

1. Content of the 'Topic Description' document

1.1. Topic area

Other

1.2. Links to the Euphresco Strategic Research Agenda

The topic addresses the following objective(s) of the 2017-2022 Euphresco Strategic Research Agenda:

- ☒ Objective 2017-R-7.2: to validate cost-effective and socially acceptable phytosanitary measures at the place of production (inland) for plants, plant products, water and soil
- ☒ Objective 2017-C-1.1: to address plant health challenges through integrative approaches and support collaboration among disciplines
- ☒ Objective 2017-C-3.1: to favour knowledge exchange and support common initiatives with relevant players

1.3. Topic title

Identifying IPM measures for given pest/crop combinations to improve plant health and decrease dependency on chemical pesticides (IIPMDDC)

1.4. Description of the problem the research should solve

There is limited progress in adopting IPM by growers at field level and in decreasing dependency on chemical pest control, although effective alternative or preventive measures are often available. Partially it may be attributed to the fact that pesticides are promoted by their manufacturers, while efficient preventive measures for improving plant health such as crop rotation, intercropping, planting of resistant/tolerant cultivars, hygiene measures, appropriate cultivation methods as well as the use of monitoring and decision support systems or biological control measures, are less often promoted. At the same time, besides the emergence of pest resistance, undesirable effects on the human health and environment, there is a drastic decline in the availability of existing and new chemical pesticides in some regions (e.g. EU) leading to increased necessity for alternative pest control options. Additionally, in some regions there are legal requirements active for regulating plant production according to IPM principles and for marketing plant products with low or even no residues of pesticides (EU Directive 2009/128/EC).

In compliance with the eligibility of topics for Euphresco research projects, the present topic will mainly focus on pests of major phytosanitary importance for specific crops in the context of Integrated Plant Production as a holistic concept.

The specific objectives of the project are:

1. To identify model crop/pest combinations, for which plant protection alternatives to chemical-synthetic products are particularly needed, based on agreed decision criteria.

The alternative pest control options should be developed within the context of Integrated Plant Production as a holistic concept (crop as agroecosystem). Relevant crop/pest combinations should be established with regard to their importance for the different region(s), where the production takes place and with regard to the potential phytosanitary regulations applied to the products.

2. To map information about IPM strategies (including recent technical-scientific but also traditional agricultural knowledge, economic and social aspects) validated or already in use for the model crop/pest combinations in order to identify IPM measures that are cost effective. International (e.g. CABI, IPPC) regional (e.g. IOBC, EPPO) and various national information sources at different organisations (e.g. plant protection services - NPPOs, universities, research centres, technical centres, pertinent ministries, advisory services, companies e.g. breeders, suppliers of IPM related products, farmer associations and consortia) and options to access this information shall be identified.

3. To compile the information on IPM strategies retrieved from different sources (e.g. websites, scientific articles, technical guidelines) and to agree on the best format to present this information to national stakeholders.
4. To identify the technical gaps on IPM measures that may prevent their adoption and use and to provide recommendations to fill the gaps.
5. To identify the main obstacles for the implementation of IPM in the partner countries and to propose the most efficient ways to encourage national stakeholders to adopt the IPM measures (e.g. knowledge transfer). Options to create cross sector, multi-actor approaches based on best practice examples shall be examined.

1.5. Description of the expected results

The project will produce:

- An inventory of potential IPM measures
- A list of obstacles and challenges for the adoption of IPM measures
- Recommendations for harmonized formats to offer information about IPM
- Recommended IPM measures for selected pest/crop combinations
- Recommendations for implementation
- Closer international relationships at least amongst the partners of the project regarding information sharing

The results of the project shall facilitate and support the production of convincing, clear and simple messages to farmers (including economic arguments) on IPM strategies for particular crops.

1.6. Beneficiaries of this research product

The project will benefit to:

- growers, farmers associations
- farm advisory and consultancy services
- producers/sellers of alternative crop protection products
- researchers
- policy decision-makers
- consumers

1.7. Research funders and research contribution/ distribution

Funding organisation	Research activity and researchers involved
1. International Centre for Genetic Engineering and Biotechnology, South Africa Dennis Ndolo Dennis.Ndolo@icgeb.org	-Project coordination; -Scientific contribution to be detailed; Contact person: Karen Muirhead E-mail address: Karen.Muirhead@icgeb.org Contact person: Dennis Ndolo E-mail address: Dennis.Ndolo@icgeb.org
2. Austrian Agency for Health and Food Safety, Austria Sylvia Bluemel sylvia.bluemel@ages.at	-Contribution to the identification of crop/pest combinations (regional input); -Contribution to the identification of information sources about IPM strategies; -Contribution to the mapping of information



	<p>from existing IPM measures (IOBC-WPRS, national) for regional crop/pest combinations; -Contribution to develop implementation options;</p> <p>Contact person: Sylvia Bluemel E-mail address: sylvia.bluemel@ages.at</p>
<p>3. Ministry of Agriculture and Forestry, Finland</p> <p>Marja Savonmaki marja.savonmaki@gov.fi</p>	<p>-Contribution to the identification of crop/pest combinations (regional input); -Contribution to identification of information sources about IPM strategies; -Contribution to mapping of information from existing IPM measures (national); -Contribution to develop implementation options;</p> <p>Contact person: Marja Jalli E-mail address: marja.jalli@luke.fi</p> <p>Contact person: Anne Maittala E-mail address: anne.maittala@ruokavirasto.fi</p>
<p>4. Ministry of Agriculture, Plant Biosecurity, Plant Protection and Inspection Services, Israel</p> <p>Yael Meller Harel YaelM@moag.gov.il</p>	<p>-Contribution to the identification of crop/pest combinations (regional input); -Contribute to analysis of IPM data to identify gaps in management protocols and formulate generalization across systems; -Contribution to identification of information sources about IPM strategies; -Contribution to the mapping of information from existing IPM measures (extensions) for regional crop/pest combinations; -Contribution to develop implementation options;</p> <p>Contact person: Ally Harari E-mail address: aharari@volcani.agri.gov.il</p>
<p>5. Ministry of Agriculture Forestry and Food, Slovenia</p> <p>Erika Oresek erika.oresek@gov.si</p>	<p>-Contribution to the identification of crop/pest combinations (regional input); -Contribution to identification of information sources about IPM strategies; -Contribution IPM strategy by reduction PPPs in minor crops production (hops);</p> <p>Contact person: Stanislav Trdan E-mail address: Stane.Trdan@bf.uni-lj.si</p>



	<p>Contact person: Magda Rak Cizej</p> <p>E-mail address: magda.rak-cizej@ihps.si</p>
<p>6. Ministry of Agriculture, Hydraulic Resources and Fisheries, Tunisia</p> <p>Mohamed Lahbib Ben Jamâa</p> <p>benjamaaml@gmail.com</p>	<ul style="list-style-type: none"> -Contribution to the identification of crop/pest combinations; -Contribution to identification of information sources about IPM strategies in particular the effective ones; -Contribution to identification of constraints to IPM application and sustainable adoption by growers for a given crop/pest combination; -Contribution to the economic analysis of available IPM strategies compared to conventional chemical protection; -Contribution to the design of simple, inexpensive and farmer-friendly monitoring tools as a basis for the application of IPM; -Contribution to implementation of IPM for a given crop/pest combination; -Contribution to mapping of farmers who apply integrated pest management practices, according to a pre-established evaluation grid and identification of administrative support and control measures; <p>Contact person: Jouda Mediouni Ben Jemâa</p> <p>E-mail address: joudamediouni1969@gmail.com</p> <p>Contact person: Synda Boulahia Kheder</p> <p>E-mail address: synda.kb@gmail.com</p> <p>Contact person: Ghazi Krida</p> <p>E-mail address: ghazi.krida.inat@gmail.com</p>
<p>7. Ministry of Food, Agriculture and Forestry, Turkey</p> <p>Yunus Bayram</p> <p>yunusbayram@tarimorman.gov.tr</p>	<p>-Contribution to be detailed;</p> <p>Contact person: Emel Cakir</p> <p>E-mail address: emel.cakir@tarimorman.gov.tr; emel_cakir@hotmail.com</p>
<p>8. University of Forestry Sofia, Bulgaria</p> <p>Rumen Tomov</p> <p>rtomov@yahoo.com</p>	<ul style="list-style-type: none"> -Contribution to the identification of crop/pest combinations in Bulgaria; -Contribution to the identification of information sources about IPM strategies and their implementation; -Contribution to the mapping of information from existing IPM measures (IOBC-WPRS, Bulgaria); -Contribution to develop implementation



	<p>options;</p> <p>Contact person: Liljana Markova E-mail address: liljanamarkova@abv.bg</p>
<p>9. International Maize and Wheat Improvement Center, Mexico</p> <p>Victor Maurice Kommerell V.Kommerell@cgiar.org</p>	<p>-Contribute to knowledge transfer (give & take; data, methods & tools, etc.) about pests/diseases in scope for this project; -Connect scientists linked to specific IPM innovations;</p> <p>Contact person: Prasanna Boddupalli E-mail address: b.m.prasanna@cgiar.org</p> <p>Contact person: David Chikoye, Head E-mail address: d.chikoye@cgiar.org</p> <p>NN: for potato (CIP) and olives, fruit trees diseases/IPM (ICARDA) Contact person: to be defined E-mail address: to be defined</p>
<p>10. European and Mediterranean Plant Protection Organization, France</p> <p>Nico Horn nh@eppo.int</p>	<p>-Sharing of project results to stakeholders via EPPO channels; -Contribute to have added value in IPM by filling gaps that are not addressed by other organizations if the activities are within EPPO's core work;</p> <p>Contact person: Ewa Matyjaszczyk E-mail address: ewa.matyjaszczyk@eppo.int</p>
<p>11. Agroinnova Centre for Innovation in the Agro-Environmental Sector, Agroinnova, University of Torino, Italy</p> <p>Vladimiro Guarnaccia vladimiro.guarnaccia@unito.it</p>	<p>-Contribution to the identification of crop/pest combinations (regional input); -Contribution to identification of information sources about IPM strategies; -Contribution to develop implementation options; -Contribution to collect data about different host-germplasm susceptibility to the selected pathogens of berry fruits;</p> <p>Contact person: Vladimiro Guarnaccia E-mail address: vladimiro.guarnaccia@unito.it</p>
<p>12. University of Catania, Italy</p> <p>Santa Olga Cacciola olga.cacciola@unict.it</p>	<p>-Contribution to the identification of citrus pests and fungal diseases of social and economic relevance (regional input); -Contribution to identification of information sources about IPM strategies of citrus pests and diseases with particular reference to</p>



	<p>organisms included in EPPO lists;</p> <ul style="list-style-type: none"> -Contribution to mapping of information from existing IPM measures (IOBC-WPRS, national and regional); -Contribution to develop implementation options for IPM management strategies of citrus pests and diseases; <p>Contact person: Santa Olga Cacciola E-mail address: olga.cacciola@unict.it socacciola@gmail.com</p>
<p>13. University of Padova, Italy</p> <p>Alberto Pozzebon alberto.pozzebon@unipd.it</p>	<ul style="list-style-type: none"> -Contribution to the identification of crop/pest combinations (regional input); -Contribution to the mapping of information from existing IPM measures (IOBC-WPRS, national) for regional crop/pest combinations (e.g., pome fruits, grapevine, nuts); -Contribution to develop implementation options; -Contribution to the identification the technical gaps on IPM measures on selected crop/pest combinations; <p>Contact person: Alberto Pozzebon E-mail address: alberto.pozzebon@unipd.it</p>
<p>14. Latvia University of Life Sciences and Technologies, Latvia</p> <p>Viktorija Zagorska viktorija.zagorska@llu.lv</p>	<ul style="list-style-type: none"> -Contribution to the identification of crop/pest combinations (regional input); -Contribution to the use of biopesticides in IPM programs; -Contribution to identification of ongoing good practices in IPM; <p>Contact person: Regina Rancane E-mail address: regina.rancane@llu.lv</p>
<p>15. Faculty of Sciences, University of Porto, Portugal</p> <p>Ana Aguiar aaguiar@fc.up.pt</p>	<ul style="list-style-type: none"> -Contribution to the identification of crop/pest combinations (regional input); -Contribution to identification of ongoing good practices in IPM ; -Contribution to mapping of information from existing IPM measures (IOBC-WPRS, national); -Contribution to understand and promote green ecological infrastructures role in pest management; -Contribution to the use of biopesticides in IPM programs;



	<p>Contact person: Ana Aguiar E-mail address: aaquiar@fc.up.pt</p>
<p>16. InnovPlantProtect, Portugal</p> <p>Liliana Cabecinha lcabecinha@iplantprotect.pt</p>	<p>-Contribution to the identification of crop/pest combinations (regional input); -Contribution to mapping of farmers who apply integrated pest management practices; -Contribution to the design of simple, inexpensive and farmer-friendly monitoring tools as a basis for the application of IPM; -Contribution to identification of information sources about IPM strategies;</p> <p>Contact person: Mr Pedro Fevereiro E-mail address: pfevereiro@iplantprotect.pt</p>
<p>17. University of the Azores, Portugal</p> <p>David João Horta Lopes david.jh.lopes@uac.pt</p>	<p>-Description/compilation of monitoring techniques/options (including different traps, lures and attractants) for specific and emerging pests from Azores crops; -Description/compilation of IPM measures against specific and emerging pests from Azores crops;</p> <p>Contact person: Elisa Tarantino E-mail address: elisa.tarantino12@gmail.com</p>
<p>18. Research-development Institute for Plant Protection, Romania</p> <p>Maria Iamandei maria_iamandei@yahoo.com</p>	<p>- Contribution to the identification of crop/pest combinations in Romania; - Description/compilation of IPM measures against specific and emerging pests from Romania; -Contribution to the identification of information sources about available IPM strategies; -Contribution to the selection and use of biological control options (e.g. predators and/or parasitoids) in IPM programs for specific and emerging pest from Romania;</p> <p>Contact person: Maria Iamandei E-mail address: maria_iamandei@yahoo.com</p>

1.8. Research project partnership outside Euphresco

Euphresco funding ensures a certain level of transnational collaboration among Euphresco member countries. It is possible, if the funding consortium is interested, to contact funding organisations or research groups outside the geographical area covered by Euphresco members. The Euphresco coordinator could advertise the research topic in order to have an enlarged collaboration. If funders are interested in this possibility, please check the case below:

☐ The funding consortium of the topic mentioned in section 1.2 requires that the topic is advertised outside the Euphresco network

Information to define the profile of sought partners could be useful (but not mandatory): country/region (if there are preferences), skills/expertise required, etc.

1.9. Any other relevant information on content

None.

2. Euphresco management aspects of the project

2.1. Indication of the topic budget

Funding organisation ^a	Mechanism ^b	Total Budget ^c
1. ICGEB (ZA)	NC	€
2. AGES (AT)	NC	€
3. MMM (FI)	NC	€
4. MOAG (IL)	NC	€
5. MAFF (SI)	NC	€
6. MARHP (TN)	NC	€
7. TARIMORMAN (TR)	NC	€
8. LTU (BG)	NC	€
9. CIMMYT (Int)	NC	€
10. EPPO (Int)	NC	€
11. AgrolInnova (IT)	NC	€
12. UNICT (IT)	NC	€
13. UNIPD (IT)	NC	€
14. LLU (LV)	NC	€
15. FCUP (PT)	NC	€
16. IPP (PT)	NC	€
17. UAC (PT)	NC	€
18. ICDPP (RO)	NC	€

2.2. Expected duration of the project (only for non-competitive topics)

24 months

2.3. Identification of project coordinator

Has the research project coordinator been identified?

☒ Yes

☐ No

2.4. Any other relevant information on topic organisation and management

None

^a First member is project coordinator. A minimum of two partners are necessary for each proposal. Add lines as needed.

^b Please indicate the preferred mechanism (e.g. real pot RP; virtual pot VP; non-competitive NC), or several mechanisms if there is flexibility.

^c Optional, as this amount can still change in the next phase. In-kind contribution should also be indicated in this column.