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PRESS RELEASE

ZEROPARASITIC: Innovative sustainable solutions for broomrapes: prevention and integrated pest management approaches to overcome parasitism in Mediterranean cropping systems

Nine partners from the North and South of the Mediterranean are working to find innovative sustainable solutions for broomrapes. The project 'ZEROPARASITIC: Innovative sustainable solutions for broomrapes: prevention and integrated pest management approaches to overcome parasitism in Mediterranean cropping systems' is a PRIMA project with the partner from Malta being EPSILON Malta, partly funded by the Malta Council for Science and Technology.

Why are broomrapes a threat to crops in the Mediterranean?

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O.ramosa



Broomrapes are holoparasitic weeds that cause significant yield and quality losses in many important crops and affect peoples' livelihoods in many countries worldwide, including the Mediterranean region. Yield losses range from 5% to 100% depending on host susceptibility, level of infestation and environmental conditions. For example, grain legumes are the primary source of protein in the Near East and North Africa, and people's ability to rely on these crops to provide food security is severely threatened by broomrape's infestation. In addition, many countries that were once exporters of food legumes and vegetables have been forced to become net importers of these commodities to meet local demand due to broomrape infestation.

What are we doing to combat this?

Genetic and molecular approaches are studied at three critical levels to gain new insights on potential regulatory targets of the infection: i.e., the broomrapes per se, the host plants, and their interaction (host-parasite). Research is focused on two of the most important crops of

the Mediterranean: tomato and fava beans. In this research, ZeroParasitic integrates innovative solutions into a realistic framework through an inter-disciplinary, multi-actor' effort targeting broomrapes, one of the most critical diseases (weed) in the Mediterranean, posing a significant threat to various key cropping systems. ZeroParasitic's impacts include delivering innovative sustainable solutions for prevention and integrated management of broomrapes that represent a major threat for significant crops in the Mediterranean regions. More than that, ZeroParasitic will deliver state-of-the-art tools to support these sustainable solutions. Socio-economic evaluation of the IPM strategies will increase the likelihood for the adoption of sustainable solutions, and the high adoption by the end-users is a key target for impact.

The Project is headed by the Hellenic **Benaki Phytopathological Institute** (<https://en.bpi.gr/>). ZeroParasitic receives the cooperation of 9 Partners from 8 countries:

- **Greece** - BenakiPhytopathological Institute (BPI), Agricultural University of Athens (AUA), Agroland SA
- **Spain** - Centro de Edafologia Biologia Applicadadel Segura (CSIC- CEBAS)
- **Tunisia** - InstitutNational de RechercheAgronomique de Tunisie (INRAT)
- **Germany** - University of Tübingen (UTU)
- **Malta** – Epsilon SA
- **Morocco** - InstitutAgronomiqueetVeterinaire Hassan II, IAV Hassan II (IAV)
- **Egypt** - Alexandria University (AU)
- **Jordan** - National Centre for Agricultural Research and Extension (NARC)

The Project's budget is close to 1.4 million euros and will last 36 months.

The Project has passed the first stage and is currently in its second stage. Throughout this period, the consortium was in continuous contact aiming to build the fundamentals of the Project and plan the future steps in more detail. In addition, executive Board & General Assembly meetings have been held to share all the progress and decision-making, as well as some internal meetings among WP leaders to exchange knowledge and plan future mutual activities.

Most of Stage 1 activities are still ongoing and will continue in Stage 2 while Due to the COVID-19 pandemic and the restrictions enforced for travelling and other activities, all project meetings and other activities were held online or postponed for a later date.

For more information, contact Prof. Marc Bonazountas (**EPSILON**, bonazountas@epsilonmalta.com)

Relevant Links:

PRIMA: <https://prima-med.org/>

Malta Council of Science and Technology: <https://mcst.gov.mt/>

ZeroParasitic Project: <https://zeroparasitic.eu/>

Epsilon Malta Ltd: www.epsilonmalta.com



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The Malta Council for
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