European Research Alliance

ERA Pesticide Free

Towards a chemical pesticide free agriculture

NEWSLETTER #5
ITALY

8 November 2023

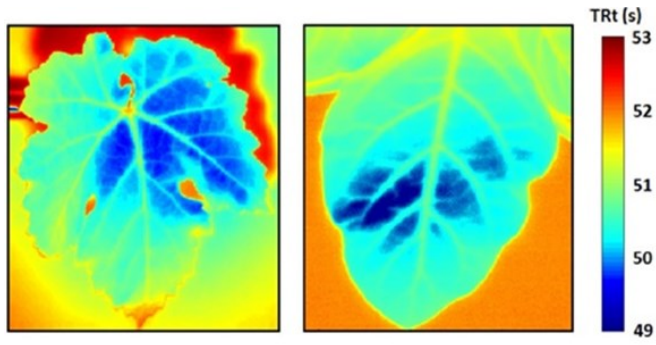
Every two weeks, this newsletter will be prepared by a different Alliance member.

*Today we are happy to share a contribution from the Council for Agricultural Research and Economics (CREA) **in Italy**.*

Pulsed thermography to monitor copper persistence on plant leaves

A novel approach based on pulsed thermography was recently tested by CREA Research Centre for Cereal and Industrial Crops (CREA CI), to evaluate the persistence of the copper on plant leaves so that the time between two applications can be monitored directly instead to be determined empirically. Thermal response was observed on grapevine and tobacco leaves after different treatments over a 3-week period. This paper demonstrates that the new methodological approach based on pulsed thermography can be an effective tool to evaluate in real time the presence of copper on differently treated plants, allowing to optimize its use in the agriculture, also according to the European Regulation n. 1107/2009.

The paper was published in Environmental Monitoring and Assessment 2022:
https://doi.org/10.1007/s10661-022-09807-x



PLANTìA Conference 2024: compost tea and microbial consortia as biostimulants and biocontrol agents of key pathogens of grapevine and legumes

In February 2024, CREA Research Centre for Vegetable and Ornamental Crops (CREA OF) will host the opening conference of the project "*From plant wastes to compost tea and microbial consortia. A natural pathway for biostimulation and biocontrol of key pathogens in grapevine and legumes and for restoring soil fertility*" (PLANTìA). The project, coordinated by CREA OF, and involving the UNINA-DiA Department - University of Naples Federico II and the Institute for Sustainable Plant Protection – National Research Council of Italy, is financially supported by Ager (https://progettoager.it/). The aim is to realize grapevine, chickpea and pea cultivation without chemical inputs, promoting soil microbial activity and plant tolerance to biotic and abiotic stressors by the application of a) compost teas (CTs) derived from plant wastes; b) microbial consortia (MC) designed combining beneficial microorganisms isolated from CTs and c) innovative boosted compost teas (bCTs) obtained by adding MC to CTs. News concerning the conference will be available on the Ager website.

Facing agricultural challenges with school children in Italy: the experience of CREA

The CREA-Research Centre for Food and Nutrition, together with the CREA Research Centres dedicated to fruit farming, horticulture, and plant protection, developed in 2022 an educational tool to promote sustainable production and consumption in schools, called "Coltiva 5" ("Grow five"). Together with a specific Manual, available here, this is a pedagogic boardgame to be played in class or during specific events. During the game, the young participants are transformed into farmers cultivating 5 seasonal horticultural products of 5 different colours, which must be protected from climatic adversities and from the attack of parasites, by biological control and other pesticide-free methods.

The use of the right antagonistic insects, good agronomic practices, and above all reference to cooperation (UE fundings) and research are the key factors to succeed and win the game. "Coltiva 5" is registered in the SIAE catalogue as original work (IP protected), being now regularly used in scientific fairs (e.g., the European Researcher Night 2023-LEAF Project-Frascati Scienza) and in schools.

This is the newsletter of the European Research Alliance *Towards a chemical pesticide free agriculture*
Visit the Alliance's website: https://www.era-pesticidefree.eu/

This issue has ben prepared by the CREA as a member of this Alliance.
If you would like more information about this issue, feel free to contact them.