



An update on the Establishment of A European Genebank Integrated System



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Fourth Meeting of the ECPGR Working Group on *Malus/Pyrus*,
06-09 March 2012, Weggis, Switzerland

The logo for AEGIS, featuring a stylized green and black symbol resembling a plant or a network node, followed by the word "aegis" in a lowercase, sans-serif font.

AEGIS Contents

- Introductory notes
- Establishment and milestones of AEGIS
- Key components of AEGIS
- AEGIS membership (MoU and Associate Membership)
- The European Collection (**also on Thursday**)
- Selection procedures of European Accessions (**Thursday**)
- AQUAS (**genebank standards on Thursday**)
- AEGIS Competitive Grant Scheme
- Plant Gene Access FP7 project proposal



Introductory notes

- Appreciated to have a chance to discuss AEGIS with you!
- *Malus/Pyrus* WG has been keen to take advantage of AEGIS but has been slow in implementing it!?
- With the current meeting I hope more progress can be made!
- I decided to elaborate especially on the selection procedures of European Accessions and on (some) AQUAS elements
- On Thursday we will discuss in particular the establishment of European Collection and Technical Standards



Establishment and milestones of AEGIS

1. ECPGR **SC decision** to initiate establishment of AEGIS in 2006
2. AEGIS Advisory Committee appointed
3. ECPGR Secretariat (incl. **AEGIS Coordinator**) to coordinate
4. **Feasibility studies** for 4 model crops conducted (2004-2008)
5. **Strategic framework** policy guide agreed (2008)
6. **Memorandum of Understanding** (MoU) developed and currently signed by **30** countries
7. Agreement on development of **quality management system**; **AQUAS** discussion paper



Establishment and milestones of AEGIS

8. Agreement on **selection requirements** for **European Accessions** and **selection criteria** for MAAs
9. **Competitive Small Grant Scheme**:
 - **First Call** 18 proposals received and 3 awarded;
 - **Second Call** published October last year;
12 proposals received; 5 selected and funded
10. EUROGENEBANK proposal to **FP7 Research Infrastructure 2010 Call**; met threshold but not selected
11. New proposal (**Plant Gene Access**) submitted to 2012 Call of FP7 Research Infrastructures
12. **European Collection** formally established (12 Dec. 2011)

Key components of AEGIS

1. A **Strategic Framework** for the Implementation of A European Genebank Integrated System – A Policy Guide
2. Formal **agreement** with countries (MoU) and institutions within countries (Associate Membership)
3. **European Collection** (details later)
4. **Quality management system** (generic and crop-specific standards; template for development of genebank manuals; reporting, monitoring and capacity building)



Key components of AEGIS

5. EURISCO as information portal for European Collection



35*. AEGIS Status

(AEGISSTAT)

The coded status of an accession with regard to the European Genebank Integrated System (AEGIS).

Provides the information, whether the accession is conserved for AEGIS.

0 – not part of AEGIS

1 – part of AEGIS

If the AEGIS status is unknown, the field stays empty

6. Dedicated AEGIS Web site:

<http://aegis.cgiar.org/home.html>



A European Genebank Integrated System

Home Page > About AEGIS

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About AEGIS

The AEGIS initiative is the brain child of the [European Cooperative Programme for Plant Genetic Resources \(ECPGR\)](#). At the present time, plant genetic resources for food and agriculture (PGRFA) in Europe are conserved in some 650 institutions scattered over about 43 European countries. While coordination of activities is carried out within the framework of the ECPGR and the ECPGR Crop Working Groups, each genebank basically operates on its own, providing for the conservation of a full range of crop germplasm important for agriculture in the area it serves.



Photo: V.Bozhkova

- ▣ [General Description of the AEGIS Initiative](#)
- ▣ [The Age of AEGIS \(J. Engels and L. Maggioni. 2011. Public Service Review: Science and Technology; Issue 7\)](#)

With this in mind, the countries of the European region believe that there is a need to improve coordination and share responsibilities with respect to the conservation of, management of and access to PGRFA in Europe by setting up AEGIS.

The legal mechanism for establishing AEGIS is the [Memorandum of Understanding \(MoU\)](#) entered into by eligible countries of the region and the European Commission. The MoU sets out their commitments as full Members of AEGIS and the main lines of AEGIS. To be eligible for membership, the countries listed must be members of ECPGR, and either Contracting Parties to the Treaty or otherwise willing to make PGRFA under their jurisdiction available under the conditions of the Treaty.

The MoU has come into force in July 2009. The MoU is supplemented by a series of Associate Member Agreements for the individual genebanks and other institutions that wish to become part of AEGIS.

- ▣ [Checklist for the implementation of the AEGIS Memorandum of Understanding \(MoU\) at National Level](#)

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RELATED INFORMATION

Highlights

First accessions formally included in the European Collection

The *Allium* Working Group has recently notified a few countries about the Group's agreement on a first batch of garlic accessions to be proposed as European Accessions. On the 12th of December 2011, Germany has flagged **61 garlic accessions in EURISCO as belonging to AEGIS**, thereby giving birth to the European Collection: [more information](#)

FP7-INFRASTRUCTURES-2012-1 Call

- ▣ [Submission of "Plant Gene Access" project proposal](#)

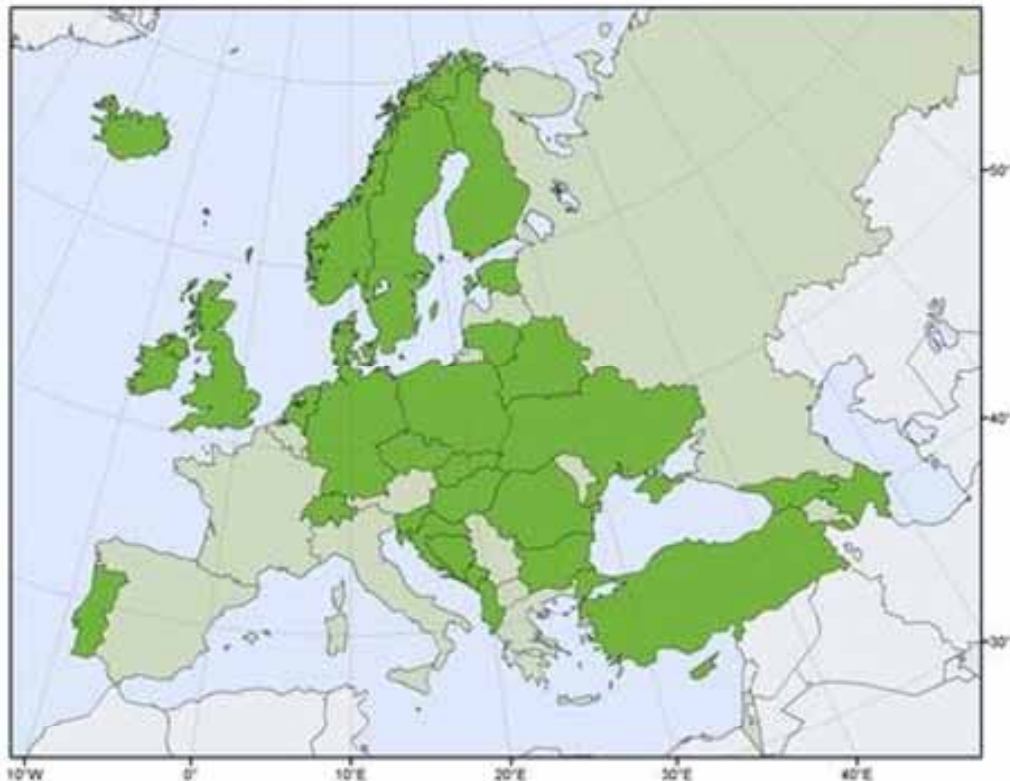
AEGIS Competitive Grant Scheme

- ▣ [Outcomes of the second call for proposals](#)

http://aegis.cgiar.org/about_aegis.html

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AEGIS member countries



1. **Albania** (6 May 2009)
2. **Azerbaijan** (16 July 2009) - Associate Members
3. **Belarus** (2 November 2011) - Associate Members
4. **Bosnia and Herzegovina** (19 May 2010)
5. **Bulgaria** (2 December 2009) - Associate Members
6. **Croatia** (2 December 2009) - Associate Member
7. **Cyprus** (15 September 2009) - Associate Member
8. **Czech Republic** (23 July 2009) - Associate Members
9. **Denmark** (22 February 2010)
10. **Estonia** (22 May 2009) - Associate Members
11. **Finland** (2 December 2009)
12. **Georgia** (18 May 2009) - Associate Member
13. **Germany** (9 September 2009) - Associate Members
14. **Hungary** (22 November 2011) - Associate Member
15. **Iceland** (22 February 2010)
16. **Ireland** (22 July 2009)
17. **Lithuania** (12 October 2010)
18. **Montenegro** (16 December 2010)
19. **The Netherlands** (28 May 2009) - Associate Members
20. **Norway** (17 August 2009)
21. **Poland** (17 May 2010)
22. **Portugal** (20 November 2009)
23. **Romania** (14 April 2010) - Associate Member
24. **Slovakia** (16 June 2009) - Associate Member
25. **Slovenia** (21 September 2009) - Associate Members
26. **Sweden** (31 May 2011) - Associate Member
27. **Switzerland** (27 May 2009) - Associate Member
28. **Turkey** (14 November 2011) - Associate Member
29. **Ukraine** (30 April 2009)
30. **United Kingdom** (18 June 2010) - Associate Members

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Associate Members

- 44 Associate Membership agreements received
- As a result of recent Plant Gene Access proposal development process **2** new AEGIS Member countries and **23** new AMAs had joined!
- Recorded Associate Members per country:

Azerbaijan (2)

Belarus (8)

Bulgaria (1)

Croatia (1)

Cyprus (1)

Czech Republic (8)

Estonia (3)

Georgia (1)

Germany (3)

Hungary (1)

Netherlands (2)

Romania (1)

Slovakia (1)

Slovenia (5)

Sweden (1)

Switzerland (1)

Turkey (1)

United Kingdom (3)

The European Collection

Has now been formally established and will hopefully steadily grow!

The European Collection

Species	European accessions	Holding genebanks	Countries of origin
<i>Allium sativum</i> L.	143	IPK, Germany (61) CRI, Czech Rep. (82)	16

<http://aegis.cgiar.org>



Preliminary designation of European Accessions (September 2011)

Crop	Accessions in European databases	Accessions selected for European Collection	% European Accessions from total
Carrot cultivars	2948	1281	43%
Sweet cherry	2731	1483	54%
<i>Poa</i> sp.	> 5000	3443	68%
<i>Brassica rapa</i>	3618	2170-2822	60—78%



AQUAS – AEGIS quality system – technical elements

1. **Operational genebank manual** – all AEGIS Associate Members; based on **genebank template** (template finalized – AEGIS Web site; so far only one manual received)
2. **Generic operational standards** – Secretariat (cooperation with FAO; inputs into draft also by ECPGR members; discussed at Commission in July 2011; standards for non-orthodox species on field genebank and *in vitro*/cryopreservation requested)
3. **Agreed minimum crop-specific technical standards** – all WGs (complementing generic standards)
4. **Quality management system procedures** – Secretariat; all WGs; Associate Members:
 - a. **record keeping**
 - b. **reporting**
 - c. **monitoring (not policing, but guiding and advisory approach)**



Up-date of Fruit Network status regarding AEGIS (end Dec. 2012)

Only activities recorded for **Prunus WG**:

European Collection: the **procedure to select** accessions for the European Collection has been tested with **cherry accessions**.

WG in the process of finalizing agreed **selection criteria**.
1116 unique cherry genotypes and 367 duplicate groups were identified.

WG members agreed to promote in their respective countries the **definition of a proposed list of candidate European Accessions** and the lists are planned to be discussed in 2012.



Up-date of Fruit Network status regarding AEGIS (end Dec. 2012)

AQUAS: **Minimum standards** for Prunus conservation were proposed by the AEGIS Prunus sub-group in 2008 and re-discussed by the group in 2010.

Finalization of the list of these minimum standards for formal approval is ongoing.

A **safety-duplication methodology** is also planned to be developed.



AEGIS Grant Scheme (8 projects)

2010

1. Assessment of Unique Material in the European Collections of **Umbellifer Crops**
2. Towards comprehensive **pea** germplasm management for future use
3. Cryopreservation of young inflorescence bases in bolting **garlic**

2011

1. Establishment of the European **Forages** Collection
2. "PGR Duplicate Finder" a software package to assist in the identification of putative duplicates in germplasm databases
3. Improving the prerequisites for a European **rye** collection
4. Identification of **old potato clones** having unreliable variety name by means of fingerprinting using microsatellite (SSR)
5. *Brassica* selection criteria for the identification of the MAAs relate to the ***Brassica oleracea*** of Iberian collection



FP7 Research Infrastructure. Call for proposals of July 2011

Theme on *Plant Genetic Resources Centres*

- The ECPGR Steering Committee endorsed/ recommended the **ECPGR Secretariat** to coordinate the preparation of a project proposals
- Full title: Access to plant genetic resources for food and agriculture in Europe and
- Short title: Plant Gene Access
- Submission completed: **23 November 2011**
- Budget: ca. **Euro 10 million**
- **34 partners**

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Plant Gene Access (12 Work Packages)

1. Project management (ECPGR)
2. Access to the European Collection (ECPGR)
3. Access to PGR information (Bioversity)
4. Quality assurance (MTT, Finland)
5. Establishing the European Collection (INRA, France)
6. Establishing a knowledge base (CRI, Czech Republic)
7. Upgrading management of PGR Information (CGN, The Netherlands)
8. Research to improve services (Warwick, UK)
9. Strengthening genebank services through genotyping (IPK, Germany)
10. Identify and rescue endangered resources (NordGen, Sweden)
11. Capacity building (KIS, Slovenia)
12. Partnership with industry (Plantum, The Netherlands)

PROJECT WEB SITE: <http://aegis.cgiar.org/documents/>

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Thank you for your attention!

