

# ECPGR Activity Grant Scheme Proposal Form

## Activity Proposal

Activity	
Full title	Building and promoting a European <i>Pyrus</i> collection – A case study.
Acronym (or short title)	<b>ECoHisPy</b> (European <b>C</b> ollection of <b>H</b> istorical <b>P</b> yrus).
Duration of Activity (in months)	12
Starting date	1.01.2015

## Applying Working Group(s)

Working Group	Indicate name and surname of Working Group Chair
1. <i>Malus/Pyrus</i>	Marc LATEUR
2.	
3.	
4.	

## Activity Coordinator

Activity Coordinator	
Name and Surname	Marc LATEUR
Nationality	Belgium
Current position	Coordinator of the Research Unit 'Plant Breeding & Biodiversity', chairman of the <i>Malus/Pyrus</i> WG, ECPGR <i>Pyrus</i> DB manager.
Institute	Agricultural Research Centre (CRA-W)
Country	BELGIUM
Telephone	+32 81 620 314 - +32 81 620 333
Email	m.lateur@cra.wallonie.be

## Activity Partners

Please note that each partner needs to be a member of a Working Group's Pool of Experts to be eligible.

**A maximum of 12 funded partners can be listed.** For self-funded partners please use the separate box below.

Partner ID No.	Name and Surname	Institute	Country
1	Markus Kellerhals	Group Leader Fruit Breeding and Genetic Resources, (EAER), Agroscope, Wädenswill	Switzerland
2	Dag Røen	Njøs Næringsutvikling.	Norway
3	Frantisek Paprstein and Jiri Sedlak	Research and Breeding Institute of Pomology Holovously Ltd.	Czech Republic
4	Gordana Đurić	University of Banja Luka, Genetic Resources Institute	Bosnia and Hercegovina
5	Dorota Kruczynska and Grzegorz Hodun	Research Institute of Horticulture, Skierniewice	Poland
6	Mauro Bergamaschi	CRA - Unità di Ricerca per la Frutticoltura / Forlì	Italy
7	Daniela Benedikova	National Agriculture and Food Center - Research Institute of Plant Production of Piestany	Slovak Republic
8	Frida Carka	Researcher at Genetic Resources Center - Agriculture University of Tirana	Albania
9	Torben Bo Toldam-Andersen	Dept. of Plant and Environmental Sciences, University of Copenhagen	Denmark
10	Arnaud Gyader (on behalf of Laurence Feugey)	Institut de Recherche en Horticulture et Semences UMR1345 (INRA / Agrocampus-ouest / Université d'Angers) - INRA Angers	France
11	Pilar Errea Abad (on behalf of Enrique Dapena)	Agrifood Research & Technology Centre of Aragon - CITA	Spain
12	Zsuzsanna Bekefi	Fruiticulture Research Institute	Hungary

### Self-funded partners

Partner No.	Name and Surname/Identifi	Institute	Country
1	Matthew Ordidge	University of Reading	United Kingdom
2	Inger Hjalmarsson	Program for Diversity of Cultivated Plants (POM), Swedish University of Agricultural	Sweden

		Sciences (SLU).	
3	Monica Höfer and Henryk Flachowsky	Julius Kühn-Institute, Institute for Breeding Research on Fruit Crops	Germany
4	Marc Lateur	Agricultural Research Centre (CRA-W)	Belgium

## Description of Activity

*Please address the following aspects: Background – Justification – Methodology or Approach – Expected impact.*

Describe the Activity (max. 500 words):

The AEGIS initiative is a fundamental component of ECPGR and key to this is the development of a coordinated European genetic resource collection. One of the key limitations in progress towards this aim is the challenge of aligning activities across multiple national programs sufficiently to allow a clear comparison of data and/or accessions between national collections. Within the *Malus/Pyrus* and *Prunus* collections, this is exemplified by the need to better coordinate the combined phenotypic and genotypic analysis of accessions across multiple countries.

In parallel with considerations of the development of the *Prunus* collection (submitted by the *Prunus* WG), and with an aim to initiating the AEGIS European collection of *Pyrus*, this project aims to develop a method to introduce a sample of around 100 true to type historical and land races European pear cultivars into AEGIS and EURISCO after an accurate process of collecting historical, phenotypical, utilitarian and genotypical data. Implementation of a verification process with the view to select the most appropriate set of cultivars to be included in this common collection. Producing a summary of the methods applied as a case study for perennial pome fruit.

We will collaborate in creating an electronic catalog (in English and national languages) containing the description of the historical cultivars with the objective to disseminate the information to researchers, the public, nurseries and breeders through the ECPGR framework and national websites.

In addition to initiating the European collection, this will provide tools for the further inclusion of accessions in the future expansion of the collection by members.

## ECPGR Objective(s)

*Objectives must be feasible and achievable within the project timeline. Please list here the corresponding number(s) of the ECPGR Outcome(s) and/or Output(s) and/or Activities to which your proposed Activity will contribute. The logframe describing ECPGR objectives is available from the website.*

List ECPGR outcomes, outputs, activities to which this Activity contributes:

OUTCOME 1 : AEGIS start to become operational for *Pyrus*. Accessions in AEGIS are

characterized and evaluated
OUTCOME 5 : Relations with users of germplasm are strengthened by developing users friendly channels of communication.

## Expected products

*List concrete products and results that are obtained by the Activity*

Expected products/results
- 100 historical European pear cultivars verified with common phenotypic and genotypic data and uploaded in the EURISCO catalogue with the AEGIS flag.
- SSR marker data for around 100 European historical pear cultivars are published.
- A catalogue in English and local languages with fruit pictures that summarize the main information on those European historical cultivars with their history, main characteristics, qualities and pointing out their different uses. The document will be made available for researchers, the public, nurseries, breeders through ECPGR channels and national websites.
- A practical method summarized and published as a case study in collaboration with the <i>Prunus</i> WG.

## Workplan for the proposed period of the Activity

*Brief description of meetings and/or main actions of the Activity.*

Type of Action (indicate if "meeting" or "other action")	Description
1. Other action	Collation of pomological and other relevant reference literature for a list of 10 to 15 pear cultivars by each partner that could potentially be proposed as candidates for inclusion in the AEGIS European collection. Criteria for inclusion will be defined by the group with reference to the work already done some years ago by the <i>Prunus</i> WG.
2. Other action	Collation of data concerning historical synonyms of those European historical cultivars and making an appropriate analysis of the data.
3. Other action	Selecting, based on historical data, a minimum of 5 to 10 varieties from each partner that will be studied for phenotypic and genotypic characterization. The accessions selected should be in an advanced stage of phenotyping for the most important phenological and fruit quality traits. During the project the phenotyping could be slightly refined according to common minimum set of priority descriptors agreed by the <i>Malus/Pyrus</i> WG. They should include, standardized fruit pictures. The final list of candidates and common descriptors and format will be defined through discussion amongst the group members (by e-mail, and if necessary by phone or skype).

4. Other action	Collecting information on traditional uses and data concerning the most interesting features with the view to documenting and making recommendations for the potential utilization of those cultivars.
5. Other action	Sending material for SSR analyses to one central laboratory that will use the common set of SSR's and reference cultivars defined according the ECPGR <i>Malus/Pyrus</i> WG. Data interpretation will take into account the already published results in order to cross-reference the information.
6. Other action	Acceptance of protocols for descriptions and delivery of data encoded on pre-formatted Excel sheets that will be provided by the <i>Pyrus</i> DB manager and will do a check with EURISCO DB.
7. Other action	With the view to enhance the diffusion of information to potential users, a catalogue (in English and local languages) will be produced with fruit pictures that summarize the main information on those European historical cultivars with their history, main characteristics, qualities and limitations and highlighting their different uses.
8. Other action	All project partners will contribute through e-mails (and, if necessary by phone or skype) to produce a summary document 'Guidelines for developing a <i>Pyrus</i> procedure for the selection of the Most Appropriate Accessions (MAA)'. On the basis of this document, a reference group, composed by a subset of partners, will propose which accession can be flagged within AEGIS and enter into the AEGIS system and encoded in EURISCO.
9. Other action	Developing a communication strategy for dissemination of the results through ECPGR channels and other National websites.

### Additional remarks

*Indicate any additional remark(s) that is/are important for the evaluation/implementation of the proposed Activity*

Remarks:

**Please send the completed form together with the budget table to the Chair of the submitting Working Group for submission of the Activity proposal.**