European Research Alliance

ERA Pesticide Free

Towards a chemical pesticide free agriculture

NEWSLETTER #9

GREECE

24 January 2024

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

*Today we are happy to share a contribution from the Hellenic Agricultural Organization (ELGO-DIMITRA) **in Greece**.*

Classical biological control of *Bactrocera oleae* in Crete, Greece: A Promising Long-Term Management Strategy for the Olive Fruit Fly

A promising classical biological control program has recently been initiated in Greece to manage the key insect pest the olive fruit fly *Bactrocera oleae*. This program aims to enhance the protection of olive cultivation using 'biological weapons', in line with the objectives of the European Green Deal.

Specialized parasitoid species from sub-Saharan Africa, *Psyttalia ponerophaga* and two strains of *Psyttalia lounsbury*i from Kenya and South Africa, were introduced by the USDA-ARS European Biological Control Laboratory in Montpellier, France. These were subsequently established in laboratory colonies at IMBB-FORTH in Greece. These parasitoids have demonstrated high efficiency in the early autumn of 2023 under the field conditions in Crete, a period when indigenous natural enemies have been insufficient in suppressing *B. oleae* populations to economically acceptable levels. The effectiveness of these parasitoids will be evaluated again next this year over a larger area.

This research, funded by the Region of Crete under the action "Specialized Scientific Support and Innovative Actions for Olive Plant Protection in the Region of Crete," is being conducted in collaboration with the following partners: the Department of Molecular Biology and Biotechnology at the Foundation for Research and Technology – Hellas (IMBB-FORTH), ELGO "DIMITRA" - Institute of Olive Tree, Subtropical Plants, and Viticulture, and the Department of Agriculture of the Hellenic Mediterranean University.

Contacts: Kalaitzaki Argyro Dr (ELGO-DIMITRA) ; John Vontas (IMBB-FORTH)

XX International Plant Protection Congress: Healthy Plants Support Human Welfare

July 1-5 2024, Greece

The XX International Plant Protection Congress will take place at the Megaron Athens International Convention Center in Athens, Greece from July 1-5, 2024.

The Congress will consist of plenary and concurrent sessions featuring updated information and research data, with invited speakers as well as oral and poster presentations covering all plant protection disciplines such as plant pathology, entomology, weed science, nematology, plant breeding, and technology transfer, among others. Satellite sessions are also welcome.

Plenary lectures will focus on topics including, but not limited to:

- The impact of climate change on plant protection.
- Plant protection in a changing world - are the solutions found in the past?
- Strategies for developing and implementing digital identification tools for plant biosecurity and protection.
- Resistance breeding within the framework of the EU's 'Farm to Fork' strategy
- Exploring the potential of microbiomes for sustainable agriculture

Registration for the Congress is now open. For more information, the detailed program, and to secure your place at this important event, please visit the website: https://www.ippcathens2024.gr/

Paper: Local Peach Germplasm Under the Microscope for Disease Resistance

The use of resistant cultivars is important for controlling damage from biotic and abiotic stresses. Local germplasm may provide a foundation for genetic improvement towards sustainability and resilience, yet there is limited knowledge about the local genetic resources of the Greek peach [Prunus persica (L.) Batsch]. A survey was conducted on the mainland and across five Greek islands to identify local traditional and underutilized germplasm. A total of 32 peach cultivars/accessions were assessed for their susceptibility to shoot blight caused by *Cylindrocarpon destructans and Monilinia laxa*. It was discovered that local cultivars exhibited greater resistance to *C. destructans* compared to foreign cultivars.

These findings offer new opportunities for enhancing plant resistance to diseases and contributing to the reduction of pesticide use.

Citation: P. Drogoudi, G. Pantelidis, L. Karapetsi, K. Ziakou, K. Kazantzis, P. Madesis, & T. Thomidis. (2023). Exploring the Genetic and Morphological Variation and Disease Resistance in Local and Foreign Prunus persica (L.) Batsch Cultivars. Agriculture. 13. 800. 10.3390/agriculture13040800

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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 ELGO-DIMITRA as a member of this Alliance.
If you would like more information about this issue, feel free to contact them.

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