

## 1. Content of the 'Topic Description' document

### 1.1. Topic area

Diagnostics, field detection, surveillance, fruit production.

### 1.2. Topic title

Early detection of fungal storage pathogens on pome fruits

### 1.3. Description of the problem the research should solve

Fungal storage pathogens on apple fruits such as *Neofabraea* or *Phytophthora* species could pose a risk for the export of apple fruit as a commodity from Europe to third countries. Previous literature studies have shown that about 38 fungal species were reported having a potential impact on apple fruits in countries of the European Union, several of them causing damage to apple fruits as causal agents of storage diseases.

In this context, a prognosis system for relevant pathogenic fungi causing storage diseases (e.g. *Neofabraea* spp., *Phytophthora* spp.) on pome fruits shall be developed with emphasis on early detection (including quantification) of the pathogens during packing house operations. Procedures to control these storage pathogens shall be tested. The overall aim is to increase the quality of pome fruits intended for longer periods of storage from the field to the table. The topic meets the requirements of the priority 1- Know your enemy - epidemiology and taxonomy, Objective 2017-R-1.2: to support taxonomic research for the unambiguous identification of pests of the Euphresco Strategic Research Agenda 2017-2022.

### 1.4. Description of the expected results

- A method protocol for early detection of pathogenic fungi causing storage diseases.
- Description of tested control procedures.

### 1.5. Beneficiaries of this research product

- National Plant Protection Services (reference laboratories, inspectors, risk managers).
- Approved laboratories for official diagnostic tests.
- Professional associations and Technical Institutes.
- Apple industry; fresh consumption and processing industry.
- Pome fruit farmers.

### 1.6. Research funders and research contribution/ distribution

Funding organisation	Research activity and researchers involved
<p>1. Federal Ministry of Agriculture and Forestry Environment and Water Management, Austria</p> <p>Sylvia Bluemel <a href="mailto:sbluemel@ages.at">sbluemel@ages.at</a></p>	<p>-Identification and selection of relevant storage fungi (based on literature research and discussion with partners).</p> <p>-Development of a detection system for selected storage fungi (detection and identification methods and techniques to be discussed e.g. morphological or molecular).</p> <p>-Depending on the selected fungal species, different options of sampling with regard to date and location will be tested (e.g. start in the field?).</p> <p>-Identification of handling and storage procedures favourable for symptom development and development of recommendations to avoid these conditions.</p>



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2. Main Inspectorate of Plant Health and Seed Inspection, Poland  Janina Butrymowicz <a href="mailto:J.Butrymowicz@piorin.gov.pl">J.Butrymowicz@piorin.gov.pl</a>	-Development of an EARLY DETECTION system for selected: bull's eye rot fungi ( <i>Neofabraea</i> spp.) (detection and identification methods and techniques to be discussed, with emphasis on molecular tools). -Depending on the selected fungal species, different options of sampling with regard to date and location will be tested (e.g. start in the field?).  Contact: Joanna Pulawska Email address: <a href="mailto:joanna.pulawska@inhort.pl">joanna.pulawska@inhort.pl</a>  Contact: Janina Butrymowicz Email address: <a href="mailto:j.butrymowicz@piorin.gov.pl">j.butrymowicz@piorin.gov.pl</a>
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### 1.7. 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.

The funding consortium of the topic mentioned in section 1.2 requires to advertise the topic outside the Euphresco network

### 1.8. Any other relevant information on content

Expression of interest has been received from the following researchers: Marcel Wenneker, e-mail address: [marcel.wenneker@wur.nl](mailto:marcel.wenneker@wur.nl)

## 2. Euphresco management aspects of the project

### 2.1. Indication of the topic budget

Funding organisation <sup>a</sup>	Mechanism <sup>b</sup>	Total Budget <sup>c</sup>
1. BMLFUW (AT)	NC	€ 31 990
2. PIORIN (PL)	NC	€ tbc
3. FGBU-VNIIKR (RU)	NC	€ 10 000
4. USAMV (RO)	NC	€ 5 000
5. WUR (NL)	NC	€ 25 000
total		€

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

24 months (planned start 01.03.2018).

### 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

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

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

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