantBioRes)
• 100 (with accompanying activities) / 100 (ICPP2023)
• 200 (with accompanying activities) / 100 (ICPP2023)
Contact: icpp@icpp2023.com
All fees are in Euro (€).
Event Dates: <https://www.icpp2023.com/>
Sponsorship: <https://www.icpp2023.com/sponsorship>
*Please always verify before booking.



Tech&Bio 2023

From September 20 to 21, 2023

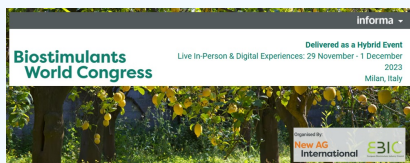
In Valence, France

Organisers : French chambers of Agriculture

[More information](#)

Biostimulant World Congress

Conference dedicated to commercial and scientific developments in the field of plant biostimulants.



From November 29 to December 1st, 2023

In Milan, Italy

Organisers : New Ag International ; EBIC

[More information](#)

Reviews identified for you in the scientific literature



The Bestim JTN conducts a (non-exhaustive) watch on topics related to the concept of agroecological immunity (biocontrol, biostimulation, plant immunity, etc.). In this section, we share with you a selection of articles (mainly reviews and books) from this watch.

Biostimulants

- Abirami, S., Sree Gayathri, S., & Usha, C. (2022). **Chapter 3—Trichoderma as biostimulant—A plausible approach to alleviate abiotic stress for intensive production practices.** In H. B. Singh & A. Vaishnav (Éds.), *New and Future Developments in Microbial Biotechnology and Bioengineering* (p. 57-84). Elsevier. <https://doi.org/10.1016/B978-0-323-85577-8.00004-4> (Fee based access)

- Ali, S., Moon, Y. S., Hamayun, M., Khan, M. A., Bibi, K., & Lee, I. J. (2022). **Pragmatic role of microbial plant biostimulants in abiotic stress relief in crop plants.** *Journal of Plant Interactions*, 17(1), 705-718. <https://doi.org/10.1080/17429145.2022.2091801> (Open access)
- Arahou, F., Lijassi, I., Wahby, A., Rhazi, L., Arahou, M., Wahby, I., 2022. **Spirulina-Based Biostimulants for Sustainable Agriculture: Yield Improvement and Market Trends.** *Bioenerg. Res.* <https://doi.org/10.1007/s12155-022-10537-8> (Open access)
- Biological Products Industry Alliance (BPIA), The Fertilizer Institute, Biostimulant Council, 2022. **United States Biostimulant Industry Recommended Guidelines to Assess the Efficacy, Composition, and Safety of Plant Biostimulant Products.** *Journal of Regulatory Science* 10. <https://doi.org/10.21423/jrs-v10a247> (Open access)
- Chauhan, S., Mahawar, S., Jain, D., Udpadhyay, S. K., Mohanty, S. R., Singh, A., & Maharjan, E. (2022). **Boosting Sustainable Agriculture by Arbuscular Mycorrhiza under Stress Condition: Mechanism and Future Prospective.** *BioMed Research International*, 2022, e5275449 <https://doi.org/10.1155/2022/5275449> (Open access)
- Fusco, G.M., Nicastro, R., Roupheal, Y., Carillo, P., 2022. **The Effects of the Microbial Biostimulants approved by EU Regulation 2019/1009 on Yield and Quality of Vegetable Crops.** *Foods* 11, 2656. <https://doi.org/10.3390/foods11172656> (Open access)
- Garza-Alonso, C. A., Olivares-Sáenz, E., González-Morales, S., Cabrera-De la Fuente, M., Juárez-Maldonado, A., González-Fuentes, J. A., Tortella, G., Valdés-Caballero, M., & Benavides-Mendoza, A. (2022). **Strawberry Biostimulation: From Mechanisms of Action to Plant Growth and Fruit Quality.** *Plants*, 11(24), Art. 24. <https://doi.org/10.3390/plants11243463> (Open access)
- Gedeon, S., Ioannou, A., Balestrini, R., Fotopoulos, V., & Antoniou, C. (2022). **Application of Biostimulants in Tomato Plants (*Solanum lycopersicum*) to Enhance Plant Growth and Salt Stress Tolerance.** *Plants*, 11(22), Art. 22. <https://doi.org/10.3390/plants11223082> (Open access)
- Kaushal, P., Ali, N., Saini, S., Pati, P. K., & Pati, A. M. (2023). **Physiological and molecular insight of microbial biostimulants for sustainable agriculture.** *Frontiers in Plant Science*, 14. <https://www.frontiersin.org/articles/10.3389/fpls.2023.1041413> (Open access)
- Kumari, M., Swarupa, P., Kesari, K. K., & Kumar, A. (2022). **Microbial Inoculants as Plant Biostimulants: A Review on Risk Status.** *Life (Basel, Switzerland)*, 13(1), 12. <https://doi.org/10.3390/life13010012> (Open access)
- Ma, Y., Freitas, H., & Dias, M. C. (2022). **Strategies and prospects for biostimulants to alleviate abiotic stress in plants.** *Frontiers in Plant Science*, 13. <https://www.frontiersin.org/articles/10.3389/fpls.2022.1024243> (Open access)
- Mannino, G., Berteau, C.M., Bonini, P., 2022. **Editorial: Characterization of biostimulants used in agriculture: A step towards sustainable and safe foods.** *Frontiers in Plant Science* 13. <https://doi.org/10.3389/fpls.2022.1065879> (Open access)
- Morcillo, R. J. L., Baroja-Fernández, E., López-Serrano, L., Leal-López, J., Muñoz, F. J., Bahaji, A., Férrez-Gómez, A., & Pozueta-Romero, J. (2022). **Cell-free microbial culture filtrates as candidate biostimulants to enhance plant growth and yield and activate soil- and plant-associated beneficial microbiota.** *Frontiers in Plant Science*, 13. <https://www.frontiersin.org/articles/10.3389/fpls.2022.1040515> (Open access)
- Ryabova, O.V., Gagarina, A.A., 2022. **Actinomycetes as the Basis of Probiotics for Plants.** *Appl Biochem Microbiol* 58, 827-841. <https://doi.org/10.1134/S0003683822070055> (Fee-based access)
- Sanjuán, J., Nápoles, M. C., Pérez-Mendoza, D., Lorite, M. J., & Rodríguez-Navarro, D. N. (2023). **Microbials for Agriculture: Why Do They Call Them Biostimulants When They Mean Probiotics?** *Microorganisms*, 11(1), 153. <https://doi.org/10.3390/microorganisms11010153> (Open access)

- Azeem, S., Agha, S.I., Jamil, N., Tabassum, B., Ahmed, S., Raheem, A., Jahan, N., Ali, N., Khan, A., 2022. **Characterization and survival of broad-spectrum biocontrol agents against phytopathogenic fungi.** *Revista Argentina de Microbiología* 54, 233–242. <https://doi.org/10.1016/j.ram.2021.10.005> (Open access)
- Carrie, W., Puia, Z., Mehetre, G., Deka, P., Lalnunmawii, E., & Singh, B. (2022). **Management of plant diseases using endophytes as biocontrol agents: Present status and future prospects.** In *Endophytic Association: What, Why and How.* (p. 367-384). Elsevier. <https://doi.org/10.1016/B978-0-323-91245-7.00024-9> (Fee-based access)
- Jaiswal, D. K., Gawande, S. J., Soumia, P. S., Krishna, R., Vaishnav, A., & Ade, A. B. (2022). **Biocontrol strategies: An eco-smart tool for integrated pest and diseases management.** *BMC Microbiology*, 22(1), 324. <https://doi.org/10.1186/s12866-022-02744-2> (Open access)
- Khurshed, A., Rather, M. A., Jain, V., Wani, A. R., Rasool, S., Nazir, R., Malik, N. A., & Majid, S. A. (2022). **Plant based natural products as potential ecofriendly and safer biopesticides: A comprehensive overview of their advantages over conventional pesticides, limitations and regulatory aspects.** *Microbial Pathogenesis*, 105854. <https://doi.org/10.1016/j.micpath.2022.105854> (Open access)
- Kumari, M., Qureshi, K. A., Jaremko, M., White, J., Singh, S. K., Sharma, V. K., Singh, K. K., Santoyo, G., Puopolo, G., & Kumar, A. (2022). **Deciphering the role of endophytic microbiome in postharvest diseases management of fruits: Opportunity areas in commercial up-scale production.** *Frontiers in Plant Science*, 13. <https://www.frontiersin.org/articles/10.3389/fpls.2022.1026575> (Open access)
- Lin, L., Yang, Z., Tao, M., Shen, D., Cui, C., Wang, P., Wang, L., Jing, M., Qian, G., & Shao, X. (2023). **Lysobacter enzymogenes prevents Phytophthora infection by inhibiting pathogen growth and eliciting plant immune responses.** *Frontiers in Plant Science*, 14. <https://www.frontiersin.org/articles/10.3389/fpls.2023.1116147> (Open access)
- Russo, A., Pollastri, S., Ruocco, M., Monti, M.M., Loreto, F., 2022. **Volatile organic compounds in the interaction between plants and beneficial microorganisms.** *Journal of Plant Interactions* 17, 840–852. <https://doi.org/10.1080/17429145.2022.2107243> (Open access)
- Saberi Riseh, R., Hassanisaadi, M., Vatankhah, M., & Kennedy, J. F. (2023). **Encapsulating biocontrol bacteria with starch as a safe and edible biopolymer to alleviate plant diseases: A review.** *Carbohydrate Polymers*, 302, 120384. <https://doi.org/10.1016/j.carbpol.2022.120384> (Fee-based access)
- Sarkar, A. K., & Sadhukhan, S. (2023). **Unearthing the alteration in plant volatiles induced by mycorrhizal fungi: A shield against plant pathogens.** *Physiologia Plantarum*, e13845. <https://doi.org/10.1111/ppl.13845> (Fee-based access)
- Tarigan, S.I., Toth, S., Szalai, M., Kiss, J., Turoczi, G., Toepfer, S., 2022. **Biological control properties of microbial plant biostimulants. A review.** *Biocontrol Science and Technology* 32, 1351–1371. <https://doi.org/10.1080/09583157.2022.2129589> (Fee-based access)
- Zhu, X., Chen, W. J., Bhatt, K., Zhou, Z., Huang, Y., Zhang, L. H., Chen, S., & Wang, J. (2023). **Innovative microbial disease biocontrol strategies mediated by quorum quenching and their multifaceted applications: A review.** *Frontiers in Plant Science*, 13. <https://www.frontiersin.org/articles/10.3389/fpls.2022.1063393> (Open access)

Biosolutions

- Jaffar, N. S., Jawan, R., & Chong, K. P. (2023). **The potential of lactic acid bacteria in mediating the control of plant diseases and plant growth stimulation in crop production—A mini review.** *Frontiers in Plant Science*, 13. <https://www.frontiersin.org/articles/10.3389/fpls.2022.1047945> (Open access)
- Llorens, E., & Agustí-Brisach, C. (2022). **Biocontrol of Plant Diseases by Means of Antagonist Microorganisms, Biostimulants and Induced Resistance as Alternatives to Chemicals.** *Plants*, 11(24), Art. 24. <https://doi.org/10.3390/plants11243521> (Open access)

Plant immunity

- Goswami, A.K., Maurya, N.K., Goswami, S., Bardhan, K., Singh, S.K., Prakash, J., Pradhan, S., Kumar, A., Chinnusamy, V., Kumar, P., Sharma, R.M., Sharma, S., Bisht, D.S., Kumar, C., 2022. **Physio-biochemical and molecular stress regulators and their crosstalk for low-temperature stress responses in fruit crops: A review.** *Frontiers in Plant Science* 13. <https://doi.org/10.3389/fpls.2022.1022167> (Open access)
- Gou, M., Balint-Kurti, P., Xu, M., Yang, Q., n.d. **Quantitative disease resistance: Multifaceted players in plant defense.** *Journal of Integrative Plant Biology*, 2022. <https://doi.org/10.1111/jipb.13419> (Open access)
- Gupta, R., Leibman-Markus, M., Anand, G., Rav-David, D., Yermiyahu, U., Elad, Y., Bar, M., 2022. **Nutrient Elements Promote Disease Resistance in Tomato by Differentially Activating Immune Pathways.** *Phytopathology®* PHYTO-02-22-0052-R. <https://doi.org/10.1094/PHYTO-02-22-0052-R> (Fee-based access)
- Kandasamy, G.D., Kathirvel, P., 2023. **Insights into bacterial endophytic diversity and isolation with a focus on their potential applications -A review.** *Microbiological Research* 266, 127256. <https://doi.org/10.1016/j.micres.2022.127256> (Fee-based access)
- Sasaki, K., & Imai, R. (2022). **Mechanisms of cold-induced immunity in plants.** *Physiologia Plantarum*, e13846. <https://doi.org/10.1111/ppl.13846> (Fee-based access)
- Urban, L., Lauri, F., Ben Hdech, D., Aarouf, J., 2022. **Prospects for Increasing the Efficacy of Plant Resistance Inducers Stimulating Salicylic Acid.** *Agronomy* 12, 3151. <https://doi.org/10.3390/agronomy12123151> (Open access)

Nanoparticles

- El-Saadony, M. T., Saad, A. M., Soliman, S. M., Salem, H. M., Desoky, E. S. M., Babalghith, A. O., El-Tahan, A. M., Ibrahim, O. M., Ebrahim, A. M., Abd El-Mageed, T. A., Elrys, A. S., Elbadawi, A. A., El-Tarabily, K. A., & AbuQamar, S. F. (2022). **Role of Nanoparticles in Enhancing Crop Tolerance to Abiotic Stress: A Comprehensive Review.** *Frontiers in Plant Science*, 13. <https://www.frontiersin.org/articles/10.3389/fpls.2022.946717> (Open access)
- Khan, I., Awan, S.A., Rizwan, M., Hassan, Z.U., Akram, M.A., Tariq, R., Brestic, M., Xie, W., 2022. **Nanoparticle's uptake and translocation mechanisms in plants via seed priming, foliar treatment, and root exposure: a review.** *Environ Sci Pollut Res* 29, 89823-89833. <https://doi.org/10.1007/s11356-022-23945-2> (Fee-based access)
- Verma, K. K., Zeng, Y., Song, X. P., Singh, ., Wu, K. C., Rajput, V. D., & Li, Y. R. (2022). **Nanosilicon: An approach for abiotic stress mitigation and sustainable agriculture.** *Frontiers in Plant Science*, 13. <https://www.frontiersin.org/articles/10.3389/fpls.2022.1025974> (Open access)

Information spotted for you in the press



Research projects

Fungi Could Be the Future of Healthier Plants

Author: Strange D. - Source: <https://news.ncsu.edu> - Publication date: January 10, 2023

Key words: Biostimulation, Arbuscular mycorrhizae and ectomycorrhizae; Potassium assimilation ; USA

[Read the article](#)

European market

High-tech test and innovation center for Dutch biostimulant producer

Source: <https://www.hortidaily.com> - Publication date: February 6, 2023

Key words: Biostimulants, Netherlands

[Read the article](#)

Asian market

Natural Botanical Compound - CE Osthol Effectively Controls Resistant Powdery Mildew

Source: <https://news.agropages.com> - Publication date: February 6, 2023

Key words: Biocontrol ; Powdery mildew ; China ; Research

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European market

Rovensa Group launches Rovensa Next, a new global biosolutions business unit to shape a sustainable future for agriculture

Source: <https://news.agropages.com/> - Publication date: February 8, 2023

Key words: Biosolutions

[Read the article](#)

European market

New bio-fertilizers and stimulants on the Spanish market - Rooteco raised €300,000 in a seed round

Source: <https://www.freshplaza.com> - Publication date: February 8, 2023

Key words: Biostimulants, Micro-organisms, Spain

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European market

Olmix Group finalizes acquisition of foliar biostimulants, seed treatment solutions business

Source: <https://www.hortidaily.com> - Publication date: February 9, 2023

Key words: Foliar biostimulants, Seed treatments, France

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European market

Plant biostimulants are used in crops ranging from high-end to row crops, AgriTecno is constantly optimizing its product pipeline for 2023

Source: <https://news.agropages.com> - Publication date: February 16, 2023

Key words: Biostimulants, Market, Europe, China

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European market

Koppert's biofungicide active Pseudomonas registration successfully renewed in Europe for 15 years

Source: <https://news.agropages.com> - Publication date: February 24, 2023

Key words: Biocontrol, Micro-organisms, Europe

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American market

USA - Certis Biologicals introduces biofungicide Soilgard® to provide disease protection for greenhouse and agriculture specialty crops

Source: <https://news.agropages.com> - Publication date: February 24, 2023

Key words: Biocontrol, Microbial fungicide ; USA ; Specialised crops

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European market

Natural PGR trans-zeatin is accessible at reduced cost for plant applications through biotech production platform patented by Acies Bio

Source: <https://news.agropages.com> - Publication date: March 2, 2023

Key words: Growth regulators

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European market

New biostimulant seed treatment set to boost wheat yields with reduced fertilizer use – Syngenta Crop Protection partners with Apeha.Bio to bring novel agricultural technology to markets across Europe

Source: <https://news.agropages.com> - Publication date: March 2, 2023

Key words: Biostimulant ; Seed treatment ; Wheat ; Europe

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American market

BASF showcases bioinputs at 2nd Biological Production Meeting

Source: <https://news.agropages.com> - Publication date: March 2, 2023

Key words: Biocontrol ; Nematicide ; Biofungicide ; Micro-organism ; Argentina

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American market

Jarrow Biotech launches revolutionary, innovative, environmentally friendly biopesticide

Source: <https://news.agropages.com> - Publication date: March 2, 2023

Key words: Biocontrol ; USA

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European market

LIDA Plant Research launches the BIOFORCE range - New range of solutions based on microorganisms and biostimulants suitable for organic farming

Source: <https://www.freshplaza.com> - Publication date: March 7, 2023

Key words: Biostimulant

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The Bestim JTN is funded by the Ministry of Agriculture and Food Security and is affiliated to ACTA



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