March 2023

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Eighth newsletter to stakeholders

‘Euphresco is a network for phytosanitary research coordination and funding’. ‘Euphresco is a forum for plant health research’. ‘Euphresco is a platform to enhance research coordination and international collaboration’. These statements are all correct, but Euphresco is above all a service to countries. In this light, it is not surprising that the service must be regularly adapted to better serve the needs its ‘clients’. In the last 12 month, the membership to Euphresco has been broadened to include for-profit entities, for which plant health is one of the main areas of interest. Involvement of these entities in Euphresco activities will create synergies between the research programming activities of Euphresco members and the programmes of industry. This represents an opportunity to benefit from greater resources (more funds, more expertise, more people), and to reduce the gaps between the policy makers, the research funders and the stakeholders. While we develop a more diffuse national coordination by involving more players in each country, we also try to broaden the geographical coverage of the network. Stronger national coordination will result in more impactful transnational coordination.

Global phytosanitary research coordination

While Euphresco has been effective in Europe and has attracted non-European members, its current structure and operations limit their full engagement. In addition to this, there are research areas that are under-represented. Consideration needs to be given to the global plant health research context in order to clarify the role of Euphresco and to adapt its structure and operations to better serve a wider and more diverse membership. In September 2022, the international workshop ‘Shaping global plant health research coordination’ was held in London (GB). Representatives of national, regional and international plant health networks attended from around the world, including the Australian Centre for International Agricultural Research (ACIAR), Better Border Biosecurity (B3), CAB International (CABI), the Consultative Group for International Agricultural Research (CGIAR), the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM-Bari), the National Institute for Agricultural Research and Food Technology - National Research Council (INIA-CSIC), the Plant Biosecurity Research Initiative (PBRI) and Euphresco Net. The workshop participants agreed that there is a need for global phytosanitary research coordination to enhance international collaboration and to enable

session on research coordination will be held at the upcoming International Congress on Biological Invasions (ICBI2023). Project proposals are being submitted to seek funding to enhance national and regional phytosanitary research coordination and to set the foundations for global phytosanitary research coordination through fit-for-purpose activities.

Plant Health research priorities for the Mediterranean region

In 2020 Euphresco and CIHEAM-Bari launched a series of initiatives to strengthen plant health research coordination and collaboration in the Mediterranean region. The 'Compendium on the Plant Health research priorities for the Mediterranean region' was published in 2020. A supplement to the compendium was published in 2022 to update the content of the compendium. The supplement is available here. The initiative to improve and strengthen cooperation and coordination in the Mediterranean region can be extended to other areas, and procedures will be tested in the next months if the project proposal is funded (see above).

Transnational research collaboration to start soon

Discussions on the research topics proposed in 2022 have come to an end, collaborations have been secured between organizations in thirty countries worldwide and thirteen research projects will start soon on the following topics:

2022-A-391 Rapid and efficient detection and identification of severe strains of citrus tristeza virus
Short description: the project will aim to develop molecular tests for the detection and identification of CTV strains and in particular, the severe strains as defined in the EFSA scientific opinion.
Expected output: development and validation of diagnostic tests.

2022-A-392 Insights into the biology of tomato brown rugose fruit virus: virus survival in soil
Short description: the project will develop knowledge on the survival of tomato brown rugose fruit virus in soil in different agro-ecological and pedoclimatic conditions. Survival following composting will also be considered.
Expected output: knowledge on epidemiology.

2022-A-394 Validation of molecular diagnostic methods for the detection and identification of tomato mottle mosaic virus
Short description: the project will validate molecular tests for the detection and identification of tomato mottle mosaic virus.
Expected output: validated diagnostic tests.

2022-C-395 Development of validated procedures for the phytosanitary treatment of wood products and bamboo using ethane dinitrile
Short description: the project will produce knowledge on the efficacy of ethane dinitrile as a phytosanitary treatment to replace methyl bromide.
Expected output: validated phytosanitary treatment.

2022-F-396 Development of a seed identification guide for invasive plants and weedy

and weeds to support their identification.
Expected output: guidelines on the taxonomy and identification of seeds of invasive plants and weeds.

2022-A-399 Understanding and managing the impact of *Phytophthora* in horticulture
Short description: the project will produce knowledge on the presence of *Phytophthora* species in gardens and will contribute to shed light on their origin, and pathways of introduction via trade of ornamental plants.
Expected output: knowledge on the epidemiology.

2022-A-403 Discovering nematode diversity in ornamental plant collections of international importance
Short description: the project will develop knowledge on the diversity and dynamics of plant parasitic nematodes in public and private gardens.
Expected output: knowledge on the nematode species present in soils from gardens to support capacity building and to raise awareness.

2022-A-406 Diagnosis of *Xylella fastidiosa*: detection on dormant plant species which are important for Mediterranean countries
Short description: the project will develop knowledge on the distribution and dynamics of *Xylella fastidiosa* in woody stems of important Mediterranean plants (e.g. almond, cherry and grapevine) throughout the year and during plant dormancy.
Expected output: knowledge to support diagnosis.

2022-A-410 Frass-based detection of wood boring pests
Short description: the project will gather knowledge on available methods for the detection of *Agrilus planipennis* (emerald ash borer) from frass and validate them.
Expected output: validated diagnostic tests.

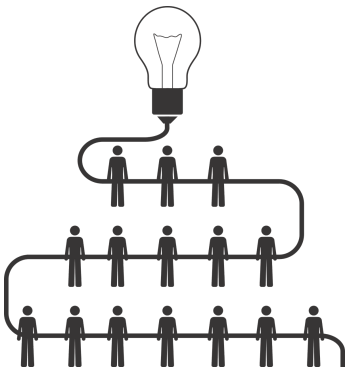
2022-F-411 Assessing the risk of whitefly transmitted viruses in Europe
Short description: the project will gather knowledge on the presence of *Bemisia tabaci* (whitefly) in Northern European countries and on the viruses present in European populations, in specimens that are intercepted at points of entry and in their host plants.
Expected output: knowledge on the epidemiology of *Bemisia tabaci* and the viruses it transmits.

2022-F-415 *Meloidogyne enterolobii* – Survival under temperate climatic conditions and distribution within Europe
Short description: the project will produce knowledge on the presence and distribution of *Meloidogyne enterolobii* (root-knot nematode) in the EPPO region and on the nematode's epidemiology, in particular its ability to survive in temperate climatic conditions and the duration of its life cycle.
Expected output: knowledge to support inspection.

2022-A-417 Distribution of *Meloidogyne chitwoodi* and *Meloidogyne fallax* within Europe
Short description: the project will develop and validate sampling protocols to support surveys and will gather information on the distribution of *Meloidogyne chitwoodi* and *Meloidogyne fallax*.

2022-A-418 Influence of incubation of wood samples on detection of pine wood nematode
Short description: the project will develop knowledge on the effect of the incubation period (prior to extraction) on the detection of *Bursaphelenchus xylophilus*, especially for low-level infestations in dry wood such as wood packaging material.
Expected output: validated protocols for detection.

More information on the above-mentioned projects is available by contacting the Euphresco coordinator.



National research priorities currently under discussion

Euphresco projects start as ideas, based on national priorities and proposed by each Euphresco member. Through discussions, exchange and networking, the suggestions become projects. New suggestions for 2023 have been submitted by Australia, Austria, Belgium, Canada, France, the United Kingdom, the Netherlands, Portugal, Russia, Slovakia, Slovenia, the United States and the European Commission. The list of suggested topics is available from the Euphresco website. More information is available from the Euphresco coordinator.

Euphresco Digital Research Object Portal

Opening research data and publishing open access articles have become a requirement for many publicly funded research projects. The ultimate goal of opening data is to increase their visibility, use and re-use. The number of infrastructures that host open research data has increased to adapt to different types of data and scientific journals are adapting to the open access policy. The multiplication of open data/open access infrastructures has to be seen positively as they contribute to the visibility, use and re-use of scientific information. Yet, the large number of diverse infrastructures has the counter-effect to scatter information which may be more difficult to reach, or which is 'hidden'. To address the abovementioned limitations associated to open data approaches and policies, Euphresco has developed the Digital Research Object Portal (DROP). DROP works as a node, a unique entry point that facilitates retrieval of digital research objects (data and documents). Currently, the portal references documents and data produced in the

documents from national and international research projects. If you are interested in giving visibility to your data and documents, do not hesitate to contact the Euphresco coordinator. your template.

Open access reports and recommendations to policy makers

Since its creation, Euphresco has adopted an open science approach, i.e. the most important research outputs are publicly accessible. In the last months, several interesting projects ended and final reports with recommendations to policy makers are available on DROP.

- Project 2018-A-271 Rapid identification of plant-health related bacteria by MALDI-TOF mass spectrometry (MALD-ID)
- Project 2018-A-289 Plant Health Bioinformatics Network (PHBN)
- Project 2018-A-293 Phytosanitary risks of newly introduced crops (PRONC)
- Project 2019-A-330 Detecting virus-carrying *Xiphinema* spp. as an alternative to *Xiphinema* identification up to species level in trade (XiphiVIR)

Latest success story: forensic techniques used to differentiate origins of invasive beetles

Stable isotopes of elements are in everything. The abundance of different isotopes in plants and animals can vary depending on where they grow, or on their nutrition. Stable Isotope Ratio Analysis (SIRA) is an analytical technique that allows the isotopes naturally present in a sample to be measured. SIRA has been used for a number of years to map the production and origin of samples of plants and animals. Wood-boring larvae assimilate isotopes from wood as they feed. Hence, isotope signatures of beetles may provide clues about the geographic origin of the emerged adults. This information can be used in planning phytosanitary measures where adult beetles are found. The full success story is accessible through DROP.

Knowing more about Euphresco

Anybody interested in receiving information on the Euphresco activities can subscribe to the newsletter by completing the form on the Euphresco website.

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