



European
Commission

Plant Health

Protecting plants to safeguard our future



Plants are the source of air we breathe and over 80 % of the food we consume. They play a critical role in achieving sustainable and competitive agriculture and forestry sectors and the protection of biodiversity and ecosystems. Therefore, keeping plants healthy is not only important – it is absolutely vital.

Healthy plants are no easy feat

Trade and the movement of goods and people are facilitating the introduction, spread and establishment of plant pests and diseases. In fact, the Food and Agriculture Organization estimates that up to 40 % of food crops are lost due to plant pests and diseases annually. This impacts the food supply of millions of people and damages agriculture.

Climate change and intensification in agricultural and forest management practices can also lead to the emergence of new pests and diseases, and existing ones are likely to become more severe. Adding to these challenges, people have turned to pesticides to secure yields in plant production. This in turn has increased concerns over the effects of plant protection products on the environment, non-target organisms and human health.

Research and Innovation

This CORDIS Results Pack focuses on 10 projects funded under Horizon 2020 dedicated to tackling the threats to plant health.

Asterix

(Weeding robot for precision farming reducing herbicide usage by 95%),
Coordinated in Norway

The ASTERIX project has developed field robots that integrate machine vision and precision nozzle technology to discriminate weeds from plants and spray drops of bioherbicide only on the weeds, reducing the usage by more than 90 %.

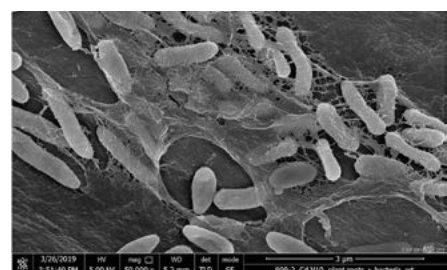


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BIOFERTICELLULASER

(Role of bacterial cellulases in the transition from free living to root endophytes in rapeseed crops and in the design of efficient biofertilizers),
Coordinated in Spain

The BIOFERTICELLULASER project, employed plant growth-promoting bacteria as fertiliser to improve crop yield.



© Oldrich Benada, Olga Kofonová and Paula García Fraile

DESSA

(DEcision Support system for Smart Agriculture), Coordinated in Italy

DESSA designed a decision support tool that provides accurate, farm-specific information to farmers on plant protection actions.



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EMPHASIS

(Effective Management of Pests and Harmful Alien Species - Integrated Solutions), Coordinated in Italy

The EMPHASIS project addresses native and alien pest threats for a range of both natural ecosystems and farming systems.



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EUCLID

(EU-CHINA Lever for IPM Demonstration), Coordinated in France

Meanwhile, EUCLID has developed sustainable pest management methods for European and Chinese agriculture.



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FOUNDATION

(Fusarium oxysporum mediated underpinning of cell type-specific modulation in multiple host interaction), Coordinated in Spain

FOUNDATION is studying the molecular dialogue of Fusarium oxysporum to find new control strategies.



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MET-PEST

(Multi-approach determination of metal based pesticides in food), Coordinated in France

This MET-PEST project has developed novel methodologies for the selective determination of fungicides in food.



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nEUROSTRESSPEP

(Novel biocontrol agents for insect pests from neuroendocrinology), Coordinated in the United Kingdom

In nEUROSTRESSPEP, entirely new classes of biopesticides have been developed and tested.



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NEURICE

(New commercial EUROpean RICE (Oryza sativa) harbouring salt tolerance alleles to protect the rice sector against climate change and apple snail (Pomacea insularum) invasion), Coordinated in Spain

NEURICE has developed novel rice varieties with improved salt tolerance.



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POnTE

(Pest Organisms Threatening Europe), Coordinated in Italy

Finally, the POnTE project has optimised surveillance and prevention programmes for the management of future emerging agricultural diseases.



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EU Research and Innovation to protect plant health

European research and innovation activities bring together knowledge and expertise to address the challenges to plant health. Many of which are funded under different areas of Horizon 2020, including Marie Skłodowska-Curie Actions, the European Research Council (ERC) and the SME Instrument.

Supporting activities for the protection of plant health, the European Parliament and the Council adopted Regulation (EU) 2016/2031 on protective measures against plant pests in October 2016. The new rules entered into force on 13 December of the same year, and aim to modernise the plant health regime, enhance more effective measures for the protection of the Union's territory and its plants, ensure safe trade, and mitigate the impacts of climate change on the health of crops and forests.

The United Nations has also declared 2020 as the International Year of Plant Health with the aim of raising global awareness on the importance of protecting plant health.

Learn more about

Protective measures against plant pests: <https://bit.ly/2RcYcp4/>

International Year of Plant Health: <http://www.fao.org/plant-health-2020/home/en/>

Plant Health factsheet: <https://bit.ly/2RDQ7sC/>

Agriculture research activities: https://ec.europa.eu/agriculture/research-innovation_en/

CORDIS Results Pack: <https://cordis.europa.eu/article/id/413320-plant-health-protecting-plants-to-safeguard-our-future>



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